Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
This represents the final version, as of 30 April, 2021							
COVID-19, allergy, asthma, clinical management, pediatric, Europe	31-May-20	Managing childhood allergies and immunodeficiencies during respiratory virus epidemics - The 2020 COVID-19 pandemic: A statement from the EAACI-section on pediatrics	Pediatric Allergy and Immunology	Review	In this review, the European Academy of Allergy and Clinical Immunology (EAACI) outlines six recommendations for the management of childhood allergies and immunodeficiencies based on six underlying facts and existing evidence. Citing differences in adult and pediatric COVID-19, the authors discuss how underlying chronic diseases increase the risk of severe COVID-19. However, there is no evidence pointing towards the increased severity of COVID-19 with the usage of currently available asthma and allergy treatments. The EAACI recommends the following for pediatric allergists: (1) gaining the best control of current allergic symptoms by advising patients to adhere to current hygiene and social distancing recommendations to reduce the risk of COVID-19 infection; (2) optimal asthma control; (3) being mindful of the early symptoms of allergy being similar to COVID-19, but not to be too suspicious or overlook them; (4) treatment of patients with allergic conditions according to current guidelines, the only exception being to withhold biologics during acute COVID-19 infection; (5) flexibility and adaptability to the dynamic world of emerging evidence; (6) the usage of developments in the comprehension of mechanistic knowledge of COVID-19 to fine-tune patient-tailored safety and treatment recommendations in the future.	The authors provide guidelines from the European Academy of Allergy and Clinical Immunology about the care and management of pediatric patients with allergies and asthma. They highly recommend adherence to current guidelines for social distancing and hygiene, while keeping up with new developments in the mechanisms of COVID-19 and emerging evidence to provide tailored treatments for pediatric patients.	Brough HA, Kalayci O, Sediva A, et al. Managing childhood allergies and immunodeficiencies during respiratory virus epidemics - The 2020 COVID-19 pandemic: A statement from the EAACI-section on pediatrics. Pediatr Allergy Immunol. 2020 Jul;31(5):442-448. doi: 10.1111/pai.13262. Epub 2020 May 31.
Pregnancy, drug development, interventional clinical trials, inclusion criteria	31-May-20	Inclusion of pregnant women in clinical trials of COVID-19 therapies: what have we learned?	British Journal of Anaesthesia	Correspondence	The authors studied the approach towards recruitment of pregnant women to interventional clinical trials for COVID-19. Among 371 interventional trials registered, most declare pregnancy an exclusion criterion (251/371, 68%). This is most striking in trials investigating the use of drugs (235/310, 75.8%). Many trials altogether avoid mention of pregnant women in their inclusion/exclusion criteria (117/371, 31%). Even trials investigating drugs with a relatively favorable safety profile (e.g. ascorbic acid), interventions or drugs already being used in pregnant women (e.g. extra-corporeal membrane oxygenation [ECMO], steroids) or those investigating low-risk non-pharmacological interventions (e.g. biological sampling for diagnostic/basic science purposes) exclude pregnant women. Most importantly, there is a global lack of differentiation between the risks at various developmental stages of pregnancy.	This report argues in favor of inclusion of pregnant women in interventional clinical trials for COVID-19.	Einav S, Ippolito M, Cortegiani A. Inclusion of pregnant women in clinical trials of COVID-19 therapies: what have we learned? [published online 2020 May 31]. Br J Anaesth. doi:10.1016/j.bja.2020.05.020
Children, clinical presentation, symptoms, asymptomatic, meta-analysis	31-May-20	Presenting symptoms of COVID-19 in children: a meta-analysis of published studies	British Journal of Anaesthesia	Correspondence	In this meta-analysis of symptoms in children with positive SARS-CoV-2 RT-qPCR tests, of 737 articles identified, 28 (n=1614 patients) articles were relevant for analyses. All studies, but one, were retrospective and included patients from China with the exception of four studies (from Malaysia, Spain, Italy, and the USA). Fever and cough were the most common signs of COVID-19 in children. This study conclusively confirmed the clinical impression that COVID-19 in children typically presents as a mild (37%) or moderate (45%) upper respiratory tract infection and is rarely severe or critical. In addition, 16% of SARS-CoV-2-infected pediatric patients were asymptomatic in this analysis. Typical CT changes were present in just 55% of patients, indicating that CT scanning is of lesser value in children compared with adults.	Results of this meta-analysis provide conclusive evidence on the absence of specificity regarding COVID-19 symptoms in children and the relatively high proportion of asymptomatic patients among children.	Assaker R, Colas AE, Julien-Marsollier F, et al. Presenting symptoms of COVID-19 in children: a meta-analysis of published studies [published online 2020 May 31]. Br J Anaesth. doi:10.1016/j.bja.2020.05.026

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Pregnancy, maternal anxiety, maternal depression, GAD-7, PHQ-9, lockdown period, UK	31-May-20	Anxiety and Depression Levels Among Pregnant Women With COVID-19	Acta Obstetricia et Gynecologica Scandinavica	Letter to Editor	Most studies on COVID-19 in pregnancy have focused on physical effects of the pandemic on infected mothers as well as the possibility of vertical transmission; these tend to eclipse maternal mental health needs during these unprecedented times. The authors present pilot data on anxiety and depression levels in pregnant women at an inner-city London hospital, over the past 11 weeks of the pandemic. Eleven COVID-19 positive mothers completed the cross-sectional survey, within one week of diagnosis, and the median Generalised Anxiety Score 7 (GAD-7) throughout the 11-week period was 3 (scores of 5, 10, and 15 are cut-off points for mild, moderate and severe anxiety. The median Patient Health Questionnaire-9 (PHQ-9) score throughout the 11-week period was 2 (scores of 5, 10, 15, and 20 represent boundaries for mild, moderate, moderately severe and severe depression). Both sets of scores declined in the last few weeks of the lockdown period, likely as more information on maternal COVID-19 became available.	Although pilot data suggest that maternal levels of anxiety and depression at the tail-end of the COVID-19 pandemic in the UK appear low, the authors conclude that maternal mental health should not be overlooked.	Kotabagi P, Fortune L, Essien S, Nauta M, Yoong W. Anxiety and depression levels among pregnant women with COVID-19 [published online 2020 May 31]. Acta Obstet Gynecol Scand. doi:10.1111/aogs.13928
Adolescent, chilblain-like lesions, perniosis, serology, IgA, Italy	31-May-20	A Clinical, Histo-pathological and Laboratory Study of 19 Consecutive Italian Paediatric Patients With Chilblain-Like Lesions: Lights and Shadows on the Relationship With COVID-19 Infection	Journal of the European Academy of Dermatology and Venereology	Original Article	In this prospective group of patients with chilblain-like lesions, 19 patients, all adolescents (mean age: 14 years), were recruited. 11/19 (58%) of them and/or their cohabitants reported flu-like symptoms one to two months prior to skin manifestation onset. Lesions were localized to toes and also heels and soles. Video-capillarosopy showed pericapillary edema, dilated and abnormal capillaries, and microhemorrhages. Major pathological findings that distinguish these lesions from idiopathic perniosis include epidermal basal layer vacuolation, papillary dermis edema and erythrocyte extravasation, perivascular and peri-eccrine dermal lymphocytic infiltrate, and mucin deposition in the dermis and hypodermis; dermal vessel thrombi were observed in 2 cases. Nasopharyngeal swab for SARS-CoV-2 and IgG serology for SARS-CoV-2 nucleocapsid protein were negative. Importantly, IgA serology for S1 domain of SARS-CoV-2 spike protein was positive in 6 patients and borderline in 3.	History data and the detection of anti-SARS-COV-2 IgA in patients with chilblain-like lesions in this study strongly suggest a relationship between skin findings and COVID-19.	El Hachem M, Diociaiuti A, Concato C, et al. A clinical, histopathological and laboratory study of 19 consecutive Italian paediatric patients with chilblain-like lesions: lights and shadows on the relationship with COVID-19 infection [published online 2020 May 31]. J Eur Acad Dermatol Venereol. doi:10.1111/jdv.16682
COVID-19; gastrointestinal endoscopy; pediatric gastroenterology; SARS-CoV2	30-May-20	Changes in Pediatric Endoscopic Practice During the Coronavirus Disease 2019 Pandemic: Results From an International Survey	Gastroenterology	Brief Communication	This paper explores the impact of COVID-19 on pediatric endoscopic practice worldwide and compares differences between areas with differing COVID-19 case burdens. An online survey was distributed to pediatric gastro-enterologists in April 2020. There were 145 responses from distinct institutions worldwide, representing 27 different countries. European institutions were more likely to inquire about gastro-intestinal symptoms and recent travel compared with North America, likely reflecting earlier experience with COVID-19. Additionally, areas with a higher case burden were more likely to use full PPE precautions. Pediatric endoscopy volumes decreased to <10% of normal at 81.4% of institutions, and 89.6% of institutions postponed all elective cases. 53.1% of institutions were not rescheduling postponed procedures, and 69.7% of institutions had no defined plan to address the backlog. This study demonstrates significant pediatric endoscopic practice variation across institutions worldwide and highlights relevant differences in practice across geographic regions and varied COVID-19 case burdens.	This study demonstrates significant pediatric endoscopic practice variation across institutions worldwide and highlights relevant differences in practice across geographic regions and varied COVID-19 case burdens.	Ruan W, Fishman DS, Lerner DG, et al. Changes in Pediatric Endoscopic Practice During the Coronavirus Disease 2019 Pandemic: Results From an International Survey. Gastroenterology. 2020;159(4):1547-1550. doi:10.1053/j.gastro.2020.05.068

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Airway, pediatric anesthesia, perioperative	30-May-20	Perioperative care of pediatric anesthesia for children with suspected or confirmed COVID-19	Saudi Journal of Anaesthesia	Practice Guideline	The authors present recommendations utilized in the anesthesia department in a pediatric hospital in Saudi Arabia for confirmed or suspected COVID-19-positive children. The guidance includes general infection prevention and hospital management strategies to reduce spread of COVID-19. Specific recommendations include using one operating room for all suspected and confirmed COVID-19 cases, operating room preparedness drills, proper utilization of N95 masks and other PPE equipment, reducing elective surgeries, and lengthening turnover time between elective surgeries. The strategies specific to the pediatric anesthesia department addressed infection control procedures within the operating room and pre-anesthesia assessment clinic. The authors provide recommendations for difficult airway management, extubation, anesthesia procedures taking place outside the operating room, and transport measures to limit the potential spread of COVID-19. Additionally, the guidance details a protocol to follow after a healthcare worker is exposed to infected or suspected patients.	The authors present the recommendations for the anesthesia department in a pediatric hospital in Saudi Arabia for confirmed or suspected COVID-19-positive children.	Al Juhani T, Al Zughaibi N, Haroun A, Al Saad A. Perioperative care of pediatric anesthesia for children with suspected or confirmed COVID-19. Saudi J Anaesth. 2020;14(3):370-377. doi:10.4103/sja.SJA_358_20
Pregnancy, high-risk, maternal outcomes	30-May-20	SARS-CoV-2 Infection and COVID-19 During Pregnancy: A Multidisciplinary Review	Mayo Clinic Proceedings	Review	With the understanding that relevant data are limited and rapidly changing, authors conclude that physiologic, metabolic, and vascular changes in normal and high-risk pregnancies may affect risks for COVID-19 and exacerbate the clinical presentation of the virus. Studies to date have reported high risks of pregnancy complications, including preterm birth and preeclampsia, as well as higher rates of cesarean delivery among mothers infected with COVID-19. In this multidisciplinary review, authors summarize guidelines for medical/obstetric care and outline future directions for optimization of treatment and preventive strategies for pregnant patients with COVID-19.	Given differing physiology during gestation, pregnancy represents a vulnerable state that may be associated with a greater risk of COVID-19 infection and worse subsequent outcomes. Future large, likely multicenter, studies will be critical in improving our understanding of the pathophysiology and clinical characteristics of COVID-19 and pregnancy, which may optimize COVID-19 preventive and treatment strategies during normal and high-risk pregnancies.	Narang K, Enninga EAL, Gunaratne MDSK, et al. SARS-CoV-2 Infection and COVID-19 During Pregnancy: A Multidisciplinary Review. Mayo Clin Proc. 2020;95(8):1750-1765. doi:10.1016/j.mayocp.2020.05.011
Economic impact, children, low resources	30-May-20	COVID-19, economic impact and child mortality: A global concern	Clinical Nutrition	Letter to the Editor	The COVID-19 outbreak has shattered the world's economic giants with an estimated loss of $1 trillion during 2020. This economic dent could have drastic effects on people living in extreme poverty. As in the year 2019, top donor countries of humanitarian aid and the World Food Program were the USA, Germany, UK, and the European Commission. Unfortunately, these countries were badly hit by the COVID-19 pandemic. As a result, economies of these countries are badly affected and over 80 countries have already requested the IMF for financial aid including the USA and others. This	This letter argues that COVID-19 adversely affects the economies worldwide, having a future impact on humanitarian programs and threatening children in poverty.	Kabir M, Saqib MAN, Zaid M, Ahmed H, Afzal MS. COVID-19, economic impact and child mortality: A global concern. Clin Nutr. 2020;39(7):2322-2323. doi:10.1016/j.clnu.2020.05.027

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					economic dip will have a future impact on different humanitarian programs. Most countries of the world are under lockdown and this is causing food shortage in markets and price inflation. Children already facing undernutrition are now more vulnerable than ever and are currently under high risk of acquiring COVID-19. Appropriate deployment of funds, timely preventive measures, and right initiatives are required.		
Pregnancy, platelets, blood counts, France	30-May-20	Thrombocytopenia in pregnant patients with mild COVID-19	International Journal of Obstetric Anesthesia	Case Report	The authors present three pregnant patients with mild COVID-19 and thrombocytopenia at a single center in France. To their knowledge, these are the first reports of thrombocytopenia during pregnancy related to mild COVID-19. None of the patients required a platelet transfusion, and none developed severe COVID-19 requiring intensive care. The authors argue against the presence of gestational thrombocytopenia or pre-eclampsia in these patients. In conclusion, the authors state that pregnant patients with mild COVID-19 should also have a recent platelet count to help guide decision-making before insertion of an epidural catheter.	In this article, the authors present the first reports of thrombocytopenia associated with mild COVID-19 in pregnancy. This has implications for epidural analgesia in this patient population.	Le Gouez A, Vivanti AJ, Benhamou D et al. Thrombocytopenia in pregnant patients with mild COVID-19 [published online, 2020 May 30]. Int J Obstet Anesth. doi:10.1016/j.ijoa.2020.05.010
Children, clinical course, antiviral therapy, interferon α-2b, China	30-May-20	Clinical Features and the Treatment of Children With COVID-19: A Case Series From Wenzhou, China	Journal of Medical Virology	Letter to the Editor	Three children (2-12 years) with COVID-19 were prospectively followed from hospital admission to discharge; all were in close contact with confirmed cases of COVID-19. Their initial symptoms were non-specific and varied from persistent fever to cough. Overall the clinical presentation, prognosis and radiological changes observed were milder and resolved quicker than those of adults. Antiviral therapy and interferon α-2b appeared successful in relieving symptoms in these children.	The present case series described mild clinical course in children with COVID-19, treated with antiviral therapy and interferon α-2b.	Cai J, Sun W, Huang J, Gamber M, Wu J, He G. Clinical features and the treatment of children with COVID-19: A case series from Wenzhou, China [published online 2020 May 30]. J Med Virol. doi:10.1002/jmv.26092
Children, age-related mortality, all-deaths, epidemiology, Europe, USA, South Korea	30-May-20	Children's Mortality From COVID-19 Compared With All-Deaths and Other Relevant Causes of Death: Epidemiological Information for Decision-Making by Parents, Teachers, Clinicians and Policymakers	Public Health	Letter to the Editor	The authors synthesized information on COVID-19 in relation to other causes of death in line with a previous call for increased focus on age-specific mortality. They collated age-specific data on COVID-19 deaths from official government sources for seven countries up to May 8–19, 2020. For this time period, in these seven countries combined, 44 COVID-19 deaths were reported in 42,846 confirmed cases (this latter number is likely to be a massive underestimate; data were not available for France) in those aged 0–19 years (0–14 years in USA). This compares with 13,200 estimated deaths from all-causes. The situation in each country was almost identical, and in accordance with early data from China i.e. COVID rarely kills children, even compared with influenza, against which many children are already vaccinated.	Data from seven countries show that mortality due to COVID-19 is similar to flu, or less severe, in children whilst being the opposite in adults.	Bhopal S, Bagaria J, Bhopal R. Children's mortality from COVID-19 compared with all-deaths and other relevant causes of death: epidemiological information for decision-making by parents, teachers, clinicians and policymakers [published online 2020 May 30]. Public Health. doi:10.1016/j.puhe.2020.05.047
Children, malnutrition, hunger, economic crisis, developing countries	30-May-20	COVID-19, Economic Impact and Child Mortality: A Global Concern	Clinical Nutrition	Letter to the Editor	There is significant correlation between age and poly-morbidity due to COVID-19, and these factors are independently associated with malnutrition and its negative impact on patient survival. The economic impact of the COVID-19 outbreak, particularly on top donor countries of humanitarian aid, could have drastic effects on people living in extreme poverty. Undernutrition causes 45% of deaths in children less than 5 years of age, and reports have estimated that over 2 million lives of children are under high risk due to undernutrition in coming months. Appropriate deployment of	The COVID-19 pandemic has placed millions of children at risk for undernutrition, as top donor countries face economic crises.	Kabir M, Saqib MAN, Zaid M, Ahmed H, Afzal MS. COVID-19, economic impact and child mortality: A global concern [published online 2020 May 30]. Clin Nutr. doi:10.1016/j.clnu.2020.05.027

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					funds, timely preventive measures and right initiatives are needed to prevent future human crisis.		
Human milk samples, breastfeeding, viral transmission	30-May-20	Detectable Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) in Human Breast Milk of a Mildly Symptomatic Patient With Coronavirus Disease 2019 (COVID-19)	Clinical Infectious Diseases	Brief Report	In this case, a 40-year-old female with mild clinical symptoms tested positive for SARS-CoV-2 on RT-PCR testing of a combined oro/nasopharyngeal swab. Her 8-month-old son, who had been breastfed until the day of maternal symptom onset, also tested positive for SARS-CoV-2; upon confirmed SARS-CoV-2 infection in the infant, breastfeeding was resumed with no adverse effects. The mother had detectable viral RNA in human milk in two separate samples taken 10 days apart (5 and 15 days after maternal symptom onset, respectively) but interspersed with a number of negative results. Contamination from the infant's oropharynx is unlikely because breastfeeding was stopped for five days prior to collection of the first sample and all samples thereafter were collected prior to feeding. The risk of environmental contamination is also unlikely given appropriate hand hygiene and resolution of maternal respiratory symptoms at time of sample collection. There appeared to be no relationship between RT-PCR cycle threshold values from the patient's or infant's oropharyngeal samples with viral RNA detection in human milk. Although SARS-CoV-2 RNA was identified in human milk samples, whether this translates to viable virus or degraded residual nucleic acid could not be ascertained. Due to the infant's travel history and close contact with the mother, viral transmission via breastfeeding is presumed to be unlikely by the authors. Thus, the benefits of human milk likely greatly outweigh risks associated with maternal SARS-CoV-2 infection, due to conferring protection to other respiratory illnesses.	This case report describes an actively breastfeeding patient with SARS-CoV-2 infection with detectable viral RNA in human milk; the patient's infant also tested positive for SARS-CoV-2, but no adverse effects from breastfeeding were noted and viral transmission via human milk is concluded unlikely by the authors.	Tam PCK, Ly KM, Kernich ML, et al. Detectable severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in human breast milk of a mildly symptomatic patient with coronavirus disease 2019 (COVID-19) [published online 2020 May 30]. Clin Infect Dis. doi:10.1093/cid/ciaa673
Human milk, breastfeeding, human coronaviruses, assay validation	30-May-20	SARS-CoV-2 and Human Milk: What Is the Evidence?	Maternal & Child Nutrition	Review Article	There is limited published literature related to vertical transmission of any human coronaviruses via human milk and/or breastfeeding. Results of the present literature search revealed a single study providing some evidence of vertical transmission of human coronavirus 229E; a single study evaluating presence of SARS-CoV in human milk (it was negative); and no published data on MERS-CoV and human milk. In total, 13 studies reporting human milk tested for SARS-CoV-2 were identified; one study detected the virus in one milk sample, and another study detected SARS-CoV-2 specific IgG in milk. Importantly, none of the studies on coronaviruses and human milk report validation of their collection and analytical methods for use in human milk. In addition, little remains known about the timing of antibody response in human milk to SARS-CoV-2 infection. Future research should utilize validated methods and focus on both potential risks and protective effects of breastfeeding.	Limited reports on the presence of human coronaviruses, including SARS-CoV-2, in human milk are described; these studies do not report methods of sample collection or validation of assays for human milk.	Lackey KA, Pace RM, Williams JE, et al. SARS-CoV-2 and human milk: What is the evidence? [published online 2020 May 30]. Matern Child Nutr. doi:10.1111/mcn.13032
Children, myocardial injury, congenital heart disease, systematic review	30-May-20	Children's Heart and COVID-19: Up-to-date Evidence in the Form of a Systematic Review	European Journal of Pediatrics	Review	Myocardial injury in adult patients with COVID-19 has been linked to fatal outcomes, but scientific evidence in children is sparse. In this systematic review, 46 papers were included. Even though SARS-CoV-2 infection in childhood is less common and milder than when occurring in adults, it is not without risk of cardiac involvement, especially in patients with a background of congenital heart disease. In newborns and children, previous cardiac surgery is related with increased risk of a more severe form of the disease, being admitted to intensive care unit, and needing intubation as well as mechanical ventilation. In addition, conversely to adulthood, the role of	This systematic review is aimed at summarizing all pediatric cases of COVID-19 with cardiac involvement, which is often found in those with congenital heart disease.	Sanna G, Serrau G, Bassareo PP, Neroni P, Fanos V, Marcialis MA. Children's heart and COVID-19: Up-to-date evidence in the form of a systematic review [published online 2020 May 30]. Eur J Pediatr.

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					troponin in identifying and quantifying myocardial damage is less definite in children, due to a limited number of studies addressing this issue.		doi:10.1007/s00431-020-03699-0
Child, cutaneous manifestation, skin rash, Russia	30-May-20	Cutaneous Manifestations in COVID-19: A Skin Rash in a Child	Dermatologic Therapy	Letter	In mid-April, a 12-year-old girl presented with a two-day history of fever; her RT-PCR test for SARS-CoV-2 was positive. On the third day of illness, the fever dramatically ceased, and a skin rash appeared. Examination revealed purpuric eruptions and erythematous macula rashes of 3 to 4mm in size, on the upper eyelids, above the eyebrows and in the temporal region. Her tongue was also slightly swollen and irritated. The described eruptions were asymptomatic and completely disappeared within three days without treatment.	This case report confirms skin manifestations of SARS-CoV-2 infection in a child, while noting rare involvement of the oral mucous membranes.	Olisova OY, Anpilogova EM, Shnakhova LM. Cutaneous manifestations in COVID-19: a skin rash in a child [published online 2020 May 30]. Dermatol Ther. doi:10.1111/dth.13712
Maternal mortality, comorbidities, case fatality rate, Mexico	30-May-20	Maternal Mortality From COVID-19 in Mexico	International Journal of Gynecology & Obstetrics	Brief Communication	A total of 45,219 cases of COVID-19 have been confirmed in Mexico, as of May 17, 2020. Using open data from the Mexican Ministry of Health to conduct a search for COVID-19 positive cases among pregnant women, 308 cases were identified including seven maternal deaths. Compared to obstetric COVID-19 patients who survived, women who suffered maternal mortality were older and had higher prevalence of diabetes, obesity, and other comorbidities. Of the seven maternal death cases, only two received intensive care, and only one received mechanical ventilation. Known exposure to COVID-19 was low in both groups, suggesting lower overall COVID-19 testing and tracing capacity in the population.	The present study reports a 2.3% case fatality among parturient women with COVID-19 in Mexico.	Lumbreras-Marquez MI, Campos-Zamora M, Lizaola-Diaz de Leon H, Farber MK. Maternal mortality from COVID-19 in Mexico [published online 2020 May 30]. Int J Gynaecol Obstet. doi:10.1002/ijgo.13250
Pregnancy, prevalence, universal obstetric screening, Seattle, USA	30-May-20	Low Prevalence of SARS-CoV-2 Among Pregnant and Postpartum Patients With Universal Screening in Seattle, Washington	Clinical Infectious Diseases	Brief Report	After initiating universal SARS-CoV-2 PCR testing of labor and delivery patients at medical centers in Seattle, WA, USA, the authors found a low prevalence of SARS-CoV-2 (2.7% [5/188]) among pregnant and postpartum patients. Prevalence among symptomatic patients (22.2% [4/18]) was similar to initial targeted screening approaches (19.1% [8/42]). Among 170 asymptomatic patients, two were positive or inconclusive, respectively; repeat testing at 24 hours was negative. Despite low numbers of additional cases identified, universal screening of pregnant patients provides important surveillance information due to the representativeness of this population to the greater community.	A low prevalence of SARS-CoV-2 among pregnant and postpartum patients was determined after initiating universal testing at hospitals in Washington state (USA).	LaCourse SM, Kachikis A, Blain M, et al. Low prevalence of SARS-CoV-2 among pregnant and postpartum patients with universal screening in Seattle, Washington [published online 2020 May 30]. Clin Infect Dis. doi:10.1093/cid/ciaa675
High-risk pregnancy, neurological manifestation, preeclampsia, eclampsia, liberal testing	30-May-20	Coronavirus disease-2019 in Pregnancy With Neurological Manifestations Versus Pregnancy With Eclampsia: Need for Liberal Testing to Rule Out the Masquerades	Acta Obstetricia et Gynecologica Scandinavica	Letter to Editor	The authors agree with Gidlöf et al. and their call for more liberal testing guidelines in women with high-risk pregnancies. A severe complication of preeclampsia is eclampsia, and presentations include neurological manifestations such as headache, seizures, loss of consciousness, along with raised blood pressure. Similar manifestations have been reported in patients with COVID-19, suggesting three possible scenarios: pregnant women with COVID-19 and neurological manifestations mimicking eclampsia; COVID-19 complicating preeclampsia/eclampsia; and pregnancy with eclampsia without COVID-19. Each scenario has different implications for management and infection control strategies, but all require screening and COVID-19 testing for all pregnant women presenting with neurological manifestations.	COVID-19 screening and testing of all pregnant women presenting with neurological manifestations, which may reflect preeclampsia or eclampsia, is necessary to implement proper management and infection control strategies.	Singh S. Coronavirus disease-2019 in pregnancy with neurological manifestations versus pregnancy with eclampsia: Need for liberal testing to rule out the masquerades [published online 2020 May 30]. Acta Obstet Gynecol Scand. doi:10.1111/aogs.13927

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Children, epidemiology, pathogenesis, Kawasaki-like disease, policy	30-May-20	It's True Even in a Pandemic: Children Are Not Merely Little Adults	Clinical Infectious Diseases	Editorial Commentary	Children appear to be less affected by COVID-19 than adults. In addition, intrauterine transmission appears to be extremely uncommon, and newborns born to infected mothers are likely to experience either asymptomatic or mild disease. These observations raise the hypothesis that dysregulated host responses may be the primary driver of disease severity. Reports have also emerged of a Kawasaki-like illness among children and associated with SARS-CoV-2 infection. This editorial also outlines implications of these early reports of pediatric COVID-19 for healthcare workers and public policymakers.	This editorial presents a summary of available data on the epidemiology and pathogenesis of pediatric COVID-19 and implications for re-opening policies.	Creech CB. It's True Even in a Pandemic: Children are Not Merely Little Adults [published online 2020 May 30]. Clin Infect Dis. doi:10.1093/cid/ciaa680
COVID-19; children; adolescents; compliance; quarantine; psychological; India	29-May-20	Compliance and Psychological Impact of Quarantine in Children and Adolescents due to Covid-19 Pandemic	The Indian Journal of Pediatrics	Original Research	The authors assessed compliance and psychological impact of quarantine in a cohort of 120 children and adolescents (mean age=15.4 years, age range=9-18 years; 85.12% male) in India during the COVID-19 pandemic [date not specified] via interview. Comparable data was obtained from 131 children and adolescents who were not quarantined [age not specified]. Most adolescents (73.55%) identified correctly that quarantine had been imposed to protect the community, whereas only 51.23% of adolescents understood that quarantine restrictions were also to protect members of the household. 44.63% reported that the quarantine would not protect themselves. The proportion of adolescents who were compliant with all the household protective measures was only 10.71% (n=13), whereas compliance with all the community protecting measures combined was higher (17.35%). When compliance to all the behaviors was taken as a whole, it reduced to 7.43%. The most difficult activity for children and adolescents to comply with was not going out of the house to socialize (65.26%). Quarantined children and adolescents experienced greater psychological distress than those not quarantined ($p < 0.001$). Worry (68.59%), helplessness (66.11%) and fear (61.98%) were the most common feelings experienced under quarantine. The low compliance with quarantine requirements as seen in this study raises a serious concern about the effectiveness of quarantine as a preventive measure of disease transmission. Compliance and mental health problems can be improved by providing adequate financial support and enhanced knowledge about pandemic planning.	The authors assessed the compliance and psychological impact of quarantine in a cohort of children and adolescents in India during the COVID-19 pandemic via interview. The findings indicate low compliance with quarantine requirements and greater psychological distress among those quarantined. Compliance and mental health problems can be improved by providing adequate financial support and enhanced knowledge about pandemic planning.	Saurabh K, Ranjan S. Compliance and Psychological Impact of Quarantine in Children and Adolescents due to Covid-19 Pandemic. Indian J Pediatr. 2020;87(7):532-536. doi:10.1007/s12098-020-03347-3.
SARS-CoV-2; street children; lockdown	29-May-20	Effect of COVID-19 response in Uganda on street children	Pan African Medical Journal	Letter to the Editor	The authors examine the impact of COVID-19 related mitigation measures on street children in Uganda. They identify that the dynamic street children population may make it difficult to enumerate them and thus challenging for the government to plan for them. They also note that factors such as domestic mistreatment, parental death, poverty, and widespread urbanization increasing the cost of living are the main causes of children's decision to live in the streets. The authors suggest that COVID-19-related information presented only through electronic media was a barrier to street children, which in conjunction with low literacy levels, could result in misinterpretation or misinformation. Additionally, street children do not have access to clean water, food, and sanitation facilities, with the WHO's mitigation strategies for staying at home and social distancing being infeasible. The COVID-19 lockdown also dwindled their primary source of income, begging, and increased their risk of dying from hunger. Additionally,	The authors highlighted the challenges faced by street children in Uganda during the COVID-19 related mitigation measures. Children were impacted due to insufficient information being provided to them regarding the pandemic, economic hardships, and lack of access to water, food,	Kawala BA, Kirui BK, Cumber SN. Effect of COVID-19 response in Uganda on street children. Pan Afr Med J. 2020 May 29;35(Suppl 2):56. doi: 10.11604/pamj.supp.2020.35.2.23545. PMID: 33623581; PMCID: PMC7875726.

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					they found that street children's rough experiences (such as sexual violence) may make them more defiant to possible regulations to prevent the spread of the virus. They also noted the possibility of children going back to their abusive families, but also more children going to the streets due to increasing poverty and orphanage levels. The authors conclude by imploring the governments to play an active role in protecting vulnerable street children in Uganda.	and sanitation facilities. The authors implored the government to play an active role in protecting vulnerable street children in Uganda.	
COVID-19; neonatal care; Brazil	29-May-20	Psycho-Emotional Care in a Neonatal Unit During the COVID-19 Pandemic	Revista Paulista de Pediatria	Editorial	The authors discussed psycho-emotional care in a neonatal unit in Brazil during the COVID-19 pandemic. In times of social distancing, parents' unrestricted access to and presence in the neonatal unit are hindered. Keeping the same professionals in care of each newborn, on each shift, gives the patient a reference to recognize the routine care and the voice and touch of each professional, which can be a source of safety and trust in the face of so many changes. Professional use of physical and verbal contact with the newborn is encouraged, while keeping the number of professionals providing care for the newborn to a minimum. Cell phone use in the neonatal unit, which has always been restricted, can be an important tool in this moment of crisis, shortening the distance between the family and the infant. Photos and/or video records and short descriptions about how the infant is behaving, their traits, and routine can be sent to the parents. In the case of death, family members who live in the same household can gather and perform a mourning ritual for the newborn if possible. It is essential to give family members the opportunity to return in a few days and talk with the team about more information and support. Finally, it is important for the staff to take care of their own physical and mental health.	The authors discussed psycho-emotional care in a neonatal unit in Brazil during the COVID-19 pandemic. Professional use of physical and verbal contact with newborns is encouraged, while keeping the number of professionals providing care to a minimum. Photos and/or video records and short descriptions about how the infant is behaving, their traits, and routine can be sent to the parents.	Morsch DS, Custódio ZAO, Lamy ZC. PSYCHO-EMOTIONAL CARE IN A NEONATAL UNIT DURING THE COVID-19 PANDEMIC. Rev Paul Pediatr. 2020;38:e2020119. doi:10.1590/1984-0462/2020/38/2020119.
Pediatric, school, Sweden, Finland	29-May-20	COVID-19 in Schoolchildren	Folkhälsomyndigheten (Public Health Agency of Sweden)	Report	This report from the Public Health Agency of Sweden compares the incidence of COVID-19 cases in children (age range=1-19 years) in Finland and Sweden, which applied different measures regarding school closures and policies during the early COVID-19 pandemic. Finland closed all schools from March 18-May 13, 2020, except for grades 1-3, which had the option of on-site learning if their caretakers were essential workers or if participation was deemed necessary. Sweden did not close daycares or primary schools; however, secondary schools and universities were closed on March 17, 2020. Out of 1,121,961 children in Finland, 584 (8.2%) were diagnosed with COVID-19. 1 child (0.3%) was admitted to the ICU. In Sweden, which has a pediatric population of 2,288,347, 1,124 (2.1%) were diagnosed with COVID-19. 14 children (0.6%) were admitted to the ICU. The authors note that Finland had a comprehensive testing policy for several weeks longer than Sweden. The authors ultimately conclude that school closure policies in Finland compared to Sweden had no measurable effect on the incidence of COVID-19 in children and encourage officials to carefully weigh potential adverse effects of school closures against possible positive effects.	This report from the Public Health Agency of Sweden compares the incidence of pediatric COVID-19 in Finland, which had more stringent school closures, to Sweden. The authors found no measurable effect of school closures on COVID-19 among children in Finland compared to Sweden.	Folkhälsomyndigheten. Covid-19 in schoolchildren. Folkhälsomyndigheten. 2020; 20108-1.
Social media, health information, misinformation,	29-May-20	Healthcare information on YouTube:	International Journal of Gynecology & Obstetrics	Clinical article	YouTube videos are increasingly popular and easily accessible sources of COVID-19 information for pregnant women. The authors compiled Turkish language videos on YouTube about COVID-19 and pregnancy, collected data on ranking and information source, and scored them based on usefulness	This study analyzed Turkish language YouTube videos about COVID-19 and	Yuksel B, Cakmak K. Healthcare information on YouTube: Pregnancy and COVID-19 [published online,

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pregnancy, maternal health, Turkey		Pregnancy and COVID-19			(DISCERN score) and quality of content (MICI score). 76 videos had a total of 1,494,860 views, with 40,849 likes and 575 dislikes. Videos were designated as "informative" (n=45), "misleading" (n=0), "personal experience" (n=15), and "news update" (n=16). The main sources of information in "informative" videos were physicians (73%), and news agencies (20%) and the majority of these targeted patients. The DISCERN scores were low for the "informative" (2.9 ± 1), "personal experience" (1.6 ± 0.9), and "news update" (1.9 ± 0.9) groups, indicating the content was generally not useful. The mean MICI score for informative videos was low as well (5.3 ± 2.8) indicating low quality of content. The authors conclude that Turkish videos about pregnancy and COVID-19 have high view rates, and although at the time of this study none were "misleading" or in conflict with current guidelines, they were found to be generally low in quality and trustworthiness. Future education efforts should take advantage of the popularity and accessibility of online videos to ensure consistent, quality information.	pregnancy. The authors conclude that while these videos are popular, they are generally low in quality and trustworthiness. None were found to contradict current guidelines.	2020 May 29]. Int J Gynaecol Obstet. 2020;150(2):189-193. doi:10.1002/ijgo.13246
Contact tracing, serology, zoonoses	29-May-20	Investigation and Serologic Follow-Up of Contacts of an Early Confirmed Case-Patient with COVID-19, Washington, USA	Emerging Infectious Disease	Synopsis	In this article, the authors described the contact investigation for a 35-year-old man of COVID-19, confirmed on January 20, 2020 in the USA. He returned home to Washington from Wuhan on January 15th, 2020. Contacts of the case-patient were identified, actively monitored for symptoms, interviewed for a detailed exposure history, and tested for SARS-CoV-2 infection by rRT-PCR and ELISA. Fifty contacts were identified and 38 (76%) were interviewed, of whom 11 (29%) reported unprotected face-to-face interaction with the case-patient. Thirty-seven (74%) had respiratory specimens tested negative by rRT-PCR. Twenty-three (46%) had ELISA performed on serum samples collected around 6 weeks after exposure, and none had detectable antibodies to SARS-CoV-2. Among contacts who were tested, the authors concluded that no secondary transmission was identified in this investigation, despite unprotected close interactions with the infectious case-patient.	This article described the contact investigation for a 35-year-old man of COVID-19 in the USA and identified no secondary cases among close contacts of this early US COVID-19 case-patient by molecular or serologic methods.	Chu VT, Freeman-Ponder B, Lindquist S, et al. Investigation and Serologic Follow-Up of Contacts of an Early Confirmed Case-Patient with COVID-19, Washington, USA. Emerg Infect Dis. 2020;26(8):1671-1678. doi:10.3201/eid2608.201423
Gestational diabetes, pregnancy, screening, Italy	29-May-20	Italian recommendations for the diagnosis of gestational diabetes during COVID-19 pandemic: Position statement AMD-SID, diabetes, and pregnancy study group	Nutrition, Metabolism, and Cardiovascular Diseases	Viewpoint	The authors provide a temporary guide for gestational diabetes mellitus (GDM) screening in Italy, specifically in response to the COVID-19 pandemic, to help guide practitioners when it is not possible to implement standard GDM screening because of an unfavorable risk/benefit ratio for pregnant women or when usual laboratory facilities are not available. They recommend screening for pre-gestational diabetes at the first prenatal visit, adapting the oral glucose tolerance test when necessary to focus on obtaining at least one fasting plasma glucose, maintaining close follow up with telehealth for those with GDM, maintaining tight glucose control in women with COVID-19 and GDM, and considering deferral of the postpartum glucose tolerance test until risks of COVID-19 are lower when it is safe to do so.	The authors provide recommendations from Italian professional societies for modifications in screening and diagnosis of gestational diabetes during the COVID-19 pandemic.	Torlone E, Festa C, Formoso G, et al. Italian recommendations for the diagnosis of gestational diabetes during COVID-19 pandemic: Position statement AMD-SID, diabetes, and pregnancy study group [published 2020 May 29]. Nutr Metab Cardiovasc Dis. 2020 doi:10.1016/j.numecd.2020.05.023
Pregnancy, pancreatitis, gastrointestinal symptoms, USA	29-May-20	COVID-19 Infection Presenting as Pancreatitis in a Pregnant	Case Reports in Women's Health	Case Report	A 36-year-old woman (gravida 4 para 2) at 33 weeks of gestation presented very early in the COVID-19 course with four days of cough and fever, without recent travel or known exposure. She appeared well, with stable vital signs and was sent home to self-quarantine after a specimen for COVID-19 testing was collected. Two days later, she presented with nausea, vomiting, and	Nausea, vomiting, and epigastric pain in pregnancy should be thoroughly evaluated, as COVID-19	Rabice SR, Altshuler PC, Bovet C, Sullivan C, Gagnon AJ. COVID-19 infection presenting as pancreatitis in a pregnant woman: A case

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		Woman: A Case Report			abdominal pain, and was diagnosed with acute pancreatitis. To date, no cases of human pancreatitis have been identified in relation to COVID-19, although multiple other gastrointestinal symptoms have been described. Given the lack of other etiology, the possibility that the patient's acute pancreatitis could be secondary to COVID-19 should be considered.	presentation may include gastrointestinal symptoms.	report. Case Rep Womens Health. 2020;27:e00228. doi:10.1016/j.crwh.2020.e00228
Pregnancy, risk perceptions, knowledge, breastfeeding, China	29-May-20	The outbreak of coronavirus disease in China: Risk perceptions, knowledge, and information sources among prenatal and postnatal women	Women and Birth	Original Research	Using cross-sectional survey design, a four-section online questionnaire was administered to 161 prenatal and postnatal women during the COVID-19 outbreak in Nanjing, China, in February 2020. The participants perceived their risk of contracting and dying from COVID-19 to be lower than their risk of contracting influenza, however many of them were worried that they might contract COVID-19. The participants demonstrated adequate knowledge about COVID-19. The three major sources from which they obtained information about COVID-19 were doctors, nurses/midwives, and the television. The majority of women thought neonates of pregnant women with suspected or confirmed COVID-19 should be isolated for at least 14 days after birth and that women with suspected or confirmed COVID-19 should not breastfeed their neonates.	Although surveyed prenatal and postnatal women demonstrated adequate knowledge about COVID-19, they had misunderstood some of the WHO recommendations.	Lee TY, Zhong Y, Zhou J, He X, Kong R, Ji J. The outbreak of coronavirus disease in China: Risk perceptions, knowledge, and information sources among prenatal and postnatal women [published online 2020 May 29]. Women Birth. doi:10.1016/j.wombi.2020.05.010
Pregnancy, placenta, intra-uterine vertical transmission, caveolin, syncytio-trophoblasts	29-May-20	Factors Preventing Materno-Fetal Transmission of SARS-CoV-2	Placenta	Original Article	Although many pregnant women have been infected by SARS-CoV-2, the presence of intrauterine vertical transmission has not been conclusively reported yet. What prevents this highly contagious virus from reaching the fetus? Is it only the presence of a strong placental barrier, or is it the natural absence of some receptor that the viruses use for transmission? The barriers selected as potential targets by SARS-CoV-2 are the alveolo-capillary barrier (ACB), and the syncytio-capillary barrier (SCB). Caveolae are omega-shaped structures located on the cell membrane. They consist of caveolin-1 protein (Cav-1) and are involved in the internalization of some viruses. By activating leukocytes and nuclear factor-κB, Cav-1 initiates inflammatory reactions. The presence of more than one Cav-1 binding sites on coronavirus is an important finding supporting the possible relationship between SARS-CoV-2-mediated lung injury. While the ACB cells express Cav-1, there is no caveolin expression in syncytio-trophoblasts. This review explains the hypothesis that lack of caveolin expression in the SCB is one of the most important physiological mechanisms that prevents vertical transmission of SARS-CoV-2. Since the physiological Cav-1 deficiency appears to prevent acute cell damage, treatment algorithms could potentially be developed to block this pathway in the non-pregnant population affected by SARS-CoV-2.	The authors hypothesize that the absence of caveolin-1 protein (used for viral internalization) on syncytio-trophoblast cell membranes may prevent intrauterine transmission of SARS-CoV-2.	Celik O, Saglam A, Baysal B, et al. Factors preventing materno-fetal transmission of SARS-CoV-2 [published online 2020 May 29]. Placenta. doi:10.1016/j.placenta.2020.05.012
Pregnancy, antenatal corticosteroids, emergency cesarean delivery, thrombo-prophylaxis, Netherlands, Ireland	29-May-20	COVID-19 Infection During the Third Trimester of Pregnancy: Current Clinical Dilemmas	European Journal of Obstetrics & Gynecology and Reproductive Biology	Letter to the Editor	Two cases of third-trimester SARS-CoV-2 infection from two different European countries are presented in this report. Patient A is a 38-year-old woman with diet-controlled gestational diabetes, who presented with cough, dyspnea, and oxygen desaturation. A CT scan showed bilateral ground-glass opacities, and while an initial nasopharyngeal swab was negative for SARS-CoV-2, a second sample was found to be positive. Antenatal corticosteroids for fetal lung maturation were administered. The patient's symptoms rapidly improved and was discharged on day 5. Patient B is a 29-year-old woman who presented with cough, sore throat, and diarrhea. While a SARS-CoV-2 swab result was pending, cesarean delivery was performed in view of maternal fever, fetal tachycardia, and previous	Appropriate management of pregnant patients with COVID-19 should be evaluated on a case-by-case basis.	Fontanella F, Hannes S, Keating N, et al. COVID-19 infection during the third trimester of pregnancy: Current clinical dilemmas [published online 2020 May 29]. Eur J Obstet Gynecol Reprod Biol. doi:10.1016/j.ejogrb.2020.05.053

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					cesarean section. On day 4 post-delivery, the SARS-CoV-2 swab returned positive. Decisions surrounding clinical management and multi-disciplinary considerations concerning time of delivery, use of antenatal corticosteroids and thromboprophylaxis in these two cases are discussed in this report.		
Pregnancy, lung ultrasound score, intensive care unit, Italy	29-May-20	Lung Ultrasound for Pregnant Women Admitted to ICU for Covid-19 Pneumonia	Edizioni Minerva Medica	Letter to the Editor	Chest radiography is the most common tool used to diagnose COVID-19 and monitor disease. However, minimizing exposure to radiation during pregnancy is considered a very important goal in treatment. Therefore, based on well-established practice in critical care settings, the authors implemented lung ultrasound to obtain bedside lung imaging and monitor respiratory conditions in pregnant patients with COVID-19 in the intensive care unit (ICU) at a tertiary care hospital in Lombardy, Italy. Daily assessments of patients' Lung Ultrasound Score (LUS) in six specific areas in each lung were performed. Median values of LUS (total score ranging from 0 to 36) upon admission to and discharge from the ICU were 20.5 and 13 respectively.	Lung ultrasound proved to be a sensitive and reliable tool to track the clinical evolution of pregnant patients' respiratory conditions, while complementing standard ultrasound imaging, in this report from Italy.	Giannini A, Mantovani A, Vezzoli C, Franchini D, Finazzi P. Lung ultrasound for pregnant women admitted to ICU for Covid-19 pneumonia [published online 2020 May 29]. Minerva Anestesiol. doi:10.23736/S0375-9393.20.14726-6
Pregnancy, breastfeeding, diabetes, recommen-dations, Italy	29-May-20	Breastfeeding During the COVID-19 Pandemic: Suggestions on Behalf of Woman Study Group of AMD	Diabetes Research and Clinical Practice	Review	Breastfeeding improves the health of mother and child and reduces risk of neonatal infection with other pathogens that are likely to cause serious illness. To date, no evidence has confirmed COVID-19 vertical transmission from infected mother to fetus. However, it is well known that an infected mother can transmit the SARS-CoV-2 virus through respiratory droplets during breastfeeding or intimate contact. Thus, mothers with known or suspected COVID-19 should adhere to standard and contact precautions during breastfeeding. After reviewing current knowledge about COVID-19 vertical transmission and the compatibility of breastfeeding in COVID-19 positive mothers, the Woman Study Group of AMD has compiled available recommendations, from health care organizations and expert opinions, to facilitate mother-newborn interaction and the initiation of breastfeeding, addressing both mothers with and without diabetes.	A summary of recommendations in support of breastfeeding in mothers with suspected or confirmed COVID-19 is presented.	Giuliani C, Li Volsi P, Brun E, et al. Breastfeeding during the COVID-19 pandemic: suggestions on behalf of Woman Study Group of AMD [published online 2020 May 29]. Diabetes Res Clin Pract. doi:10.1016/j.diabres.2020.108239
Children, respiratory pathogens, co-infection, Japan	29-May-20	The First Pediatric Patients With Coronavirus Disease 2019 (COVID-19) in Japan; The Risk of Co-Infection With Other Respiratory Viruses	Japanese Journal of Infectious Diseases	Short Communication	In February 2020, three children were diagnosed with COVID-19 in Furano, Hokkaido, Japan. During this period, influenza and human metapneumovirus infections were prevalent among children in the Furano region. Two of the three cases experienced co-infection with other respiratory viruses, including influenza virus A or human metapneumovirus. To the authors' knowledge, the cases described in the present report were the first pediatric patients with COVID-19 in Japan. In children with COVID-19, the possibility of co-infection with other respiratory pathogens should be considered.	This article describes the first pediatric cases of COVID-19 in Japan, to the authors' knowledge, and notes the possibility of co-infection with other respiratory pathogens.	Kakuya F, Okubo H, Fujiyasu H, et al. The first pediatric patients with coronavirus disease 2019 (COVID-19) in Japan; The risk of co-infection with other respiratory viruses [published online 2020 May 29]. Jpn J Infect Dis. doi:10.7883/yoken.JJID.2020.181
Pediatrics, high-volume testing, drive-through, Philadelphia, USA	29-May-20	Drive-Through COVID-19 Testing During the 2020 Pandemic: A Safe, Efficient, and Scalable Model for	Academic Pediatrics	Healthcare Innovations	This report outlines a team's approach, process, and lessons learned in developing a pediatric-focused high-volume COVID-19 testing site in Philadelphia, PA, USA. The site also prioritized testing employees in an effort to return healthy individuals to work and limit workplace transmission. Drive-through testing has several advantages: it promotes social distancing, prevents infectious individuals from entering a closed building, and offers efficiency and convenience to families. Between March 18 and March 31, 2020, the site completed 901 tests with a positive rate of 8.5% compared to	This article shares one team's development of a pediatric-focused drive-through COVID-19 testing center and discusses how this process can inform	Flynn EF, Kuhn E, Shaik M, Tarr E, Scattolini N, Ballantine A. Drive-Through COVID-19 Testing During the 2020 Pandemic: a safe, efficient, and scalable model for pediatric patients and healthcare workers

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		Pediatric Patients and Healthcare Workers			the citywide rate of 20%. During the study period, 26% of patients tested were under 18 years old, and the peak age range for tested patients was 30 to 39 years old.	future pediatric public health efforts.	[published online 2020 May 29]. Acad Pediatr. doi:10.1016/j.acap.2020.05.018
Children, age-related susceptibility, ACE2, cross-protection, immunity	29-May-20	Higher Prevalence of Asymptomatic or Mild COVID-19 in Children, Claims and Clues	Journal of Medical Virology	Commentary	While children of different age groups are vulnerable to SARS-CoV-2 infection, they mostly experience either an asymptomatic or mild form of disease compared with adults. Plausible explanations for this phenomenon are discussed in this article, related to level of ACE2 receptor expression, childhood vaccination and potential cross-protection against COVID-19, and differences in innate and adaptive immunity.	Possible mechanisms underlying lower prevalence and milder COVID-19 disease in children, compared to adults, are described.	Miri SM, Noorbakhsh F, Mohebbi SR, Ghaemi A. Higher prevalence of asymptomatic or mild COVID-19 in children, claims and clues [published online 2020 May 29]. J Med Virol. doi:10.1002/jmv.26069
Age-related difference, trained immunity, adaptive memory, BCG vaccination	29-May-20	The Perplexing Question of Trained Immunity Versus Adaptive Memory in COVID-19	Journal of Medical Virology	Review	Apart from geographic limitation to people with prior exposure to other coronaviruses and air pollutants, inflammatory comordidities and older ages are also among the main factors of susceptibility to severe illness. The unusual epidemiological data pointed out in children and African territories have revealed new insights in host-pathogen interplay with more focus on epigenetic regulation of cognitive compartments belonging to innate immunity. Should trained immunity be proven to be involved in timely immune responsiveness against SARS-CoV-2 and that adaptive memory could be detrimental, both treatment regimens and vaccine design will tremendously change accordingly with more focus on upper respiratory tissue innate immunity to subdue this threat underway.	This article addresses the wide spectrum of symptoms observed in COVID-19 through the framework of trained immunity (in children) and adaptive immune enhancement (in older ages).	Kerboua KE. The perplexing question of trained immunity versus adaptive memory in COVID-19 [published online 2020 May 29]. J Med Virol. doi:10.1002/jmv.26083
Children, African American, Hispanic, demographic risk factors, Chicago, USA	29-May-20	African American Children Are at Higher Risk for COVID-19 Infection	Pediatric Allergy and Immunology	Letter to the Editor	Recent evidence suggests there are higher rates of COVID-19 and related fatality rates in African American adult communities around the United States. However, there is limited data as to whether any race or ethnicity group is at higher risk for COVID-19 infection in children. In this study, over a five-week period from March to April 2020, 474 children (<18 years) were evaluated and tested; and 5.2% of children were found to be positive for COVID-19. Minority racial/ethnic groups were significantly associated with COVID-19 positive test results. Compared with non-Hispanic whites, African American children had a significantly higher rate of positive test (1.7% vs. 6.8% respectively, p=0.046). Hispanic children had a trend towards higher rate of positive COVID-19 test compared with their non-Hispanic white counterparts (6.6% vs. 1.7% respectively, p=0.067). In logistic regression, African American race and higher age were risk factors for positive COVID-19 test even after adjusting for all demographic variables; pre-existing asthma was not associated with differential COVID-19 risk. 80% of hospitalized and all PICU admitted children were African American.	Findings from this study suggest that African American children are not only at higher risk for SARS-CoV-2 infection but may also be at higher risk for more severe infection once hospitalized.	Bandi S, Nevid MZ, Mahdavinia M. African American children are at higher risk for COVID-19 infection [published online 2020 May 29]. Pediatr Allergy Immunol. doi:10.1111/pai.13298
Women, children, essential services, pandemic response	29-May-20	Covid-19: Millions of Women and Children at Risk as Visits to Essential Services Plummet	The BMJ	News	During a high-level meeting organized by the United Nations (UN) Every Woman Every Child initiative and advocacy groups, the UN has predicted that 47 million women could lose access to contraception resulting in 7 million additional unintended pregnancies over the next six months due to COVID-19. There could also be 31 million additional cases of gender-based violence in low- and middle-income countries. Disruptions in medical supply chains and strained financial and human resources, as well as lockdowns and transport disruptions, have led to declines in healthcare visits and deliveries	Disruptions in medical supply chains, transportation, and the implementation of lockdowns during the COVID-19 pandemic threaten access to essential services for	Thornton J. Covid-19: Millions of women and children at risk as visits to essential services plummet. BMJ. 2020;369:m2171. doi:10.1136/bmj.m2171

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					in health institutions. Leaders at the UN meeting call for national policies and budgets to protect human rights, to focus on strengthening health systems, and invest in multi-stakeholder partnership.	women and children in countries with already weak health systems.	
COVID-19; Nigerian children; clinical features; laboratory findings	28-May-20	COVID-19 in children: a case series from Nigeria	Pan African Medical Journal	Case Series	This case series describes the clinical presentation, laboratory findings, treatment, and outcome in a group of 5 Nigerian children (ages 3 months, 2,4,7 & 8 years, 3 of the 5 children male) managed at a COVID-19 isolation and treatment center in Katsina-Nigeria from April 16-May 15, 2020. All the children had a SARS-CoV-2 positive RT-PCR test and had close contact with family members with confirmed COVID-19. Out of the 5 children, 1 had moderate disease, 3 had mild symptomatic disease, and 1 was asymptomatic. 2 out of the 5 children had lymphocytosis, which contrasts with the observation of leucopenia with lymphopenia reported in adult populations. Out of the 4 children who had chest radiograph, 2 had features of pneumonia. With no definitive treatment for COVID-19 at the time, the children received zinc, lopinavir/ritonavir, and azithromycin with improvement in their clinical state. The authors note their study showed a predominance of features of upper respiratory tract infection (URTI) suggesting a need for screening of children with URTI in an area of high transmission or history of a household contact with confirmed COVID-19.	This case series describes the clinical presentation, laboratory findings, treatment, and outcomes in 5 Nigerian children with COVID-19. While most of the cases were mild or asymptomatic, the authors note a predominance of upper respiratory tract infection (URTI) suggesting a need to screen children with URTI in an area of high transmission or history of a household contact with confirmed COVID-19.	Ibrahim OR, Suleiman BM, Sanda A, Oloyede T, Bello SO, Bello UI, Yahaya S, Dawud A, Bashir SS. COVID-19 in children: a case series from Nigeria. Pan Afr Med J. 2020 May 28;35(Suppl 2):53. doi: 10.11604/pamj.supp.2020.35.2.23597. PMID: 33623578; PMCID: PMC7875722.
Screen time, children, adolescents, education, social media, mental health, physical activity, exercise, sleep	28-May-20	Screen Time for Children and Adolescents During the Coronavirus Disease 2019 Pandemic	Obesity	Perspective	Although excessive screen time may be associated with health risks, given current laws and policies during COVID-19, rises in screen time may be inevitable and even beneficial for education and socialization. The authors describe the benefits and drawbacks of screen time related to physical activity, education, social media and support, sleep, and mental health. While sheltering in place, screen time can be used to promote physical activity although it is traditionally associated with sedentary behavior. Even though most remote learning is conducted on screens and constitutes a large proportion of the day, this time is largely equivalent to in-school instruction. Social media may be an ideal platform to keep connected with friends and peers while practicing social distancing. On the other hand, excessive screen time is associated with poor sleep, but avoiding screens for at least 1 hour before bedtime may mitigate sleep disturbances, especially given that sleep quality may be poorer because of stressors or anxiety. Increased screen time may further exacerbate the risk for depression, anxiety, suicide, and inattention, but many mental health resources and services are offered online. The authors argue that professional societies should update their current guidance regarding screen time to support families during the COVID-19 pandemic.	The authors describe the benefits and drawbacks of screen time related to physical activity, education, social media and support, sleep, and mental health. They argue that professional societies should update current guidance regarding screen time to support families during the COVID-19 pandemic.	Nagata JM, Magid HSA, Gabriel KP. Screen Time for Children and Adolescents During the Coronavirus Disease 2019 Pandemic. Obesity. 2020;28(9):1582-1583. doi:10.1002/oby.22917
Pregnancy, delivery, delayed cord	28-May-20	Delayed umbilical cord clamping and breastfeeding	European Journal of Obstetrics and Gynecology	Correspondence	The authors express that the insufficient evidence thus far for vertical transmission of SARS-CoV-2 from mother to fetus or newborn is not reliable due to the novelty of the virus and vulnerability of the fetus. From this, the authors conclude that since respiratory droplets are a major route of mother	The authors argue for early cord clamping, immediate isolation of the newborn, and lack	Kohan S, Rahnemaei FA. Delayed umbilical cord clamping and breastfeeding after childbirth in mothers

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clamping, breastfeeding		after childbirth in mothers affected by COVID 19: Recommended or not?	and Reproductive Biology		to infant transmission during the delivery process, early cord clamping, immediate isolation of the newborn and lack of skin-to-skin contact can reduce infection risk to the newborn. They also express that if the mother's health permits it, she could breastfeed her newborn with proper precautions in place.	of skin-to-skin contact to minimize transmission of SARS-CoV-2 from mother to newborn by respiratory droplets following delivery.	affected by COVID 19: Recommended or not?. Eur J Obstet Gynecol Reprod Biol. 2020;250:264. doi:10.1016/j.ejogrb.2020.05.041
Pregnancy, childbirth, delivery, asymptomatic, universal screening, USA	28-May-20	Universal Screening for SARS-CoV-2 in Women Admitted for Delivery	The New England Journal of Medicine	Letter to the Editor	The obstetrical population presents a unique challenge during the COVID-19 pandemic since these patients have multiple interactions with the healthcare system and most are admitted to the hospital for delivery. The authors report the results of a universal testing strategy from 22 March-4 April 2020 at their center in New York City (NY, USA) for pregnant patients admitted to the hospital for delivery (n=215). They identified four patients (1.9%) who tested positive for SARS-CoV-2 and who had symptoms of COVID-19 on admission. Of 210 women tested who were asymptomatic on admission, 29 (13.7%) were positive for SARS-CoV-2. One patient who was negative for SARS-CoV-2 on admission became symptomatic postpartum, and repeat SARS-CoV-2 testing was positive. The authors conclude that most of the SARS-CoV-2 positive pregnant patients were asymptomatic on admission, which underscores the risk of COVID-19 in asymptomatic obstetrical patients.	In one hospital during the COVID-19 pandemic in New York City, more than 13% of obstetrical patients admitted for delivery were positive for SARS-CoV-2 without symptoms.	Sutton D, Fuchs K, D'Alton M et al. Universal Screening for SARS-CoV-2 in Women Admitted for Delivery. [published online, 2020 May 28]. N. Engl. J. Med. 382:2163-2164. doi:10.1056/NEJMc2009316
Neonates, cord clamping, breastfeeding, isolation, skin-to-skin contact	28-May-20	Delayed Umbilical Cord Clamping and Breastfeeding After Childbirth in Mothers Affected by COVID 19: Recommended or Not?	European Journal of Obstetrics & Gynecology and Reproductive Biology	Correspondence	Newborns are more vulnerable to the potential consequence of COVID-19 due to their immature immune systems. Currently, there is insufficient evidence for vertical transmission from mother to fetus via amniotic fluid, umbilical blood or breast milk. Since respiratory droplets are a major route of transmission to the infant during the delivery process, early cord clamping, immediate isolation of the newborn, and lack of skin-to-skin contact can reduce the newborn's risk of infection. If a mother is generally well, breastfeeding should be allowed while observing hygiene precautions.	This brief correspondence argues against delayed umbilical cord clamping but in favor of breastfeeding in newborns born to mothers with COVID-19.	Kohan S, Rahnemaei FA. Delayed umbilical cord clamping and breastfeeding after childbirth in mothers affected by COVID 19: Recommended or not? [published online 2020 May 28]. Eur J Obstet Gynecol Reprod Biol. doi:10.1016/j.ejogrb.2020.05.041
Pregnancy, obstetrical anesthesia, cesarean section, infection control, China	28-May-20	Anesthesia and Infection Control in Cesarean Section of Pregnant Women With COVID-19 Infection: A Descriptive Study	Journal of Clinical Anesthesia	Correspondence	From January 24 to March 15, 2020, there were 3,294 pregnant women who had vaginal or operative deliveries in the Maternal and Children Health Hospital in Wuhan, China, of whom 110 had suspected and confirmed COVID-19 infection. The authors describe an upgraded infection prevention and control practice to limit risk of exposure to SARS-CoV-2 among anesthesiologists when conducting cesarean sections for pregnant women with COVID-19. They report the safety and efficacy of combined spinal-epidural anesthesia and infection control measures on the perinatal care quality of 14 pregnant women with COVID-19. Some minor complications were reported in these patients, but none had severe obstetric complications related to anesthesia or surgery.	No adverse events were noted in this report of the safety and efficacy of infection prevention and control strategies to limit risk of SARS-CoV-2 transmission during obstetrical anesthesia.	Yue L, Han L, Li Q, et al. Anesthesia and infection control in cesarean section of pregnant women with COVID-19 infection: A descriptive study [published online 2020 May 28]. J Clin Anesth. doi:10.1016/j.jclinane.2020.109908
Children, secondary transmission,	28-May-20	No Evidence of Secondary Transmission of COVID-19 From	Euro-surveillance	Rapid Communication	In this study, all notifications of SARS-CoV-2 transmission to Public Health Departments prior to school closures (on March 12, 2020) in Ireland were screened and identified 3 infected children and 3 infected adults with history of school attendance. Epidemiological data indicated that all cases were	No cases of secondary transmission of SARS-CoV-2 in the school setting were identified	Heavey L, Casey G, Kelly C, Kelly D, McDarby G. No evidence of secondary transmission of COVID-19

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school settings, Ireland		Children Attending School in Ireland, 2020			infected outside of the school setting. Among 924 child contacts and 101 adult contacts of these six cases identified, in the school setting, there were no confirmed cases of COVID-19. These findings add to current evidence that children do not appear to be drivers of transmission, thus the authors argue that reopening schools should be considered safe accompanied by certain measures.	in this study from Ireland; data support the reopening of schools with appropriate infection control measures.	from children attending school in Ireland, 2020. Euro Surveill. doi:10.2807/1560-7917.ES.2020.25.21.2000903
Infant, Kawasaki Disease, IV immuno-globulins, California, USA	28-May-20	COVID-19 and Kawasaki Disease: Novel Virus and Novel Case	Hospital Pediatrics	Case Report	A 6-month-old infant, admitted and diagnosed with classic Kawasaki disease, screened positive for COVID-19 in the setting of fever and minimal respiratory symptoms. The patient was treated per treatment guidelines, with IV immunoglobulin and high-dose aspirin, and subsequently fever subsided with resolution of her clinical symptoms. The patient's initial echocardiogram was normal, and she was discharged within 48 hours of completion of her IV immunoglobulin infusion. In pediatrics, with the clinical spectrum yet to be clearly defined, patients presenting with fever alone or primarily with other organ system involvement may be missed if testing is restricted to those with respiratory complaints alone.	Kawasaki Disease and COVID-19 were diagnosed in a 6-month-old infant with fever and minimal respiratory symptoms.	Jones VG, Mills M, Suarez D, et al. COVID-19 and Kawasaki Disease: Novel Virus and Novel Case [published online 2020 Apr 7]. Hosp Pediatr. doi:10.1542/hpeds.2020-0123
Children, age-related susceptibility, resistance, susceptibility, immune response	28-May-20	Resistance of Children to Covid-19. How?	Mucosal Immunology	Comment	Both resistance to SARS-CoV-2 infection and resistance to disease appear to be much stronger in children than in adults. The apparent resistance to infection might actually reflect a more rapid clearance of the virus so that the chance to detect cases is diminished; future studies on seropositivity prevalence should help to distinguish between these possibilities. Major hypotheses explored in this article include more rapid and efficient innate and trained immune response in children, a less intense immunopathological reaction, and greater capacity for tissue repair. Nevertheless, extremely rare severe cases have been observed in children, especially those below the age of 1. Understanding susceptibility/resistance mechanisms can contribute to therapy and vaccine design.	This article reviews existing hypotheses for greater resistance to SARS-CoV-2 infection and/or disease in children compared to adults.	Fischer A. Resistance of children to Covid-19. How? [published online 2020 May 28]. Mucosal Immunol. doi:10.1038/s41385-020-0303-9
Children, comorbidities, multi-organ involvement, BAME ethnicity, London, UK	28-May-20	Ethnicity and COVID-19 in children with comorbidities	The Lancet Child & Adolescent Health	Correspondence	In this study, children (aged 0–16 years) with confirmed COVID-19 and comorbidities, who required admission, were prospectively identified from King's College Hospital, London, UK, between February 25 and April 28, 2020. Five children (mean age 7.1 years, range 0.2-15.3 years) with COVID-19 and comorbidities were identified. Two (40%) of five patients were less than 1 year old. The pre-existing comorbidities included cerebral palsy, prematurity, Wilson disease, and dilated cardiomyopathy. Four patients (80%) were from a black, Asian, and minority ethnic (BAME) group. Investigations showed that three patients (60%) had both lymphopenia and thrombocytopenia. Of the four patients that had CRP measurements, three (75%) had elevated measurements. Respiratory support was required in three (60%) of five patients, of which two patients needed mechanical ventilation in the intensive care unit. Liver dysfunction was observed in four patients (80%), although two of these patients had underlying liver conditions, and renal dysfunction was detected in one patient. As of May 20, four patients have been discharged and one is still an inpatient, with a median length of stay of 20 days (range 7–84 days).	In this small cohort of children with comorbidities hospitalized with COVID-19, important themes include: the wide range in severity of the disease, frequent multi-organ involvement, and that most patients were from BAME populations.	Harman K, Verma A, Cook J, et al. Ethnicity and COVID-19 in children with comorbidities [published online 2020 May 28]. Lancet Child & Adol Health. doi:10.1016/S2352-4642(20)30167-X
Children, Kawasaki disease,	28-May-20	Multisystem Inflammatory Syndrome in	Journal of the Pediatric Infectious	Case Series	We present a series of six critically ill children (range 5-14 years) with Multisystem Inflammatory Syndrome in Children (MIS-C). Key findings of this syndrome include fever, diarrhea, shock, and variable presence of rash,	A small case series of multisystem inflammatory syndrome	Chiotos K, Bassiri H, Behrens EM, et al. Multisystem Inflammatory Syndrome in

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multisystem inflammatory syndrome, Philadelphia, USA		Children During the COVID-19 Pandemic: A Case Series	Diseases Society		conjunctivitis, extremity edema, and mucous membrane changes. The current case series supports this syndrome as a clinical entity potentially driven by a disordered immunological response following SARS-CoV-2 infection. Evidence of prior infection includes positive antibody testing for SARS-CoV-2 IgG antibodies in all but one patient (who was not tested) and weakly positive SARS-CoV-2 nasopharyngeal PCRs in three patients. Two potentially notable findings from this study include the presence of neurologic symptoms in four patients and hyponatremia in all six patients at presentation, which may be associated with Kawasaki shock syndrome. IV immunoglobulins and methylprednisone, which are used successfully to treat Kawasaki disease, were administered to all patients in this cohort and were effective in reducing systemic inflammation.	in children from Philadelphia (USA) reveals several notable clinical features, including neurologic symptoms and hyponatremia.	Children during the COVID-19 pandemic: a case series [published online 2020 May 28]. J Pediatric Infect Dis Soc. doi:10.1093/jpids/piaa069
Children, buccal swab, saliva samples, viral load, Singapore	28-May-20	Clinical Utility of Buccal Swabs for Sars-Cov-2 Detection in Covid-19-Infected Children	Journal of the Pediatric Infectious Diseases Society	Brief Report	Recent studies have shown evidence of consistent detection of SARS-CoV-2 in saliva specimens of infected adults, raising the possibility of using saliva as a less invasive form of screening for SARS-CoV-2 that is not aerosol-generating. Although children are often unable to produce saliva specimens spontaneously, buccal swabs can be performed to obtain saliva for testing. In addition, if the virus could be detected in saliva, this suggests a potential route of viral transmission in infants who tend to drool and place objects in their mouths. In the present study, eleven children (6 asymptomatic, 5 symptomatic) were included; the median ages were 8.4 years (range 2.1-12.5 years) and 3.8 years (0.3-11.8 years) respectively. SARS-CoV-2 RNA was detected from at least 1 buccal specimen in 9 out of 11 COVID-19-infected children (81.8%). The viral loads in buccal specimens were substantially lower than those in nasopharyngeal specimens. Findings led the authors to conclude that buccal swabs for SARS-CoV-2 are not suitable as screening specimens for COVID-19 in children.	Results from this comparison of buccal and nasopharyngeal specimens in COVID-19 infected children conclude that buccal specimen collection appears to have reduced sensitivity.	Kam KQ, Yung CF, Maiwald M, et al. Clinical Utility of Buccal Swabs for Sars-Cov-2 Detection in Covid-19-Infected Children [published online 2020 May 28]. J Pediatric Infect Dis Soc. doi:10.1093/jpids/piaa068
Children, viral shedding, reactivation, hospital discharge, China	28-May-20	Characteristics of Children With Reactivation of SARS-CoV-2 Infection After Hospital Discharge	Clinical Pediatrics	Brief Report	In this retrospective cohort study, 14 children (<15 years) who had been hospitalized with confirmed COVID-19 in Beijing Ditan Hospital and who were discharged between January 21 and April 18, 2020 were followed and included in analysis. Of these, 7 (50%) experienced reactivation of SARS-CoV-2 shedding, including 2 children who experienced a second reactivation after discharge. Of the children with reactivation, 2 were infants (<3 years), 3 were male, and the median age was 5.7 (range 2.9-7.3) years, which indicated that they were older than the children who did not experience reactivation (median 2.2 years, range 0.8-6.5 years). None of the patients were symptomatic at the time of discharge, and treatment methods did not differ significantly between those with reactivation and those without. The median time from discharge to the first recurrence of a positive SARS-CoV-2 test result was 14 (range 7-17) days.	Half of the children in this study had a positive SARS-CoV-2 test result on nasopharyngeal swab samples after hospital discharge.	Zhao W, Wang Y, Tang Y, et al. Characteristics of Children With Reactivation of SARS-CoV-2 Infection After Hospital Discharge [published online 2020 May 28]. Clin Pediatr (Phila). doi:10.1177/0009922820928057

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Pediatric pulmonology, imaging, radiological diagnosis	28-May-20	Practical Guide for Pediatric Pulmonologists on Imaging Management of Pediatric Patients With COVID-19	Pediatric Pulmonology	Review	This review article synthesizes the reported imaging findings in pediatric COVID-19 across the literature, offers imaging differential diagnostic considerations and useful radiographic features to help differentiate these entities from COVID-19, and provides recommendations for ordering imaging studies to evaluate suspected cases of pediatric COVID-19.	This review summarizes available literature on imaging findings in pediatric COVID-19 and provides practical guidance.	Foust AM, McAdam AJ, Chu WC, et al. Practical Guide for Pediatric Pulmonologists on Imaging Management of Pediatric Patients with COVID-19 [published online 2020 May 28]. Pediatr Pulmonol. doi:10.1002/ppul.24870
Child, inflammatory syndrome, Kawasaki disease, multi-organ dysfunction, India	28-May-20	Multisystem Inflammatory Syndrome With Features of Atypical Kawasaki Disease During COVID-19 Pandemic	The Indian Journal of Pediatrics	Clinical Brief	The authors report a 5-year-old boy from a COVID-19 hotspot area in India who presented in late April 2020 with acute febrile illness with abdominal pain and loose stools followed by shock. On examination, child had bulbar conjunctivitis and extremity edema. Initial investigations showed high inflammatory parameters, elevated serum creatinine and liver enzymes. Echocardiography showed moderate left ventricular dysfunction and normal coronaries. Cardiac enzymes were also elevated, suggesting myocarditis. He was treated with inotropic support, respiratory support with high flow nasal cannula, IV immunoglobulins, aspirin, steroids and diuretics. RT-PCR for SARS-CoV-2 was negative twice. His clinical condition improved rapidly, and he was discharged after 6 hospital days.	The present case shows similar laboratory parameters and clinical profile to growing reports of COVID-19 related multi-system inflammatory syndrome in children.	Rauf A, Vijayan A, John ST, Krishnan R, Latheef A. Multisystem Inflammatory Syndrome with Features of Atypical Kawasaki Disease during COVID-19 Pandemic [published online 2020 May 28]. Indian J Pediatr. doi:10.1007/s12098-020-03357-1
Children, diagnostic tests, clinical presentation, chest CT	28-May-20	Diagnosis of COVID-19 in Children: The Story Evolves	BMC Medicine	Commentary	Although children are less likely to be diagnosed with SARS-CoV-2 than adults, significant concerns remain about the small number of children reported as requiring ventilatory support and who have died as a result of COVID-19. In the published literature, there do not appear to be specific co-morbidities which increase the risk of requiring hospitalization for SARS-CoV-2 infection in children. In addition, although difficult to draw conclusions from reports with a variety of phenotypes represented in children, markers such as CRP, procalcitonin, liver enzymes, and D-dimer appear to be elevated in children. Chest CT imaging has also been shown to have better diagnostic value than RT-PCR in a small handful of studies. Data on severe COVID-19 in children, including the need for ICU admission and the mortality rate, are limited.	Clinical features and markers, diagnostic testing, and data on severe disease in children with COVID-19 are discussed in this review.	Harwood R, Sinha I. Diagnosis of COVID-19 in children: the story evolves. BMC Med. 2020;18(1):158. doi:10.1186/s12916-020-01631-9
Children, serology, viral testing, Seattle, USA	28-May-20	Seroprevalence of SARS-CoV-2 among children visiting a hospital during the initial Seattle outbreak	medRxiv	Preprint (not peer reviewed)	Children are underrepresented in COVID-19 case counts. In the United States, children represent 22% of the population but only 1.7% of confirmed SARS-CoV-2 cases. One possibility is that symptom-based viral testing is less likely to identify infected children, since they often experience milder disease than adults. To better assess the frequency of pediatric SARS-CoV-2 infection, we serologically screened 1,775 residual samples from Seattle Children's Hospital collected from 1,076 children seeking medical care during March and April of 2020. Only one child was seropositive in March, but nine were seropositive in April for a period seroprevalence of >1%. Most seropositive children (8/10) were not suspected of having had COVID-19. The sera of most seropositive children had neutralizing activity, including one that neutralized at a dilution >1:18,000. Therefore, among children seeking medical care, the frequency of SARS-CoV-2 infection increased markedly during the early Seattle outbreak despite few positive viral tests.	Serology testing may capture cases of infection in children, with milder disease, that are not identified through symptom-based viral testing.	Dingens AS, Crawford KHD, Adler A, et al. Seroprevalence of SARS-CoV-2 among children visiting a hospital during the initial Seattle outbreak [published online 2020 May 28]. medRxiv. doi.10.1101/2020.05.26.20114124

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USA; screening; COVID-19; pregnancy; asymptomatic	27-May-20	Universal SARS-CoV-2 testing on admission to the labor and delivery unit: Low prevalence among asymptomatic obstetric patients	Infection Control and Hospital Epidemiology	Research Brief	In this article, the authors report the prevalence of asymptomatic SARS-CoV-2 infections in women presenting to the labor and delivery units at 2 academic and 2 community hospitals in Boston, USA, between April 18-May 5, 2020. 757/763 women were tested for SARS-CoV-2, of which 139 women displayed symptoms suggestive of SARS-CoV-2 infection. 11/139 (7.9%) symptomatic women and 9/618 (1.5%) asymptomatic women tested positive for SARS-CoV-2. In other words, 9/20 (45%) of women positive for SARS-CoV-2 upon admission were asymptomatic. None of the 9 positive asymptomatic patients developed COVID-19 symptoms, and all 9 newborns tested negative for SARS-CoV-2. This article indicates a lower prevalence of SARS-CoV-2 infection among asymptomatic pregnant women, than was earlier reported in New York City, USA. The authors suggest reduced community transmission, and under-reporting of symptoms by patients as possible causes for the difference in prevalence. They underscore the importance of universal screening of the obstetric population, discussing implications on maternal and neonate health, as well as the use of such screening in monitoring community transmission of SARS-CoV-2 and in guiding public health measures for resumption of healthcare and non-healthcare operations.	In this article, the authors report the prevalence of asymptomatic SARS-CoV-2 among patients presenting to the labor and delivery ward at hospitals in Boston, USA, determining that 45% of women positive for SARS-CoV-2 infection were asymptomatic at presentation. They also found that none of the women who tested positive transmitted the virus to their 9 newborns. Hence, they recommend the usage of universal screening of pregnant women as a tool to monitor community transmission and to guide public health measures accordingly.	Goldfarb IT, Diouf K, Barth WH, et al. Universal SARS-CoV-2 testing on admission to the labor and delivery unit: Low prevalence among asymptomatic obstetric patients. Infect Control Hosp Epidemiol. 2020 Sep;41(9):1095-1096. doi: 10.1017/ice.2020.255. Epub 2020 May 27. PMID: 32456729; PMCID: PMC7287300.
Maternal breastfeeding, neonate, pregnancy	27-May-20	Coronavirus Covid-19 infection and breastfeeding: an exploratory review [Access to Abstract in English Only; Article in Spanish]	Revista Española de Salud Pública	Review	The review aims to investigate the action plan on breastfeeding in postpartum women with SARS-CoV-2 and her newborn. A literature search was conducted through the Medline, Web of Science, Scopus, BVS, and Cuiden databases. A total of 14 documents have been found, of which 9 are observational empirical studies. Most of the studies were conducted in China, Italy, the USA, and Australia. A total of 114 mothers infected with SARS-CoV-2 with their respective newborns have been assessed. The results suggest that newborns should be breastfed and detecting the presence of antibodies of the coronavirus in them is a protective factor against infection. Breastfeeding in postpartum women with SARS-CoV-2 is highly recommended for the newborn if the health of the mother and newborn allows it. When direct breastfeeding is favored, the appropriate respiratory hygiene measures should be considered. If the mother's health does not permit direct breastfeeding, her breast milk should be previously extracted and kept unpasteurized. To secure newborn feeding, milk banks are also an appropriate option.	This review argues that the newborns should be breastfed if the maternal and child health status allows it and appropriate hygiene measures should be considered.	Fernández-Carrasco FJ, Vázquez-Lara JM, González-Mey U, Gómez-Salgado J, Parrón-Carreño T, Rodríguez-Díaz L. Infección por coronavirus Covid-19 y lactancia materna: una revisión exploratoria [Coronavirus Covid-19 infection and breastfeeding: an exploratory review]. Rev Esp Salud Publica. 2020;94:e202005055. Published 2020 May 27.

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Vertical transmission, pregnancy, maternal outcomes, placenta, pathology, United Kingdom	27-May-20	Adverse outcomes in SAR-CoV-2 (COVID-19) and SARS virus related pregnancies with probable vertical transmission	JBRA Assisted Reproduction	Review	This article summarizes some of the current data on COVID-19 in pregnancy, including evidence for and against possible vertical transmission of the virus, findings from placental pathology, and the impact of the virus and potential vertical transmission on other birth outcomes. There are several reports suggestive of vertical or in-utero transmission of the SARS-CoV-2 virus but with insufficient information to establish with certainty how the virus was transmitted. Other studies have shown no evidence of vertical transmission, yet also have their limitations. At this time, there is a lack of definitive data for whether or not vertical transmission occurs. Pathologic changes in the maternal placenta have also been described, including decidual arteriopathy and maternal vascular malperfusion. One study found SARS-CoV-2 mainly in the syncytiotrophoblast cells at the maternal-fetal interface of the placenta in a second trimester of pregnancy. The authors summarize several reports of adverse outcomes, such as preterm births, that occurred in cases with possible vertical transmission. More evidence is needed to understand how COVID-19 impacts pregnancy and whether or not vertical transmission occurs.	There is conflicting evidence regarding vertical transmission of SARS-CoV-2 and the role of placental and endometrial tissue. Vertical transmission could impact pregnancy and pregnancy-related outcomes, such as preterm birth. Further evidence is needed to draw more concrete conclusions that will help guide clinical care.	Gulam Bahadur, Roy Homburg, Wai Yoong, et al. Adverse outcomes in SAR-CoV-2 (COVID-19) and SARS virus related pregnancies with probable vertical transmission. JBRA Assist. Reprod. 2020; 24 (3):351-357
Pregnancy, universal obstetric screening, PPE	27-May-20	Letter to the Editor: Screening All Pregnant Women Admitted To Labor And Delivery For The Virus Responsible For COVID-19	American Journal of Obstetrics and Gynecology	Letter to the Editor	The authors disagree with the recent call by Vintzileos et al. for universal obstetric COVID-19 screening and argue in favor of continued adherence to public health guidelines for COVID-19 diagnostic testing. They state that a positive COVID-19 test provides no information regarding current or future ability to transmit the virus. Therefore, they recommend continued use of universal personal protective equipment with testing limited to diagnosis in disease management.	In this article, the authors present an argument against universal obstetric screening for COVID-19.	Henderson CE, Jackman JM, Rezai S. Letter to the Editor: Screening All Pregnant Women Admitted To Labor And Delivery For The Virus Responsible For COVID-19 [published online 2020 May 27]. Am J Obstet Gynecol. doi:10.1016/j.ajog.2020.05.040
Pregnancy, universal obstetric screening, pre-symptomatic or asymptomatic patients, PPE	27-May-20	Reply To: Letter to the Editor: Screening All Pregnant Women Admitted to Labor and Delivery for the Virus Responsible for COVID-19	American Journal of Obstetrics and Gynecology	Letter to the Editor	In reply to the correspondence by Henderson et al., the authors claim that testing capacity using RT-PCR has increased, and epidemiological evidence has emerged for widespread viral transmission by both pre-symptomatic and asymptomatic COVID-19 positive patients. These data support the logic of universal testing for SARS-CoV-2 among obstetric patients admitted to the hospital; such testing would ensure the correct cohorting of patients, correct use of protective personal equipment, and correct utilization of inpatient resources if the need arises.	In reply to the letter by Henderson et al., the authors emphasize that universal obstetric screening is aimed at identifying pre-symptomatic or asymptomatic patients.	Vintzileos WS, Muscat J, Hoffmann E, et al. Reply to: Letter to the Editor: Screening All Pregnant Women Admitted to Labor and Delivery for the Virus Responsible for COVID-19 [published online 2020 May 27]. Am J Obstet Gynecol. doi:10.1016/j.ajog.2020.05.041
Children, Kawasaki Disease, history, vasculitis	27-May-20	Covid-19 and Kawasaki Disease: A Glimpse at the Past for a Predictable Future	Pediatric Cardiology	Letter to the Editor	A major warning is spreading all over the world about the increasing occurrence of Kawasaki Disease (KD) among children living in high-risk areas, potentially linked with SARS-CoV-2 infection. There is some evidence that the “Covid-19-associated” disease may present as an atypical form of KD. In this view, the authors propose that the term “Covid-19-associated vasculitis” is a more appropriate term for this disease, rather than “Covid-19-associated KD”. These two similar but distinct entities may even coexist since the “true” KD has the highest incidence in March–April.	The authors refer to the history of Kawasaki Disease discovery to reflect on the recent emergence of what they term "COVID-19 associated vasculitis" in children.	Calabri GB, Formigari R. Covid-19 and Kawasaki Disease: A Glimpse at the Past for a Predictable Future [published online 2020 May 27]. Pediatr Cardiol. doi:10.1007/s00246-020-02385-0

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Pediatrics, compassionate palliative care, moral distress, ethical issues	27-May-20	Pediatric Palliative Care in a Pandemic: Role Obligations, Moral Distress, and the Care You Can Give	Pediatrics	Ethics Rounds	Many ethical issues arise concerning the care of critically ill and dying patients during the COVID-19 pandemic. This issue presents two cases that highlight two different types of ethical issues. One is focused on the decisions that have to be made when the surge of patients with respiratory failure overwhelm ICUs. The other is focused on the psychological issues that arise for parents who are caring for a dying child when infection-control policies limit the number of visitors. Both of these situations raise challenges for caregivers who are trying to be honest, to deal with their own moral distress, and to provide compassionate palliative care.	Two cases are presented that highlight ethical issues surrounding the provision of compassionate palliative care to children with COVID-19.	Evans AM, Jonas M, Lantos J. Pediatric Palliative Care in a Pandemic: Role Obligations, Moral Distress, and the Care You Can Give [published online 2020 May 27]. Pediatrics. doi:10.1542/peds.2020-1163
Children, laboratory abnormalities, leukocyte indices, inflammatory markers, cardiac injury, systematic review	27-May-20	Laboratory Abnormalities in Children with Mild and Severe Coronavirus Disease 2019 (COVID-19): a pooled analysis and review	Clinical Biochemistry	Original Article	A literature search on laboratory findings in children with mild and severe COVID-19 identified 24 studies, including a total of 624 pediatric cases with laboratory-confirmed COVID-19, which report data on 27 different biomarkers. A meta-analysis was performed to calculate the pooled prevalence estimates (PPE) for these laboratory abnormalities in mild COVID-19. In mild disease, creatine kinase-MB (CK-MB) was frequently elevated, with a PPE of 33%. In severe disease, C-reactive protein (CRP), procalcitonin (PCT), and lactate dehydrogenase (LDH) were frequently elevated. Data also showed an inconsistent pattern of change in the leukocyte index of mild and severe cases of COVID-19 in children, differing from reports in adults that highlight specific leukocyte trends. Specifically, changes in leukocyte counts were only observed in 32% of the mild pediatric cases (PPE: 13% increase, 19% decrease). This brings into question the utility and reliability of such parameters in monitoring disease severity in the pediatric population. Instead, the authors suggest that physicians serially monitor CRP, PCT, and LDH to track the course of illness in hospitalized children, as well as cardiac biomarkers to assess possible cardiac injury.	Pooled findings from studies on laboratory markers in children with COVID-19 suggest that CRP, PCT, LDH, and CK-MB should be used to monitor illness, while leukocyte indices show inconsistent patterns.	Henry BM, Benoit SW, Santos de Oliveira MH, et al. Laboratory Abnormalities in Children with Mild and Severe Coronavirus Disease 2019 (COVID-19): a pooled analysis and review [published online 2020 May 27]. Clin Biochem. doi:10.1016/j.clinbiochem.2020.05.012
Children, child health, poverty, social services, food insecurity, policy action	27-May-20	Children Are Being Sidelined by covid-19	The BMJ	Editorial	Emerging data show the COVID-19 pandemic tracking along social fault lines; although children are not the face of this pandemic, they are deeply affected. In the shorter term, with the focus squarely on adults with covid-19, child health and social care services are being sidelined. Within family homes, the unintended consequences of the lockdown will affect poor children the most. In addition, many children are going hungry as foodbanks scramble to reconfigure services to meet the rising tide of food insecurity. In the longer term, an economic recession due to the pandemic will push further children into poverty with significant effects on child health. Proactive and concerted policy focus on vulnerable children is necessary to ensure that they are not overlooked.	This editorial summarizes negative short- and long-term impacts of the pandemic that are expected to affect vulnerable children.	Sinha I, Bennett D, Taylor-Robinson DC. Children are being sidelined by covid-19. BMJ. 2020;369:m2061. doi:10.1136/bmj.m2061
Perinatal mental health, NICU staff, post-traumatic stress	27-May-20	Covid-19 and the Need for Perinatal Mental Health Professionals: Now More Than Ever Before	Journal of Perinatology	Comment	In ordinary times, the experience of a NICU hospitalization is a potentially traumatic event for the newborn's parents. A published estimate of the prevalence of diagnosable mental disorders in NICU parents in the first partum year is 20–30%. To the author's knowledge, the highest report of parental post-traumatic stress symptoms in the literature (60% of mothers and 47% of fathers exceeding threshold) comes from a NICU that had strict limitations on skin-to-skin care and breastfeeding (not allowed) and visitation curtailment to one parent at a time. The current pandemic's limitations on parental engagement with newborns in the NICU, as well as exclusion of partners from labor and delivery will have serious effects on the	This article discusses the need to incorporate more perinatal mental health staff into NICUs, to support parents, newborns, and staff experiencing added stress during this pandemic.	Hynan MT. Covid-19 and the need for perinatal mental health professionals: now more than ever before [published online 2020 May 27]. J Perinatol. doi:10.1038/s41372-020-0696-z

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					wellbeing of families. Currently, most NICU social workers and psychologists are considered non-essential. Strategies to add mental health staff in the perinatal setting must be incorporated into discussions to promote the psychological health of parents, newborns, and NICU workers.		
Children, Kawasaki disease, France	27-May-20	Kawasaki Disease Linked to COVID-19 in Children	Nature Reviews Immunology	In Brief	An unusually high incidence of Kawasaki disease in children was reported in a French center for emerging infectious diseases: 17 cases in 11 days, in contrast to an average of 2 cases per month in 2018–2019. In 82% of the cases, IgG antibodies for SARS-CoV-2 were detected, suggesting an association between the virus and this syndrome in children. Although only six patients had recent history of an acute respiratory infection, all patients had gastrointestinal symptoms before the onset of Kawasaki disease symptoms. Remarkably, almost 60% of the patients originated from sub-Saharan Africa or Caribbean islands, and 12% from Asia, raising a possible genetic predisposition. Although Kawasaki disease-like syndromes have previously been linked to other viral infections, these patients showed higher levels of pro-inflammatory markers than other cohorts, which may reflect a particularly strong immunological reaction to SARS-CoV-2.	A brief summary of recent data on Kawasaki disease in children from France is provided.	Moreira A. Kawasaki disease linked to COVID-19 in children [published online 2020 May 27]. Nat Rev Immunol. doi:10.1038/s41577-020-0350-1
Pediatric inclusion, clinical therapeutic trials, bioethics	27-May-20	Importance of Pediatric Inclusion in COVID-19 Therapeutic Trials	Clinical Infectious Diseases	Viewpoints	As of May 6, 2020, options to participate in antiviral clinical trials targeting SARS-CoV-2, aside from convalescent plasma trials, are limited to adolescents ages 12 or older with the exception of a hydroxychloroquine treatment study at the authors' institution, open to children of all ages. Children have inherent biological differences that evolve with age and can manifest as alterations in immunity, disease pathophysiology, pharmacokinetics, and therapeutic effects. As a basic principle of justice, children significantly affected by COVID-19 should be given equal opportunities to receive potentially active therapeutic agents against COVID-19 in the safest manner possible, through structured clinical trials. Delays in initiation of pediatric clinical trials while awaiting adult data pose a potentially preventable safety issue for children.	The authors report their own experiences and outline a rationale for the inclusion of children in COVID-19 therapeutic trials.	Raabe VN, Lighter J, Caplan AL, Ratner AJ. Importance of Pediatric Inclusion in COVID-19 Therapeutic Trials [published online 2020 May 27]. Clin Infect Dis. doi:10.1093/cid/ciaa656
Children, critical care, PICU, oxygen therapy, mechanical ventilation, Spain	27-May-20	Children in Critical Care Due to Severe Acute Respiratory Syndrome Coronavirus 2 Infection: Experience in a Spanish Hospital	Pediatric Critical Care Medicine	Online Brief Report	At a tertiary hospital in Madrid, Spain between March 1 and April 15, 2020, 11 children were admitted to the pediatric ICU (PICU) with suspected COVID-19; PCR testing was positive in seven. Median age of the seven patients was 100.7 months (range 0.5-162 months). Five were admitted from the emergency department and two from the ward. The Pediatric Sequential Organ Failure Assessment score was 3 (range 0-9), and Pediatric Risk of Mortality II score was 4 (range 0-16). All children were previously healthy except one (who received an allogeneic hematopoietic stem cell transplantation). Respiratory symptoms and fever were prevalent. Not all patients presented with lymphopenia on admission. D-Dimer and ferritin were elevated. All patients needed oxygen therapy through a nasal cannula; five patients received high-flow nasal cannula therapy, which was later substituted with noninvasive ventilation in four. Mechanical ventilation was necessary in two patients on the first day of PICU admission. Tocilizumab was administered in two intubated children. Also, four children received heparin. No patients died.	In this small prospective cohort of children with COVID-19 in Spain, respiratory symptoms were the leading cause of PICU admission, making respiratory support the principal therapy.	García-Salido A, Leoz-Gordillo I, Martínez de Azagra-Garde A, et al. Children in Critical Care Due to Severe Acute Respiratory Syndrome Coronavirus 2 Infection: Experience in a Spanish Hospital [published online 2020 May 27]. Pediatr Crit Care Med. doi:10.1097/PCC.0000000000002475

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Pregnancy, critical illness, ICU, step-down-level care, preterm delivery, New York City, USA	27-May-20	Symptoms and Critical Illness Among Obstetric Patients With Coronavirus Disease 2019 (COVID-19) Infection	Obstetrics & Gynecology	Original Research	Pregnant women with COVID-19 were identified at two affiliated hospitals in New York City from March 13 to April 19, 2020, for this case series study. Of 158 pregnant women with SARS-CoV-2 infection, 124 (78%) had mild or asymptomatic disease and 34 (22%) had moderate or severe disease. Of 15 hospitalized women with moderate or severe disease, 10 received respiratory support with supplemental oxygen and one required intubation. Women with moderate or severe disease had a higher likelihood of having an underlying medical comorbidity (50% vs 27%, OR 2.76, 95% CI 1.26-6.02). Asthma was more common among those with moderate or severe disease (24% vs 8%, OR 3.51, 95% CI 1.26-9.75). Women with moderate or severe disease were significantly more likely to have leukopenia and elevated aspartate transaminase and ferritin. Women with moderate or severe disease were at significantly higher risk for cough and chest pain and pressure. Nine women received ICU or step-down-level care, including four for 9 days or longer. Two women underwent preterm delivery because their clinical status deteriorated.	In this case series, one in five pregnant women with SARS-CoV-2 infection developed moderate or severe disease, including a small proportion with prolonged critical illness who received ICU or step-down-level care.	Andrikopoulou M, Madden N, Wen T, et al. Symptoms and Critical Illness Among Obstetric Patients With Coronavirus Disease 2019 (COVID-19) Infection [published online 2020 May 27]. Obstet Gynecol. doi:10.1097/AOG.0000000000003996
Ectopic pregnancy, medical therapy, immuno-suppression, laparoscopy, viral transmission	27-May-20	Ectopic Pregnancy During Coronavirus Disease 2019 (COVID-19): To Operate, or Not to Operate	Obstetrics & Gynecology	Clinical Conundrums	In a stable, unruptured ectopic pregnancy with significant exposure or asymptomatic COVID-19 infection, should the patient be treated surgically, given limited personal protective equipment and potential exposure of surgical team members, or administered medical therapy (i.e. methotrexate) with potential risk of immunodeficiency which increases risk for worsening infection? The benefits and risks of medical and surgical therapies must be balanced when considering a woman's history, physical exam, laboratory and radiological findings. The authors also provide suggestions to reduce the theoretical risk of viral transmission during laparoscopy, a minimally invasive surgical approach that can reduce hospital stay and lead to quicker recovery.	Risks and benefits of surgical and medical therapies for ectopic pregnancy are discussed in the context of COVID-19 concerns.	Hansen KA, Stovall DW. Ectopic Pregnancy During Coronavirus Disease 2019 (COVID-19): To Operate, or Not to Operate [published online 2020 May 27]. Obstet Gynecol. doi:10.1097/AOG.0000000000003995
Human milk, viral load, thermal pasteurization, coronaviruses	27-May-20	The impact of thermal pasteurization on viral load in human milk and other matrices: A rapid review	medRxiv	Preprint (not peer reviewed)	Thermal pasteurization (62.5°C, 30 min) of human milk (HM) is thought to reduce the risk of transmitting viruses to an infant. Some viruses may be secreted into milk; others may be contaminants. Primary research articles until April 20, 2020 were identified to assess the impact of pasteurization on viral load or detection of live virus. Reviews were excluded, as were studies lacking quantitative measurements or those assessing pasteurization as a component of a larger process. Overall, 65,131 reports were identified, and 108 included. Pasteurization of HM at a minimum temperature of 56°C-60°C is effective at reducing detectable live virus. In cell culture media or plasma, coronaviruses (e.g., SARS-CoV, SARS-CoV-2, MERS) are highly susceptible to heating at ≥56°C. Future research should standardize pasteurization protocols and test viral inactivation using a human milk matrix.	This review describes the effect of thermal pasteurization on reducing detectable live viruses, like coronaviruses, in human milk.	Pitino MA, O'Connor DL, McGeer AJ, Unger S. The impact of thermal pasteurization on viral load in human milk and other matrices: A rapid review [published online 2020 May 27]. medRxiv. doi:10.1101/2020.05.23.20111369
Children, appendicitis, pediatric medical emergency, delayed diagnosis, Israel	27-May-20	Delayed Diagnosis of Pediatric Appendicitis During the COVID-19 Pandemic	Acta Paediatrica	Regular Article	In cases collected from three pediatric surgical wards in Israel, seven children presented with complicated appendicitis. Main reasons for their delayed diagnosis during the COVID-19 era were parental concern, telemedicine use and insufficient evaluation. Higher complication rates were found during the COVID-19 era compared to a similar period in the previous year (22% vs. 11%, p=0.06). Fear from COVID-19 pandemic may result in delayed diagnosis and higher complication rates in routine pediatric medical emergencies.	This report presents seven pediatric patients with appendicitis, all with late diagnosis resulting from different aspects related to fear from the current global COVID-19 pandemic.	Snapiri O, Rosenberg Danziger C, Krause I, et al. Delayed Diagnosis of Pediatric Appendicitis during the COVID-19 Pandemic [published online 2020 May 27]. Acta Paediatr. doi:10.1111/apa.15376

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Italy, COVID-19, pediatric cancer	26-May-20	Children with cancer in the time of COVID-19: An 8-week report from the six pediatric onco-hematology centers in Lombardia, Italy	Pediatric Blood Cancer	Letter to the Editor	The authors report on the impact of the COVID-19 pandemic on pediatric cancer patients during an 8-week period (Feb 20 - April 15, 2020) in the Lombardia region of Italy. This region was considered the epicenter of the pandemic in Italy and accounted for 40% of all Italians affected. During this period, 268 patients (ages 0-18 years) were tested for SARS-CoV-2 (molecular swab test) and 21 positive cases were identified. Tumor types of positive patients were 10 leukemias, 5 soft tissue or bone sarcomas, 2 lymphomas, 2 hepatoblastomas, 1 central nervous system tumor, and 6 patients who had completed cancer treatment and were in follow-up. 2 patients experienced complications of COVID-19. One with a diffuse intrinsic pontine glioma and existing neurological respiratory impairments, developed ab-ingestis pneumonia requiring inward respiratory support. Another with Hodgkin's lymphoma, who had previously been given radiotherapy, developed atypical bilateral pneumonia with mild symptoms. The authors note that compared to the general population of the region, few pediatric patients had clinical signs of COVID-19 and that severe disease was rare. They argue that anticancer treatments for pediatric patients should continue given that the consequences of postponing or delaying therapies carry great risk to patient health.	The authors report on the impact of the COVID-19 pandemic on pediatric patients during an 8-week period in Lombardia, Italy. They report very low incidence of COVID-19 and rare incidence of severe disease among these patients and thus urge physicians to not delay anticancer treatments for this population.	Ferrari A, Zecca M, Rizzari C, et al. Children with cancer in the time of COVID-19: An 8-week report from the six pediatric onco-hematology centers in Lombardia, Italy. Pediatric Blood & Cancer. 2020;67(8). doi:10.1002/pbc.28410
Pregnancy, children, nutrition, food security,	26-May-20	COVID-19 and maternal and child food and nutrition insecurity: a complex syndemic	Maternal and Child Nutrition	Editorial	The authors express concern that families with young children, youth, pregnant and lactating women need to be protected against the ongoing protracted COVID-19 pandemic and its exacerbating effects on poverty and unemployment, food and nutrition insecurity, and poor health outcomes. They articulate that the wellbeing of these vulnerable groups will depend on re-configuring currently ineffective food, nutrition, health, and social protection systems. Because food, nutrition, health, and socio-economic outcomes are inter-connected, better inter-sectoral coordination among global and local food, health care, and social protection systems is essential, taking equity and sustainability principles into account. Implementation science research informed by complex adaptive systems frameworks will be needed to fill in the major knowledge gaps.	The authors argue that coordination will be needed across food, health care, and social protection systems to mitigate the harmful effects of the COVID-19 pandemic on vulnerable populations.	Pérez-Escamilla R, Cunningham K, Moran VH. COVID-19 and maternal and child food and nutrition insecurity: a complex syndemic [published online 2020 May 26]. Matern Child Nutr. 2020;16(3):e13036. doi:10.1111/mcn.13036
MERS, antiviral drug, obstetric management, perinatal outcome, SARS vertical transmission	26-May-20	Obstetric Management of COVID-19 in Pregnant Women	Frontiers in Microbiology	Review	This review was conducted to investigate the clinical course and outcome of COVID-19 in pregnancy and to discuss several drugs that could be used for pregnant women with COVID-19. According to this literature review, most pregnant women infected by the three coronaviruses had an epidemiological contact history. Fever, cough, myalgia, and dyspnea are the major symptoms. CT images revealed typical signs of viral infection in the lungs. Nasopharynx swab or sputum samples were positive for viral nucleic acid. Lymphopenia and elevated liver enzymes were commonly seen in pregnant women with COVID-19 and SARS. Results found that interferon-alpha, lopinavir/ritonavir, and chloroquine could be administered to pregnant women with COVID-19 after patients were fully informed of these drugs' benefits and risks. Remdesivir and arbidol are promising antiviral drugs against COVID-19; however, their safety in pregnancy requires further research.	It seems that COVID-19 during pregnancy is milder than SARS and MERS during pregnancy. However, pregnant women with COVID-19 should be closely monitored, even after their etiological tests turn negative.	Mei Y, Luo D, Wei S, et al. Obstetric Management of COVID-19 in Pregnant Women. Front Microbiol. 2020;11:1186. doi:10.3389/fmicb.2020.01186

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Children, acute abdomen, hemodynamic instability, severe disease, Spain	26-May-20	Severe SARS-CoV-2 Infection in Children With Suspected Acute Abdomen: A Case Series From a Tertiary Hospital in Spain	The Pediatric Infectious Diseases Journal	Instructive Cases	This case series describes 5 children (range 9-13 years) with severe SARS-CoV-2 infection, hemodynamic instability and suspected acute abdomen. This form of the disease has not been previously documented. Four of the cases were confirmed SARS-CoV-2 infection and 1 probable. All of them were previously healthy and required admission to the pediatric critical care unit. Respiratory symptoms were not dominant or were absent; fever was observed. Laboratory testing revealed lymphopenia and high levels of C-reactive protein and procalcitonin with D-dimer, ferritin and interleukin-6 usually elevated. Respiratory support and inotropic support were almost always necessary; mechanical ventilation was required in one case.	Severe presentation of SARS-CoV-2 infection, characterized by presence of abdominal pain and skin manifestations, is described in five pediatric cases.	Cabrero-Hernández M, García-Salido A, Leoz-Gordillo I, et al. Severe SARS-CoV-2 Infection in Children With Suspected Acute Abdomen: A Case Series From a Tertiary Hospital in Spain [published online 2020 May 26]. Pediatr Infect Dis J. doi:10.1097/INF.0000000000002777
Children, Kawasaki Disease, etiology, co-infection, respiratory viruses, IgA response, molecular mimicry	26-May-20	Covid-19 and Kawasaki Disease: An Etiology or Coincidental Infection?	The Pediatric Infectious Diseases Journal	Letter to the Editor	Various studies have shown that viruses, such as adenovirus and coronavirus, have been isolated from patients with Kawasaki Disease (KD). In addition, clinical presentation of patients with viral infection could mimic KD, and some viruses may also be detected in KD as a coinfection. There is growing concern that COVID-19 might present in children as a multi-system inflammatory response similar to KD. Respiratory viruses, in particular, that replicate in the bronchial epithelium and stimulate IgA plasma cell response could explain the pathogenesis of KD. Interestingly, a vigorous host IgA response has been detected in the early stage of SARS-CoV-2 infection, which might suggest a possible link between COVID-19 and KD. Furthermore, the possibility of molecular mimicry, in which the pathogen shares similar protein structure with body tissue leading to immunological cross-reactivity cannot be excluded.	The documented association between respiratory viruses, including previous coronaviruses, and KD raises concern of whether SARS-CoV-2 infection increases the risk of KD in children.	Raba AA, Abobaker A. Covid-19 and Kawasaki Disease: An Etiology or Coincidental Infection? [published online 2020 May 26]. Pediatr Infect Dis J. doi:10.1097/INF.0000000000002779
Child, orchi-epididymitis, testicular involvement, Italy	26-May-20	Orchi-epididymitis in a Boy with COVID-19	The Pediatric Infectious Diseases Journal	Brief Report	A 14-year-old boy presented at the Emergency Department of the Versilia Hospital (Italy) with a 2-day history of high fever, pain, and swelling in the right testis. Two weeks before, he had a brief episode of high fever with spontaneous remission. Physical examination suggested acute scrotum, and swelling was confirmed by ultrasonography leading to diagnosis of orchi-epididymitis. No respiratory or urinary tract symptoms were present. Upon admission to the Pediatric Unit, a nasopharyngeal swab for SARS-CoV-2 was positive. The following clinical course was uneventful. This case points to possible testicular involvement in COVID-19 and underlines the need for further study of the potential association between pediatric COVID-19 with non-respiratory symptoms.	To the authors' knowledge, this is the first case of orchi-epididymitis associated with COVID-19 in a child.	Gagliardi L, Bertacca C, Centenari C, et al. Orchiepididymitis in a Boy with COVID-19 [published online 2020 May 26]. Pediatr Infect Dis J. doi:10.1097/INF.0000000000002769
Children, viral pneumonia, risk factors, LMICs	26-May-20	Protecting Children in Low-Income and Middle-Income Countries From COVID-19	BMJ Global Health	Editorial	Based on child pneumonia experience, COVID-19, a viral pneumonia syndrome, may impact children in low- and middle-income countries (LMICs) more severely than what has been observed to date in high-income countries (HICs). Risk factors for poor outcomes in pneumonia are overwhelmingly more prevalent in LMICs; these include severe malnutrition, low immunization uptake, nutritional anemia, HIV exposure or infection, air pollution, poverty, low parental education and, crucially, limited access to high-quality acute healthcare. The indirect effects of the COVID-19 response also require attention, for example widespread parental unemployment, disrupted education, food and housing insecurity and threats to vital preventive health programs, like immunization, antenatal care, infant	The authors draw on their shared child pneumonia experience globally to highlight the potential impacts of COVID-19 on children in LMICs and propose actions for a collective response.	Ahmed S, Mvalo T, Akech S, et al. Protecting children in low-income and middle-income countries from COVID-19. BMJ Glob Health. 2020;5(5):e002844. doi:10.1136/bmjgh-2020-002844

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					feeding and mental health. The authors suggest that vital services and health workforce must be maintained, COVID-19 testing must be scaled up in LMICs, lockdown strategies should be tailored to specific environments, and further research on COVID-19 in children must be conducted.		
Pregnancy, neonates, separation policies, breastfeeding, WHO	26-May-20	When Separation Is Not the Answer: Breastfeeding Mothers and Infants Affected by COVID-19	Maternal & Child Nutrition	Original Article	The WHO has provided detailed guidance on the care of infants of women who are a person under investigation (PUI) or confirmed to have COVID-19, which supports immediate postpartum mother-infant contact and breastfeeding with appropriate respiratory precautions. Although many countries have followed WHO guidance, others have implemented infection prevention and control policies that impose varying levels of postpartum separation and discourage or prohibit breastfeeding or provision of expressed breastmilk. These policies aim to protect infants from the potential harm of infection from their mothers, yet they may fail to fully account for the impact of separation. Global COVID-19 data are suggestive of potentially lower susceptibility and a typically milder course of disease among children, although the potential for severe disease in infancy remains. Separation causes cumulative harms, including disrupting breastfeeding and limiting its protection against infectious disease, which has disproportionate impacts on vulnerable infants. Separation also presumes the replaceability of breastfeeding—a risk that is magnified in emergencies. Moreover, separation does not ensure lower viral exposure during hospitalizations and post-discharge and contributes to the burden on overwhelmed health systems. Finally, separation magnifies maternal health consequences of insufficient breastfeeding and compounds trauma in communities who have experienced long-standing inequities and violence, including family separation. Taken together, separating PUI/confirmed SARS-CoV-2 positive mothers and their infants may lead to excess preventable illnesses and deaths among infants and women around the world.	This article discusses the potential detrimental effects of separation policies in settings that have not followed WHO-directed guidance promoting proximity and breastfeeding for COVID-19 affected mothers and infants.	Tomori C, Gribble K, Palmquist AEL, Ververs MT, Gross MS. When Separation is not the Answer: Breastfeeding Mothers and Infants affected by COVID-19 [published online 2020 May 26]. Matern Child Nutr. doi:10.1111/mcn.13033
Children, pregnant and lactating women, health care systems, food insecurity	26-May-20	COVID-19, Food and Nutrition Insecurity and the Wellbeing of Children, Pregnant and Lactating Women: A Complex Syndemic	Maternal & Child Nutrition	Editorial	Globally, the COVID-19 pandemic is expected to lead to unprecedented increases in poverty and food insecurity, as well as poor health and nutrition outcomes. Household food insecurity has been shown to negatively affect caregiver mental health and in turn early child development outcomes, as well as the risk of chronic undernutrition and infectious diseases in children. Families with young children, pregnant and lactating women must be protected against the ongoing protracted pandemic and predicted aftershocks. Multidirectional food, nutrition, health and social protection systems must be reconfigured to ensure food security for vulnerable populations of women and children.	Increased poverty and food insecurity caused by COVID-19 place the wellbeing of vulnerable families with children, pregnant and lactating women at risk.	Pérez-Escamilla R, Cunningham K, Moran VH. COVID-19, food and nutrition insecurity and the wellbeing of children, pregnant and lactating women: A complex syndemic [published online 2020 May 26]. Matern Child Nutr. doi:10.1111/mcn.13036
Children, family clusters, adult household contacts, viral transmission, Switzerland	26-May-20	COVID-19 in Children and the Dynamics of Infection in Families	Pediatrics	Research Brief	From March 10 to April 10, 2020 all patients <16 years old with SARS-CoV-2 infection were identified through the Geneva University Hospital's surveillance hospital (Switzerland). Of 4310 total SARS-CoV-2 cases, 40 were <16 years old (0.9%) and 1 patient was excluded due to inability for follow-up. Of 39 included patients, 29 (74%) were previously healthy. Seven patients (18%) were hospitalized; reasons for admission were surveillance for non-hypoxemic viral pneumonia (n=2), fever without source (n=2), apparent life-threatening event (n=1), sepsis-like event (n=1), and one pauci-	Findings from this study confirm that children are infected primarily within family clusters, with adult household contacts responsible for transmission to children in the majority of cases.	Posfay-Barbe KM, Wagner N, Gauthey M, et al. COVID-19 in Children and the Dynamics of Infection in Families [published online 2020 May 26]. Pediatrics. doi:10.1542/peds.2020-1576

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					symptomatic child whose parents both had severe COVID-19 (n=1). No patient required ICU admission or SARS-CoV-2 specific therapies. All patients, including 32 managed as outpatients, had complete resolution of symptoms by day 7 after diagnosis. Family cluster evaluation found that study children developed symptoms prior to other household contacts in only 8% (3/39) of cases. Interestingly, 85% (75/88) of adult household contacts developed symptoms at some point, compared to 43% (10/23) of pediatric household contacts (p<0.001).		
Children, viral transmission, household contacts, community settings, school closures	26-May-20	COVID-19 Transmission and Children: The Child Is Not to Blame	Pediatrics	Commentary	To what extent are children responsible for SARS-CoV-2 transmission? Resolving this issue is central to making informed public health decisions. Data on household contact investigations from Switzerland and China have shown that children frequently acquire COVID-19 from adults, rather than transmitting it to them. Transmission of SARS-CoV-2 by children outside household settings seems uncommon as well, although information is limited; studies from France and Australia have found that few secondary infections resulted from close contact between students and staff infected with SARS-CoV-2 at schools. These reports provide early reassurance that school-based transmission could be a manageable problem, especially for elementary school-aged children who appear to be at lowest risk for infection.	Existing data suggest that children are not significant drivers of COVID-19 transmission in household or community settings; the authors argue that serious consideration should be paid towards strategies that allow schools to remain open.	Lee B, Raszka WV Jr. COVID-19 Transmission and Children: The Child is Not to Blame [published online 2020 May 26]. Pediatrics. doi:10.1542/peds.2020-004879
Pregnancy, neonates, maternal outcomes, cesarean delivery, breast milk, systematic review	26-May-20	Complications and Outcomes of SARS-CoV-2 in Pregnancy: Where and What Is the Evidence?	Hypertension in Pregnancy	Review	A systematic search of relevant databases was performed on March 25 and a repeat search, on April 10, 2020. Reports of pregnant patients with SARS-CoV-2 infection at any time during their pregnancy were reviewed, and the outcomes of 155 pregnant women and 118 neonates were summarized. The evidence suggests a similar rate of severe COVID-19 cases in pregnant women and the general population. The frequency of cesarean deliveries is high, against guidelines recommendations, and requires clarification. Placenta, amniotic fluid, umbilical cord blood, breastmilk, gastric juice, urine, and feces were all screened for SARS-CoV-2 in different studies and were reported as negative suggesting a possible lack of vertical transmission. There are limited data on COVID-19 during pregnancy, associated with wide variations in methodology that make accurate data interpretation difficult.	This review adds to the growing evidence on SARS-CoV-2 infection during pregnancy and calls for improvement of the level of quality of the studies to allow evidence-based decisions regarding pregnant patients.	Teles Abrao Trad A, Ibirogba ER, Elrefaei A, et al. Complications and outcomes of SARS-CoV-2 in pregnancy: where and what is the evidence? [published online 2020 May 26]. Hypertens Pregnancy. doi:10.1080/10641955.2020.1769645
Children, cutaneous manifestations, erythema multiforme, Kawasaki Disease, France	26-May-20	Erythema Multiforme and Kawasaki Disease Associated With COVID-19 Infection in Children	Journal of European Academy of Dermatology and Venereology	Letter to Editor	This report describes two cases of children presenting with fever and eruptions with mucous membrane involvement associated with COVID-19. Case 1 is a 6-year-old male who was hospitalized for painful cheilitis during the week before admission, a rash of the extremities, and conjunctivitis. Respiratory function was normal. The clinical picture led to a diagnosis of erythema multiforme. A first SARS-CoV-2 PCR test was negative, but a second test was positive. The child's condition improved, and he was discharged 2 weeks later. Case 2 is a 3-year-old male hospitalized with fever for 8 days. Clinical examination revealed exanthema, bilateral palmar edema, glossitis, cervical lymphadenopathy, and later desquamation of the extremities at a later assessment. Laboratory tests showed increased inflammatory biomarkers. A SARS-CoV-2 PCR test performed at admission was negative, but chest CT revealed ground-glass opacities, suggestive of COVID-19 pneumonia. A final diagnosis of COVID-19-associated Kawasaki disease was concluded, and the child was treated with IV gamma globulin.	Two children, without respiratory symptoms, presented with severe cutaneous manifestations associated with COVID-19.	Labé P, Ly A, Sin C, et al. Erythema multiforme and Kawasaki disease associated with COVID-19 infection in children [published online 2020 May 26]. J Eur Acad Dermatol Venereol. doi:10.1111/jdv.16666

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Pregnancy, neonates, adverse maternal outcomes, SARS-CoV, MERS-CoV, prenatal guidance	26-May-20	Sars-CoV-2 in the Context of Past Coronaviruses Epidemics: Consideration for Prenatal Care	Prenatal Diagnosis	Review	This narrative review describes current knowledge about coronaviruses (SARS, MERS and SARS-CoV-2) and their risks and consequences on pregnancies. A summary of available candidate therapeutic options for pregnant women is also offered with consideration of the compatibility of described drugs with breastfeeding and their excretion into breastmilk. The authors also compare guidance proposed by the Royal College of Obstetricians (RCOG), American College of Obstetricians and Gynecologists (ACOG), and the WHO to give an overview of prenatal management which should be utilized until future data appear.	A review of corona-viruses in pregnancy, current therapeutic options for pregnant women with COVID-19 (with considerations for breastfeeding), and comparison of current guidance on perinatal management are provided.	Lambelet V, Vouga M, Pomar L, et al. Sars-CoV-2 in the context of past coronaviruses epidemics: Consideration for prenatal care [published online 2020 May 26]. Prenat Diagn. doi:10.1002/pd.5759
Pregnancy, labor and delivery, universal screening, asymptomatic, Connecticut, USA	26-May-20	Prevalence of SARS-CoV-2 Among Patients Admitted for Childbirth in Southern Connecticut	JAMA	Research Letter	From April 2 to April 29, 2020, screening and SARS-CoV-2 testing of patients admitted for childbirth was initiated at 3 Yale New Haven Health hospitals in southern Connecticut. Of 782 patients presenting for childbirth who were screened, 1.5% (12/782) were previously diagnosed with COVID-19. The remaining 770 patients were tested at admission, and 30/770 (3.9%) tested positive for SARS-CoV-2. Twenty-two of the 30 who tested positive for SARS-CoV-2 (73.3%) were asymptomatic. The overall prevalence of positive test results among asymptomatic patients was 2.9% (22/756). 57% (8/14) of patients with symptoms tested positive. No asymptomatic patients who tested negative developed symptoms or required further testing. No health care workers on the obstetric units were removed from work due to SARS-CoV-2 exposure or transmission from contact with a patient.	These findings suggest a low (<3%) prevalence of positive SARS-CoV-2 test results among asymptomatic patients in a pregnant population outside of the highly endemic region of New York City.	Campbell KH, Tornatore JM, Lawrence KE, et al. Prevalence of SARS-CoV-2 Among Patients Admitted for Childbirth in Southern Connecticut [published online 2020 May 26]. doi:10.1001/jama.2020.8904
Children, routine immunization, benefit-risk ratio, Africa	26-May-20	Benefit-risk analysis of health benefits of routine childhood immunisation against the excess risk of SARS-CoV-2 infections during the Covid-19 pandemic in Africa	medRxiv	Preprint (not peer reviewed)	For everyone excess death attributable to SARS-CoV-2 infection acquired during routine vaccination clinic visits, this study estimates that there could be 143 (38-576) deaths in children prevented by sustaining routine childhood immunization in Africa. In the alternative scenario that approximates the health benefits to only the child deaths averted from measles outbreaks, the benefit-risk ratio to the households of vaccinated children is 5 (95% CI 1-21) under these highly conservative assumptions, and if the risk to only the vaccinated children is considered, the benefit-risk ratio is 2,000 (95% CI 131-839,000). This analysis suggests that the health benefits of deaths prevented by sustaining routine childhood immunization in Africa far outweighs the excess risk of COVID-19 deaths associated with vaccination clinic visits. However, other factors related to logistical constraints and healthcare staff shortages caused by the pandemic must be considered for strategic decision-making to sustain routine childhood immunization in African countries	This study compares the health benefits of sustaining routine childhood immunization in Africa against the risk of acquiring SARS-CoV-2 infections through visiting routine vaccination service delivery points.	Abbas KM, Procter SR, van Zandvoort K, et al. Benefit-risk analysis of health benefits of routine childhood immunisation against the excess risk of SARS-CoV-2 infections during the Covid-19 pandemic in Africa [published online 2020 May 26]. medRxiv. doi:10.1101/2020.05.19.20106278
Depression, anxiety, adolescents, COVID-19, China	25-May-20	Depression and anxiety among adolescents during COVID-19: A cross-sectional study	Brain, Behavior, and Immunity	Letter to the Editor	Differential exposure to the COVID-19 pandemic impacts the levels of psychological distress, particularly among vulnerable populations such as adolescents. An online questionnaire comprising of Depression Self-Rating Scale for Children, Screen for Child Anxiety Related Disorders, and basic demographic characteristics was issued and gathered. This questionnaire was accessible from April 16 - 23, 2020 for adolescents in Guiyang, China, and 1036 questionnaires met the analysis criterion. The authors found that 112 (11.78%) cases with depression and 196 (18.92%) cases with anxiety were identified, and 68 (6.56%) cases presented both depression and	The authors conducted an online questionnaire in Guiyang, China and identified 11.78% cases with depression and 18.92% cases with anxiety, and 6.56% cases presented both depression and anxiety	Chen F, Zheng D, Liu J, Gong Y, Guan Z, Lou D. Depression and anxiety among adolescents during COVID-19: A cross-sectional study. Brain Behav Immun. 2020;88:36-38. doi:10.1016/j.bbi.2020.05.061

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					anxiety. Logistic regression suggested that gender, age, education of parents, companion on weekdays and physical exercise were significantly associated with depression, and that gender, physical exercise and companion on weekdays were significantly associated with anxiety.	among 1036 adolescents.	
Neonate, premature baby, vertical transmission,	25-May-20	Rapid Systematic Review of Neonatal COVID-19 Including a Case of Presumed Vertical Transmission	BMJ Pediatrics Open	Review	The systematic review has revealed eight studies where neonates have been described to have confirmed COVID-19, with low risk of bias. Of the 10 reported cases elsewhere, only three are likely to be vertically transmitted, while seven occurred in the post-perinatal period and are likely to have been postnatally acquired. All neonates had a mild course, recovered fully and were negative on retesting. Neonatal infection is uncommon, with only two previously reported cases likely to be of vertical transmission. The case reported here is still RT-PCR-positive on day 28 and is asymptomatic. Ongoing research is needed to ascertain the epidemiology of COVID-19 in neonates.	This study recommends that future research consider the possibility of vertical transmission from asymptomatic mothers.	Gordon M, Kagalwala T, Rezk K, Rawlingson C, et al. Rapid systematic review of neonatal COVID-19 including a case of presumed vertical transmission. BMJ Paediatr Open. 2020;4(1):e000718. doi:10.1136/bmjpo-2020-000718
Pregnancy, fetal brain development, prenatal choline levels, dietary supplements, respiratory virus infection	25-May-20	Maternal Choline and Respiratory Coronavirus Effects on Fetal Brain Development	Journal of Psychiatric Research	Review	Prenatal COVID-19 infection is anticipated by the U.S. Centers for Disease Control to affect fetal development similarly to other common respiratory coronaviruses through effects of the maternal inflammatory response on the fetus and placenta. In the present analysis, infants of mothers who had contracted a moderately severe respiratory virus infection in early gestation and had higher gestational choline serum levels (≥7.5 mM consistent with U.S. Food and Drug Administration dietary recommendations) had significantly increased development of their ability to maintain attention and to bond with their parents, compared to infants whose mothers had contracted an infection but had lower choline levels (<7.5 mM). For infants of mothers with choline levels ≥7.5μM, there was no effect of viral infection on infant ability to maintain attention and to bond with their parents, compared to infants of mothers who were not infected. Higher choline levels obtained through diet or supplements may protect fetal development and support infant early behavioral development even if the mother contracts a viral infection in early gestation when the brain is first being formed.	Findings from this analysis show that higher prenatal choline levels, achieved with dietary supplements, may mitigate the impact of respiratory virus infection during pregnancy on fetal development and later childhood behavior.	Freedman R, Hunter SK, Law AJ, et al. Maternal choline and respiratory coronavirus effects on fetal brain development [published online 2020 May 25]. J Psychiatr Res. doi:10.1016/j.jpsychires.2020.05.019
Infant, Tetralogy of Fallot, multi-organ dysfunction, hypoxemia, New York, USA	25-May-20	Tetralogy of Fallot palliation in a COVID-19 positive neonate	Journal of Clinical Anesthesia	Correspondence	This report presents the case of a 15-day-old female infant who was born with Tetralogy of Fallot (TOF) and was found to be COVID-19 positive on day 7 of life. The infant's mother was diagnosed with COVID-19 after experiencing fever and shortness of breath postpartum. The infant experienced desaturation, tachypnea, worsening cyanosis, feeding intolerance, and increasing lethargy, requiring supplemental oxygen and recurrent fluid boluses; she was intubated due to repeated apneic episodes. The decision for surgical palliation of TOF with a systemic-to-pulmonary shunt was made, with modifications to prevent aerosolization during the procedure. Although elevated IgM, cytokine levels, and lymphocyte counts in the infant may be suspicious of in utero infection, current data suggests early neonatal infection is most likely due to postnatal contact with caregivers. In the face of this sustained public health crisis, the concomitant occurrence of SARS-CoV-2 with pediatric congenital heart disease mandates guidance to ensure patient safety.	A case of SARS-CoV-2 infection was detected in an infant born with Tetralogy of Fallot.	Salik I, Mehta B. Tetralogy of Fallot palliation in a COVID-19 positive neonate [published online 2020 May 25]. J Clin Anesth. doi:10.10.1016/j.clinane.2020.109914

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Children, infection control practices, healthcare workers, viral transmission	25-May-20	Infection Control Practices in Children During COVID-19 Pandemic: Differences From Adults	American Journal of Infection Control	State of the Science Review	When considering the prevention of COVID-19 transmission to healthcare workers in a pediatric referral and tertiary care hospital, four primary themes should be taken into consideration; (1) ongoing education and importance of the organization of the healthcare facility, (2) proper clinical triage and isolation of the suspected or confirmed COVID-19 patients in the outpatient clinics and in the emergency departments, (3) necessity of the organization of the COVID-19 wards, and (4) utilization of personal protective equipment.	This review combines the authors' experience and recent guidelines on infection control practices in pediatric care settings during the COVID-19 pandemic.	Devrim İ, Bayram N. Infection control practices in children during COVID-19 pandemic: differences from adults [published online 2020 May 25]. Am J Infect Control. doi:10.1016/j.ajic.2020.05.022
Children, Kawasaki disease, vasculitis, endothelial dysfunction, inflammation	25-May-20	COVID-19 and Kawasaki Disease in Children	Pharma-cological Research	Review	Recent reports of clusters of children presenting with Kawasaki disease (KD)-like symptoms in the UK, USA, and Italy show overlapping blood parameters and presenting symptoms consistent with COVID-19. Some of these children patients have confirmed SARS-CoV-2 infections by RT-PCR. KD is a seasonal and rare but potentially severe inflammatory condition in children, mostly occurring in those under the age of five, characterized by vasculitis-inflammation in blood vessel walls. To date, the cause of KD, is unclear, but as-yet-unidentified infectious pathogens may be the root-cause. Most children recover completely from KD after a few weeks, but early treatment is necessary to prevent possible complications. Heightened endothelial inflammation and injury after SARS-CoV-2 infection, probably via endothelial ACE2, the systemic inflammatory response to pneumonia may potentiate the inflammatory response within coronary lesions, rendering endothelial dysfunction and therefore accelerating KD development. The association between KD and COVID-19 in children remains to be fully understood.	There is growing concern of SARS-CoV-2 infection related inflammatory syndromes as a possible link between coronavirus infection and Kawasaki Disease affecting young children.	Xu S, Chen M, Weng J. COVID-19 and Kawasaki Disease in Children [published online 2020 May 25]. Pharmacol Res. doi:10.1016/j.phrs.2020.104951
Pregnancy, maternal morbidity, venous thrombo-embolism, prophylaxis, LMWH, Spain	25-May-20	Prevention of Thrombosis in Pregnant Women With Suspected SARS-CoV-2 Infection: Clinical Management Algorithm	Ultrasound in Obstetrics & Gynecology	Letter to the Editor	An emerging body of evidence suggests that COVID-19 may predispose patients to venous thromboembolism (VTE). In pregnant women, both the physiological and virus-related hypercoagulability states could pose a uniquely increased risk for thrombotic-related morbidity. Thus, risk assessment, considering pre-existing conditions and temporary risk factors like reduced mobility, is important for successful provision of appropriate prophylaxis for pregnant women. International institutions recommend antenatal and postnatal prophylactic low molecular weight heparin in SARS-CoV-2 positive women; however, recommendations for suspected cases remain to be determined. A national expert committee, endorsed by the Spanish Society of Thrombosis and Haemostasis, has built an algorithm for clinical management of pregnancy-associated VTE adapted to the current SARS-CoV-2 pandemic, described here.	This article outlines an algorithm for thromboprophylaxis in pregnant patients with SARS-CoV-2 exposure and suspected COVID-19 to prevent complications like VTE.	Lou-Mercadé AC, Gavín O, Oros D, et al. Prevention of thrombosis in pregnant women with suspected SARS-CoV-2 infection: clinical management algorithm [published online 2020 May 25]. Ultrasound Obstet Gynecol. doi:10.1002/uog.22096
Children, high-risk comorbidities, specialist center, UK	25-May-20	Coronavirus (COVID-19) infection in children at a specialist centre: outcome and implications of underlying high-risk comorbidities in	medRxiv	Preprint (not peer reviewed)	Between March 1 and May 15, 2020, 166 children (<18 years) presented to a specialist children's hospital with clinical features of possible COVID-19 infection. 65 patients (39.2%) tested positive for SARS-CoV-2. CoVPos patients were older (median 9 years vs 1 year respectively, $p<0.001$). There was a significantly reduced proportion of vulnerable cases with high-risk comorbidities (47.7% vs 72.3%, $p=0.002$), but no difference in proportion of vulnerable patients requiring ventilation (61% vs 64.3%, $p=0.84$) between CoVPos and CoVNeg groups. However, a significantly lower proportion of CoVPos patients required mechanical ventilation support compared to CoVNeg patients (27.7% vs 57.4%, $p<0.001$). Mortality was not significantly	In children presenting with pre-existing vulnerable medical conditions at a specialist center, there does not appear to be significantly increased risk of either contracting COVID-19	Issitt R, Booth J, Bryant W, et al. Coronavirus (COVID-19) infection in children at a specialist centre: outcome and implications of underlying high-risk comorbidities in a paediatric population [published online 2020 May 25]. medRxiv.

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		a paediatric population			different between CoVPos and CoVNeg groups (1.5% vs 4% respectively, *p*=0.67) although there were no direct COVID-19 related deaths in this highly preselected pediatric population.	or severe complications.	doi:10.1101/2020.05.20.20107904
Pregnancy, universal screening, Belgium	25-May-20	Screening for COVID-19 at Childbirth: Does It Deliver?	Ultrasound in Obstetrics & Gynecology	Letter to the Editor	The authors reviewed the medical records of all consecutive women admitted for delivery at four obstetrical units in North-East Flanders, Belgium, since local introduction of universal screening with PCR on March 30, 2020. By May 8, 473 women delivered, of whom 470 (99.4%) were screened. Thirteen tested positive (2.8%). Eight patients (61.5%) were asymptomatic, four (30.8%) had mild upper airway symptoms, and one (7.7%) tested positive with respiratory symptoms >2weeks prior to delivery but had no residual symptoms by the time of delivery. These findings are likely representative of the broader population, as a public health institute recently estimated that 4.3% of Belgium's population is seropositive.	In this review, less than 1 in 35 women admitted for delivery at hospitals in Belgium tested positive for SARS-CoV-2; of those who tested positive, only 1 in 3 had mild symptoms.	Ceulemans D, Thijs I, Schreurs A, et al. Screening for COVID-19 at childbirth: does it deliver? [published online 2020 May 25]. Ultrasound Obstet Gynecol. doi:10.1002/uog.22099
Pregnancy, maternal mental health, anxiety, depression, PTSD, Canada	25-May-20	Uptrend in Distress and Psychiatric Symptomatology in Pregnant Women During the COVID-19 Pandemic	Acta Obstetricia et Gynecologica Scandinavica	Original Research Article	To determine the extent to which the COVID-19 pandemic may aggravate prenatal distress and psychiatric symptomatology, which have harmful effects on fetal development, two cohorts of pregnant women were evaluated: one was recruited before the pandemic between April 2018 and March 2020 (n=496), and the other was recruited during the pandemic between April 2 and 13, 2020 (n=1258). The total 1754 pregnant women (mean age 29.3, SD 4.2) were between 4 and 41 gestational weeks (mean 24.8 weeks, SD 9.4). A multivariate analysis of covariance controlling for age, gestational age, household income, education and lifetime psychiatric disorders showed a large effect size (ES) in the difference between the two cohorts on psychiatric symptoms (Wilks' λ=0.68, $F_{6,1400}$=108.50, p<0.001, partial η^2=0.32). According to post-hoc analyses of covariance, the COVID-19 women reported higher levels of depressive and anxiety symptoms (ES=0.57), dissociative symptoms (ES=0.22 and 0.25), symptoms of post-traumatic stress disorder (ES=0.19), negative affectivity (ES = 0.96) and less positive affectivity (ES=0.95) than the pre-COVID-19 cohort. Women from the COVID-19 cohort were more likely than pre-COVID-19 women to present clinically significant levels of depressive and anxiety symptoms [OR=1.94, $\chi2(1)$=10.05, p=.002]. Multiple regression analyses indicated that COVID-19 pregnant women having a previous psychiatric diagnosis or low income would be more prone to elevated distress and psychiatric symptoms.	Pregnant women assessed during the COVID-19 pandemic reported more distress and psychiatric symptoms than pregnant women assessed before the pandemic, mainly in the form of depression and anxiety symptoms.	Berthelot N, Lemieux R, Garon-Bissonnette J, Drouin-Maziade C, Martel É, Maziade M. Uptrend in distress and psychiatric symptomatology in pregnant women during the COVID-19 pandemic [published online 2020 May 25]. Acta Obstet Gynecol Scand. doi:10.1111/aogs.13925
Children, chronic lung disease, pulmonary function testing, Italy	24-May-20	Italian Pediatric Respiratory Society Recommendations on Pediatric Pulmonary Function Testing During COVID-19 Pandemic	Italian Journal of Pediatrics	Letter to the Editor	The Italian Pediatric Respiratory Society promotes a series of new recommendations that should be followed in pulmonary function testing (PFT) laboratories during the COVID-19 pandemic. PFT could be considered at a high-risk procedure for viral transmission due to the potential for coughing and droplet formation. Therefore, PFT should be performed in children with chronic lung disease only if it is needed to guide management and it should be limited to the necessary tests, namely spirometry. When performed, strict infection control measures should be followed due to the potential risk of transmitting SARS-CoV-2.	The Italian Pediatric Respiratory Society advises against pulmonary function testing in children with chronic lung disease unless it is needed to guide management and comprehensive infection control can be maintained.	Bignamini E, Cazzato S, Cutrera R, et al. Italian pediatric respiratory society recommendations on pediatric pulmonary function testing during COVID-19 pandemic. Ital J Pediatr. 2020;46(1):68. doi:10.1186/s13052-020-00829-0

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COVID-19; lockdown; mental health	23-May-20	Potential effects of "social" distancing measures and school lockdown on child and adolescent mental health	European Child and Adolescent Psychiatry	Editorial	The authors report the spectrum of mental health status and resilience in children experiencing lockdown and distancing measures during the COVID-19 pandemic. They indicate that school closures and lack of social activities with peers can cause children increased stress with decreased coping strategies. They also highlight 3 anecdotal patterns of resilience and coping in children: the first in which children prosper at home due to a quieter environment; the second wherein they are mildly adversely affected due to lack of developmental resources and social interactions; and the third finding increasingly negative interactions in families. Additionally, they report an under-utilization of mental health services and reduced activity of child protective services and youth welfare organizations due to fears of COVID-19 transmission. Thus, they suggest that school closures exert a disproportionate effect on children in disadvantaged positions and exacerbate existing inequalities. They recommend the provision of mental health services to children and adolescents, keeping inpatient and outpatient facilities open and using digital medicine to provide appropriate care. They also suggest developing an international network of child and adolescent psychiatrist trainers, changing the training completion personal supervision requirements, and encouraging mental health professionals to safeguard their own mental health.	The authors note that disadvantaged children are more negatively impacted by COVID-19 pandemic-related social distancing measures and school closures. They call for the continuation of mental health services for children and adolescents with mental health issues, recommending inpatient/outpatient clinics and digital health services, as well as expanded training programs for child and adolescent psychiatrists and encouraging providers to safeguard their own mental health.	Clemens V, Deschamps P, Fegert JM, et al. Potential effects of "social" distancing measures and school lockdown on child and adolescent mental health. Eur Child Adolesc Psychiatry. 2020;29(6):739-742. doi:10.1007/s00787-020-01549-w
COVID-19, SARS-CoV-2, Adaptive immunity, Innate immunity, Cytokines, Interferons (IFNs), India	23-May-20	COVID-19: Loss of bridging between innate and adaptive immunity?	Medical Hypotheses	Report	The authors suggest a possible role of the loss of bridging between innate and adaptive immunity, to explain the greater severity of COVID-19 in older adults. Since the thymus plays a vital role in both lymphatic and endocrine function and is the location for development of T-cells (the lymphocytes responsible for adaptive immunity), the authors hypothesize that the increased morbidity of older adults with COVID-19 is primarily due to the decline in the immune system, secondary to dysregulated adaptive immunity. In children, thymus-derived immunity bridges the gap between innate and adaptive immunity, but the innate response is delayed in the elderly, which makes them vulnerable to greater COVID-19 severity. The authors propose administering interferons to stimulate immune responses in early states of infection, to decrease disease fatality and bridge innate and adaptive immunity.	The authors suggest a possible role of the loss of bridging between innate and adaptive immunity, to explain the greater severity of COVID-19 in older adults. They propose administering interferons to stimulate immune responses in early states of infection, to decrease disease fatality and bridge innate and adaptive immunity.	Rao VUS, Arakeri G, Subash A, et al. COVID-19: Loss of bridging between innate and adaptive immunity?. Med Hypotheses. 2020. doi:10.1016/j.mehy.2020.109861

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Chilblain, pernio, erythema multiforme. pediatric	23-May-20	Erythema multiforme-like lesions in children and COVID-19	Pediatric dermatology	Case Report	The authors report 4 pediatric patients who presented with skins lesions including chilblains and erythema multiforme evaluated by dermatologists in Madrid Spain during the COVID-19 pandemic. The 4 children (ages 11-17 years, 3 males, 1 female) presented with chilblains and were found to have additional lesions similar to erythema multiforme. PCR positivity for SARS-CoV-2 was found in one patient. Skin biopsies of two patients showed features not typical of erythema multiforme, such as deep perivascular and peri-eccrine infiltrates and absence of necrosis of keratinocytes. Immunohistochemistry for SARS-CoV-2 spike protein revealed granular positivity in endothelial cells and epithelial cells of eccrine glands in both biopsies. One patient was treated with oral corticosteroids and one patient with topical corticosteroids. All patients had an excellent outcome within 3 weeks. While only one of these children was positive for SARS-CoV-2 via PCR, contact history, additional medical reports of acral ischemic lesions, and the increase prevalence of these skin findings during the COVID-19 pandemic suggest SARS-CoV-2 as the possible causal agent for all 4 patients.	The authors present their histopathological findings upon evaluation of chilblains and erythema multiforme-like skins lesion in 4 pediatric patients during the COVID-19 pandemic. Skin biopsies of two patients revealed findings distinct from erythema multiforme as well as the presence of SARS-CoV-2 spike proteins via immunohistochemical staining.	Torrelo A, Andina D, Santonja C, Noguera-Morel L, Bascuas-Arribas M, Gaitero-Tristán J, Alonso-Cadenas JA, Escalada-Pellitero S, Hernández-Martín Á, de la Torre-Espi M, Colmenero I. Erythema multiforme-like lesions in children and COVID-19. Pediatr Dermatol. 2020 May;37(3):442-446. doi: 10.1111/pde.14246. PMID: 32445583; PMCID: PMC7283638.
Child oral health, inequity, USA healthcare	23-May-20	How COVID-19 deepens child oral health inequities	The Journal of the American Dental Association	Commentary	As COVID-19 reaches every part and level of the USA, widespread societal inequalities have been intensely highlighted and further exacerbated. In March 2020, the CDC (USA) recommended that all elective surgeries and non-essential medical, surgical, and dental procedures be delayed due to the onset of the COVID-19 outbreak. As a result, dental clinics across the country were temporarily closed to children. Although this was a necessary precaution, closures disproportionately harmed children in poverty and those from low-income families and racial and ethnic minority groups, which carry the greatest extent and severity of dental diseases. Families may have difficulties to maintain children's oral health. Furthermore, the COVID-19 pandemic has led to widespread unemployment and possible loss of family dental insurance. Without dental insurance most families are unable to afford out-of-pocket expenses for dental care. Fear of affordability, especially during a pandemic, dissuades parents from taking their children to the dentist, and therefore leaves children with unmet dental needs. The author also highlights how COVID-19 has disrupted the USA education system, which many students rely on for healthy and balanced nutrition. With families buying cheaper, more convenient, and less healthy food options, children may eat foods with more sugars harmful for dental health. Additionally, policy reform is recommended to ensure lasting access to affordable health care, nutritious food, and social resources for vulnerable children.	The author details how the COVID-19 pandemic has exacerbated oral health dispartities for children within the USA. Social policies that addresses these disparities may improve the health and oral health of all children.	Kalash DA. How COVID-19 deepens child oral health inequities. J Am Dent Assoc. 2020;151(9):643-645. doi:10.1016/j.adaj.2020.05.015
Pediatric cardiology, perioperative, surgery, management, cardiac catheterization	23-May-20	Perioperative Preparations for COVID-19: The Pediatric Cardiac Team Perspective	Journal of Cardiothoracic and Vascular Anesthesia	Editorial	This article reviews the literature and presents current recommendations for the pediatric cardiac team preparing to take care of all children and adults during the COVID-19 pandemic. The authors discuss the protection of patients and the healthcare team during surgical procedures to minimize risk of potential exposure to SARS-CoV-2. They also discuss organization, allocation, resource monitoring, and use of PPE as well as environmental safety measures. Additionally, the authors describe considerations for	The authors present considerations for anesthetic care of pediatric COVID-19 patients in the catheterization laboratory and cardiac	Ing RJ, Barrett C, Chatterjee D, Twite M, Whitney GM. Perioperative Preparations for COVID-19: The Pediatric Cardiac Team Perspective. [published online, 2020 May 23]. J Cardiothorac Vasc

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					anesthetic care during cardiac surgery and cardiac catheterization procedures including possible exposure risks. Finally, they describe the role of the cardiac anesthesiologist during the COVID-19 pandemic. The authors state that the pediatric cardiac anesthesiologist is in a unique position to play a significant leadership role in the current rapidly changing COVID-19 pandemic. They sought to highlight important hospital and regional initiatives in which the assistance of the pediatric cardiac anesthesiologist can help guide medical decision-making.	operating room. They also emphasize the role of the cardiac anesthesiologist during the pandemic.	Anesth. doi:10.1053/j.jvca.2020.04.032
Pregnancy, maternal resuscitation, category 1 cesarean delivery	23-May-20	Management of maternal resuscitation and category 1 cesarean delivery in a Covid-19 suspect parturient	Journal of Clinical Anesthesia	Correspondence	A previously healthy 31-year-old nulliparous Chinese woman presented with preterm labor at 32 weeks gestation. She had new onset hypertension and developed left lower lobe pneumonia, manifesting with wet cough, dyspnea and pyrexia. Prior to availability of her first SARS-CoV-2 swab, the patient developed a witnessed generalized tonic-clonic seizure during a suspected eclamptic fit. After persistent severe fetal bradycardia was noted, a category 1 cesarean section was performed. Afterwards, the patient's SARS-CoV-2 swabs were found to be negative.	Clinical management and infection control guidelines to respond to medical emergency and category 1 cesarean delivery in a COVID-19 suspect parturient are described.	Oh TT, Lew E, Sng BL, et al. Management of maternal resuscitation and category 1 cesarean delivery in a Covid-19 suspect parturient [published online 2020 May 23]. J Clin Anesth. doi:10.1016/j.clinane.2020.109909
Children, Kawasaki Disease, serology, post-infectious cytokine release syndrome, New York, USA	23-May-20	Features of COVID-19 Post-Infectious Cytokine Release Syndrome in Children Presenting to the Emergency Department	The American Journal of Emergency Medicine	Case Series	This case series describes four previously healthy children (5, 10, 12, and 13 years old) with SARS-CoV-2 infection, confirmed by serologic antibody testing but negative by nasopharyngeal RT-PCR swab. The children presenting to the Pediatric Emergency Department (PED) with prolonged fever (5 or more days) and abrupt onset of hemodynamic instability with elevated serologic inflammatory markers and cytokine levels (IL-6, IL-8 and TNF-α). Interestingly, three of these four patients presumably had asymptomatic COVID-19 infections, as they reported no recent symptoms of illness yet had positive antibody testing. It is possible that the mechanism of COVID-19 post-infectious cytokine release syndrome in children is a post-infectious phenomenon related to an antibody complex mediated reaction.	The authors recommend that emergency physicians maintain a high clinical suspicion for COVID-19-associated post-infectious cytokine release syndrome, with features that overlap with features of Kawasaki Disease and toxic shock syndrome in children with recent SARS-CoV-2 infection.	Waltuch T, Gill P, Zinns LE, et al. Features of COVID-19 post-infectious cytokine release syndrome in children presenting to the emergency department [published online 2020 May 23]. Am J Emerg Med. doi:10.1016/j.ajem.2020.05.058
Children, MIS-C, case definition, multi-disciplinary team, New York	23-May-20	COVID-19 associated Multisystem Inflammatory Syndrome in Children (MIS-C) guidelines; a Western New York approach	Progress in Pediatric Cardiology	Editorial	This document details a hospital's multidisciplinary approach to severe multi-system inflammatory syndrome (MIS-C) reported in individuals <21 years of age, discusses knowledge on the case definition and clinical manifestations, and proposes guidelines on diagnosis and treatment. This broad approach with a multidisciplinary team takes cardiology, critical care, hematology, infectious diseases, and rheumatology into consideration. Limited available reports indicate that children with COVID-19 associated MIS-C can deteriorate quickly, so increased index of suspicion and discussion regarding higher level of care (transferring to pediatric tertiary care centers or to intensive care) are warranted early.	A case definition of MIS-C and multidisciplinary approach to management are presented.	Hennon TR, Penque MD, Abdul-Aziz R, et al. COVID-19 associated Multisystem Inflammatory Syndrome in Children (MIS-C) guidelines; a Western New York approach [published online 2020 May 23]. Prog Ped Card. doi:10.1016/j.ppedcard.2020.101232

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Children, Kawasaki Disease, coronaviruses	23-May-20	The Novel Coronavirus (COVID-19) and the Risk of Kawasaki Disease in Children	Journal of the Formosan Medical Association	Brief Communication	Kawasaki disease (KD) is an acute systemic febrile disease that mostly affects children <5 years of age. Cough, vomiting, sterile pyuria and diarrhea are common in KD patients. The exact etiology of KD is not fully described, but infection with respiratory viruses, including coronaviruses, has been reported as a predisposing factor. Public attention has been drawn recently to studies reporting KD in COVID-19 patients; while these rare studies cannot infer a causality link between, cases of Kawasaki-like symptoms warrant added attention to prevent delays in diagnosis and referrals.	Existing studies of Kawasaki-like Disease in pediatric COVID-19 cannot infer causality; further research is warranted.	Alizargar J. The novel coronavirus (COVID-19) and the risk of Kawasaki disease in children [published online 2020 May 23]. J Formos Med Assoc. doi:10.1016/j.jfma.2020.05.030
Pregnancy, maternal respiratory distress, intensive care, delivery, New York, USA	23-May-20	Delivery For Respiratory Compromise Among Pregnant Women With COVID-19	American Journal of Obstetrics & Gynecology	Original Research	It is not known whether delivery improves or compromises the outcome of COVID-19 pregnant patients with respiratory failure. In this retrospective observational study of 125 confirmed cases of COVID-19 in pregnant women, 12 (9.6%) had severe disease. Among the 12, three resolved spontaneously after transient respiratory support in hospital and were discharged home. Of the remaining nine who continued to need respiratory support, seven (77.8%) had iatrogenic preterm deliveries (six by cesarean delivery) for maternal respiratory distress, one had an early term delivery due to premature rupture of membranes, and one has required intensive care with high-flow nasal cannula for three weeks. Of the eight patients who delivered, seven did not require intubation, and one was intubated for emergent cesarean delivery remaining on a ventilator for 19 days. Among the seven non-intubated, four had an improvement in oxygenation within two hours postpartum; the other three were off of all respiratory support between four and seven days postpartum. This series suggests that maternal respiratory distress should not be a contraindication to delivery.	Delivery did not worsen the respiratory status of women with severe COVID-19 and need for increasing respiratory support. Delivery may be less beneficial when damage to the lungs are sufficient to warrant intubation.	McLaren RA Jr, London V, Atallah F, et al. Delivery For Respiratory Compromise Among Pregnant Women With COVID-19 [published online 2020 May 23]. Am J Obstet Gynecol. doi:10.1016/j.ajog.2020.05.035
Children, adolescents, susceptibility, transmission, contact tracing, population screening, systematic review, meta-analysis	23-May-20	Susceptibility to and transmission of COVID-19 amongst children and adolescents compared with adults: a systematic review and meta-analysis	medRxiv	Preprint (not peer reviewed)	This rapid systematic review of contact-tracing studies and population-screening studies aims to address the question: what is the susceptibility to and transmission of SARS-CoV-2 by children and adolescents compared with adults? 18 studies met inclusion criteria; 9 contact-tracing, 8 population-screening and 1 systematic-review. Meta-analysis of contact tracing studies showed that the pooled odds ratio of being an infected contact in children, compared with adults, was 0.44 (95%CI 0.29, 0.69) with substantial heterogeneity (63%). Findings from a systematic review of household clusters of COVID-19 found 3/31 (10%) were due to a child index case and a population-based school contact tracing study found minimal transmission by child or teacher index cases. Findings from population-screening studies were heterogenous and not suitable for meta-analysis. Large studies from Iceland, the Netherlands and Spain and an Italian municipal study showed markedly lower SARS-CoV-2 prevalence amongst children and young people, however studies from Stockholm, England, Switzerland and Germany showed no difference in infection prevalence between adults and children.	There is preliminary evidence that children and young people have lower susceptibility to SARS-CoV-2, with 56% lower odds of being an infected contact. Data on the role of children in the transmission of SARS-CoV-2 at a population level remain limited.	Viner RM, Mytton OT, Bonell C, et al. Susceptibility to and transmission of COVID-19 amongst children and adolescents compared with adults: a systematic review and meta-analysis [published online 2020 May 24]. medRxiv. doi:10.1101/2020.05.20.20108126

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Pregnancy, immune thrombocyto-penia, hypoxia, neonate, Netherlands	23-May-20	Immune Thrombocytopenia During Pregnancy Due to COVID-19	American Journal of Hematology	Correspondence	In April 2020, a 41-weeks-pregnant woman was diagnosed with immune thrombocytopenia (ITP) caused by COVID-19. She presented to the obstetrician due to contractions, with a sore throat but no other flu-like symptoms. Laboratory examinations showed a platelet count of $16x10^9$/L; two weeks earlier the platelet counts were $98x10^9$/L. Additional tests with direct monoclonal antibody immobilization of platelet antigens showed platelet autoantibodies against glycoprotein V. Throat and nose swabs were positive for SARS-CoV-2. Treatment with IV immunoglobulin for two days was initiated, and two units of donor thrombocytes were administered; her platelet counts increased to $80x10^9$/L. Epidural anesthesia was complicated by hypotension, therefore an urgent cesarean section was performed. After a healthy female newborn was delivered, the mother became hypoxic without dyspnea. Within 24 hours, the peripheral oxygen saturation increased, and she was discharged four days later. The newborn did not develop any symptoms of COVID-19.	In this case, COVID-19 induced immune thrombocytopenia in a pregnant patient with mild symptoms.	Tang MW, Nur E, Biemond BJ. Immune Thrombocytopenia during Pregnancy due to COVID-19 [published online 2020 May 23]. Am J Hematol. doi:10.1002/ajh.25877
Children, adolescents, young adults, case incidence, age distribution, Washington State	23-May-20	COVID-19 Confirmed Case Incidence Age Shift to Young Persons Age 0-19 and 20-39 Years Over Time: Washington State March - April 2020	medRxiv	Preprint (not peer reviewed)	Using data from the Washington State Department of Health, a longitudinal cohort (n=13,934) of COVID-19 confirmed cases was analyzed between March 1 and April 19, 2020 for proportional change over time using chi square tests for significance. Age distribution shifted with a 10% decline in cases among ages 60 years and older and a 20% increase in ages 0-19/20-39 years (chi-square = 223.10, p<.001). The number of cases over the eight-week analysis period is as follows: 0-19 years (n=515), 20-39 years (n=4078), 40-59 years (n=4788), 60-79 years (n=3221), and 80+ years (n=1332). New cases increased steadily among 0-19 and 20-39-year old individuals. After the peak (March 22, 2020), there was no decline among the 0-19 age group and a lesser decline among the 20-39 age group than older groups. As incidence declined in older age groups, the combined percentage of cases in the 0-19 and 20-39 age groups increased from 20% to 40% of total cases. A targeted approach for awareness and safety measures is advisable to reduce incidence among the supposedly less vulnerable but more mobile young population.	Over an eight-week period in Washington State, the age distribution of confirmed COVID-19 cases shifted, with a 10% decline in cases among the 60 year and older group vs. 20% increase in the 0-19 and 20-39 age groups.	Malmgren J, Gou B, Kaplan HG. COVID-19 Confirmed Case Incidence Age Shift to Young Persons Age 0-19 and 20-39 Years Over Time: Washington State March - April 2020 [published online 2020 May 23]. medRxiv. doi:10.1101/2020.05.21.20109389
Children, viral RNA shedding, stool samples, nasopharynx, Italy	23-May-20	Dynamic Viral SARS-CoV-2 RNA Shedding in in Children: Preliminary Data and Clinical Consideration of Italian Regional Center	Journal of the Pediatric Infectious Diseases Society	Original Article	This report presents preliminary data on SARS-CoV-2-RNA clearance in a series of 22 children (median age 84 months, range 8 days-210 months) with positive nasopharyngeal (NP) swabs, followed at an inpatient setting in Italy from March 16 to April 8, 2020. Four patients were asymptomatic. At diagnosis, stool was positive for SARS-CoV-2 in 15/22 (68%) patients, urine in 1/22 (4.5%) and conjunctival swab in 2/22 (9.1%). At last follow-up on April 12, 13 patients were discharged: NP swab persisted positive in 7/13 (54%, 95%CI 25-81) and stool swab persisted positive in 6/9 (67%, 95%CI 30-93). The NP swab was negative at a median of 8 days (range 2-17 days) from the date of symptom onset, and the stool swab was negative at a median of 14 days from the date of symptom onset (range 10-15 days). Overall, the estimation of positivity at day 14 from symptom onset is 52% (95%CI 21-76) for NP swab and 31% (95%CI 5-63) for stool swab.	This study found frequent fecal viral RNA shedding in pediatric patients with COVID-19, independent of gastrointestinal symptoms and with relatively slow RNA clearance.	De Ioris MA, Scarselli A, Ciofi Degli Atti ML, et al. Dynamic viral SARS-CoV-2 RNA shedding in in children: preliminary data and clinical consideration of Italian regional center [published online 2020 May 23]. J Pediatric Infect Dis Soc. doi:10.1093/jpids/piaa065

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Children, erythema multiforme, chilblain, immuno-histochemistry, skin biopsy, Spain	23-May-20	Erythema Multiforme-Like Lesions in Children and COVID-19	Pediatric Dermatology	Case Report	During examination of cases of chilblains in children and adolescents, four patients who also showed skin lesions similar to erythema multiforme (EM) were identified. They had no other known triggers for EM. One of them had a positive PCR for SARS-CoV-2, while the other 3 were negative. Skin biopsies from two patients showed features not typical of EM, such as deep perivascular and peri-eccrine infiltrate and absence of necrosis of keratinocytes. Immunohistochemistry for SARS-CoV/SARS-CoV-2 spike protein showed granular positivity in endothelial cells and epithelial cells of eccrine glands in both biopsies. All patients had an excellent outcome and had minimal or no systemic symptoms. The coincidence of EM, a condition commonly related to viruses, and chilblains in the setting of COVID-19, as well as the positive immunohistochemistry findings strongly suggest a link between EM-like lesions and SARS-CoV-2.	In addition to chilblains, lesions similar to erythema multiforme were identified in four pediatric patients (1 positive for SARS-CoV-2 on RT-PCR), with positive immunohistochemistry findings for SARS-CoV-2 on skin biopsies.	Torrelo A, Andina D, Santonja C, et al. Erythema multiforme-like lesions in children and COVID-19 [published online 2020 May 23]. Pediatr Dermatol. doi:10.1111/pde.14246
Child, myalgias, rhabdo-myolysis, creatinine kinase, New York, USA	23-May-20	Pediatric COVID-19-associated Rhabdomyolysis: A Case Report	Pediatric Nephrology	Rapid Communication	Although myalgia is commonly reported in adults with COVID-19, it has not been noted as a common symptom in children. This case report describes a 16-year-old boy who presented with fever, myalgias, mild shortness of breath with exertion, and dark-colored urine. COVID-19 PCR was positive. His initial creatinine kinase (CK) level was 427,656 U/L. Serum creatinine was normal for his age. He was treated with isotonic IV fluids containing sodium bicarbonate to maintain urine output of 100-200 mL/h and urine pH>7.0. His serum creatinine remained normal throughout the hospital stay, and he was discharged on hospital day 12 with a CK of 6526 U/L. Given this pediatric case of COVID-19-associated rhabdomyolysis, defined as the breakdown of skeletal muscle leading to leaking of muscle contents into the extracellular fluid, pediatric clinicians should be aware of this complication and manage fluids appropriately to prevent acute kidney injury.	To the authors' knowledge, this is the first pediatric case of COVID-19-associated rhabdomyolysis.	Gefen AM, Palumbo N, Nathan SK, Singer PS, Castellanos-Reyes LJ, Sethna CB. Pediatric COVID-19-associated rhabdomyolysis: a case report [published online 2020 May 23]. Pediatr Nephrol. doi:10.1007/s00467-020-04617-0
Spain, SARS-CoV-2, oncology, cancer, Madrid, COVID-19, treatment	22-May-20	COVID-19 infection in children and adolescents with cancer in Madrid	Pediatric Blood & Cancer	Letter to the Editor	This report aimed to identify the profiles and treatments of pediatric oncology patients (0-18 years) with proven SARS-CoV-2 infection in Madrid up to April 15, 2020 [testing method not specified]. The total number of current pediatric oncology patients in the Madrid region was estimated through 2015-2019 data from the Madrid Tumor Registry. The main patient (n=15) characteristics are shown in the article's sole table. Median age was 10.6 years (range 0.6-18.6 years). Most patients (60%; 9) had received chemotherapy in the 15 days prior to the SARS-CoV-2 infection. Chemotherapy had to be interrupted or delayed in 6 cases (40%). The most frequent symptoms were fever (67%; 10) and cough (40%; 6). 2 patients were asymptomatic. The clinical, radiological, and laboratory findings are similar to previously published data for the general pediatric population. Hydroxychloroquine was the most frequently used drug in this case series. All patients had favorable outcomes, with mild-moderate disease, and 2 required oxygen therapy. In conclusion, the prevalence of SARS_CoV-2 infection among children with cancer in Madrid was 1.3%. Although this patient population is managed as high risk, the clinical features of SARS-CoV-2 infection are milder and the prognosis better than in the adult population.	This report aimed to identify the profiles and treatments of pediatric oncology patients (0-18 years) with proven infection of SARS-CoV-2 in Madrid up to April 15, 2020. The prevalence of SARS_CoV-2 infection among children with cancer in Madrid was 1.3%. Although this patient population is managed as high risk, the clinical features of SARS-CoV-2 infection are milder and the prognosis better than in the adult population.	de Rojas T, Pérez-Martínez A, Cela E, et al. COVID-19 infection in children and adolescents with cancer in Madrid. Pediatr Blood Cancer. 2020;67(7):e28397. doi:10.1002/pbc.28397

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Breast milk, newborn, pregnancy	22-May-20	SARS-CoV-2 Infection and the Newborn	Frontiers in Pediatrics	Review	This review focused on the scarce information about COVID-19's clinical features, laboratory findings and prognosis in children and newborns. Since they are asymptomatic or mildly symptomatic, the majority of children do not undergo diagnostic investigations. Children who become infected with SARS-CoV-2 may have more upper respiratory tract than lower respiratory tract involvement. While there is no specific treatment for the disease, but hemodynamic stabilization of the infant, respiratory management and other daily care are essential. Drugs against cytokine storm syndrome such as corticosteroids or tocilizumab are under investigation, and this study found that routine antibiotics are not recommended. Antibiotics may be used if there is secondary bacterial infection. Standard immunoglobulins or hormonal treatments are not helpful. There is currently no information on the long-term effects of COVID-19 acquired in the neonatal period.	Infant treatment for COVID-19 is mainly symptomatic, and anti-viral treatment is not generally needed in newborns. There are no data on the efficacy of anti-viral drugs in the newborn population.	Ovalı F. SARS-CoV-2 Infection and the Newborn. Front Pediatr. 2020;8:294. doi:10.3389/fped.2020.00294
Children, adolescents, infants, hospitalized, clinical characteristics, Germany	22-May-20	Hospital Admission in Children and Adolescents With COVID-19	Dtsch Arztebl International	Correspondence	Between March 18 and May 4, 2020, the German Society for Pediatric Infectious Diseases collected data on 128 children and adolescents from 66 hospitals. Ninety-six (78%) had already been discharged. Sixteen patients (13%) required intensive care. An index patient was identified for 38% of the patients, and in 85% of these cases it was one of the parents. Forty-seven patients (37%) were infants, including 13 neonates (10%). Thirty-seven (29%) were 1 to 5 years old, 18 (14%) were schoolchildren up to 10 years old, 14 (11%) were aged 11 to 15 years, and 12 (9%) were over 15 years of age. Underlying diseases were present in 26% of the patients overall, but in 50% of those who received intensive care. Pneumonia occurred in only 15% of the patients, sepsis or sepsis-like clinical findings in 6%, encephalitis in 2%, and acute respiratory distress syndrome (ARDS) in another 2%. In 17% of cases no symptoms were documented.	Clinical data on children and adolescents admitted to 66 hospitals across Germany are presented; there was a high proportion of infants, generally mild course of disease, and pre-existing conditions were common.	Armann JP, Diffloth N, Simon A, et al. Hospital Admission in Children and Adolescents With COVID-19. Dtsch Arztebl Int. 2020;117(21):373-374. doi:10.3238/arztebl.2020.0373
Pediatric cardiology, congenital heart disease	22-May-20	Coronavirus Disease 2019 (COVID-19) Pandemic Implications in Pediatric and Adult Congenital Heart Disease	Journal of the American Heart Association	Review Article	Given the increased risk for severe COVID-19 observed in adults with underlying cardiac involvement, there is concern that patients with pediatric and congenital heart disease (CHD) may likewise be at increased risk for severe infection. The cardiac manifestations of COVID-19 include myocarditis, arrhythmia and myocardial infarction. Importantly, the pandemic has stretched health care systems and many care team members are at risk for contracting and possibly transmitting the disease which may further impact the care of patients with cardiovascular disease. In this review, the effects of COVID-19 in the pediatric and young adult population are described and a review of cardiovascular involvement in COVID-19, focusing on implications for patients with congenital heart disease, is presented.	Emerging concerns over cardiovascular involvement of COVID-19 in children are discussed in this article, with particular attention to patients with congenital heart disease.	Alsaied T, Aboulhosn JA, Cotts TB, et al. Coronavirus Disease 2019 (COVID-19) Pandemic Implications in Pediatric and Adult Congenital Heart Disease [published online 2020 May 22]. J Am Heart Assoc. doi:10.1161/JAHA.120.017224
Children, prolonged fecal shedding, respiratory tract, transmissibility	22-May-20	Prolonged fecal shedding of SARS-CoV-2 in pediatric patients. A quantitative evidence synthesis	Journal of Pediatric Gastro-enterology and Nutrition	Short Communication	A review of databases to identify pediatric studies comparing the pattern of fecal and respiratory shedding of SARS-CoV-2 RNA was conducted. Four studies reporting data from 36 children were included. A higher proportion of children had viral RNA shedding in stools after 14 days of symptoms onset compared to respiratory samples (RR= 3.2, 95%CI 1.2 to 8.9, I2 = 51%). Viral RNA shedding was longer in fecal samples with a mean difference of approximately 9 days (Mean Difference = 8.6, 95%CI 1.7 to 15.4, I2 = 77%) compared with respiratory samples. Although fecal SARS-CoV-2 RNA presence in feces does not confirm its transmissibility, the high and fast	Based on findings from this review, SARS-CoV-2 RNA shedding seems to be present in feces for a longer time than in the respiratory tract of children.	Santos VS, Gurgel RQ, Cuevas LE, et al. Prolonged fecal shedding of SARS-CoV-2 in pediatric patients. A quantitative evidence synthesis [published online 2020 May 22]. JPGN. doi:10.1097/MPG.0000000000002798

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					spread of the COVID-19 disease worldwide indicate other transmission routes are also plausible.		
Infants, BCG vaccine, immunization program, supply and distribution	22-May-20	Prioritizing Infants in a Time of Bacille Calmette-Guérin Vaccine Shortage Caused by Premature Expectations Against COVID-19	QJM: An International Journal of Medicine	Letter to Editor	The COVID-19 pandemic has accelerated a worldwide shortage not only of diagnostic test kits but also of essential drugs and vaccines. The consequences of such shortage are particularly complicated in the case of BCG vaccines (BCGV). Following the recent publication of new clinical trials conducted on the efficacy of BCGV against COVID-19, the expectation of the potential protective effect may lead to shortages of BCGV. Until evidence of new therapeutic targets are confirmed, the supply of BCGV should be prioritized for its approved use with known benefits and side effects, namely the prevention of tuberculous meningitis and miliary tuberculosis in infants.	Until the potential protective effect of BCG vaccination against COVID-19 is confirmed, vaccine supply should be prioritized for its approved use in preventing tuberculosis in infants.	Senoo Y, Suzuki Y, Tsuda K, Takahashi K, Tanimoto T. Prioritizing infants in a time of Bacille Calmette-Guérin vaccine shortage caused by premature expectations against COVID-19 [published online 2020 May 22]. QJM. doi:10.1093/qjmed/hcaa179
Pediatric asthma admissions, acute respiratory tract infections, airborne pollen, Slovenia	22-May-20	COVID-19 lockdown dropped the rate of paediatric asthma admissions	Archives of Disease in Childhood	Letter	Data from Slovenia show that during the first 5 weeks of the state's lockdown for COVID-19, from March 16 to April 20, 2020, a 71% to 78% decrease in pediatric asthma admissions was observed, compared with the same time periods in the last 3 years. Regarding common asthma attack triggers, there was a 51% to 68% decrease in admissions for acute respiratory tract infections. Airborne pollen concentrations were within seasonally expected limits, and a 48% to 58% reduction in the air nitrogen dioxide (NO2) level was detected.	A reduction in pediatric asthma admissions was observed in Slovenia during the COVID-19 lockdown, compared with a similar period in previous years.	Krivec U, Kofol Seliger A, Tursic J. COVID-19 lockdown dropped the rate of paediatric asthma admissions [published online 2020 May 22]. Arch Dis Child. doi:10.1136/archdischild-2020-319522
Pediatric Crohn's Disease, multi-system inflammatory syndrome, cytokine profile, infliximab, New York	22-May-20	Pediatric Crohn's Disease and Multisystem Inflammatory Syndrome in Children (MIS-C) and COVID-19 Treated With Infliximab	Journal of Pediatric Gastro-enterology and Nutrition	Short Communication	A case of severe COVID-19 infection is described in a 14-year-old, recently diagnosed pediatric Crohn's disease patient successfully treated with Tumor Necrosis Factor-alpha (TNF-α) blockade. The patient presented with five days of fever, an erythematous maculopapular facial rash, and abdominal pain without respiratory symptoms. SARS-CoV-2 PCR was positive. Despite inpatient treatment for COVID-19 and a perianal abscess, the patient acutely decompensated with worsening fever, tachycardia, fluid-refractory hypotension, elevation of liver enzymes, and transformation of the rash into purpura extending from the face to the trunk, upper and lower extremities. Cytokine profile revealed rising levels of interleukin (IL)-6, IL-8, and TNF-α, higher than those described in either inflammatory bowel disease or severe COVID-19 alone. The patient was treated with infliximab for TNF-α blockade to address both moderately to severely active Crohn's disease and multisystem inflammatory syndrome in children (MIS-C) temporally related to COVID-19. Within hours of infliximab treatment, fever, tachycardia and hypotension resolved and cytokine profile improved with normalization of TNF-α, a decrease in IL-6, and IL-8 concentrations.	This case supports a role for TNF-α blockade in the treatment of COVID-19 related inflammatory cascade in a pediatric Crohn's disease patient.	Dolinger MT, Person H, Smith R, et al. Pediatric Crohn's Disease and Multisystem Inflammatory Syndrome in Children (MIS-C) and COVID-19 Treated with Infliximab [published online 2020 May 22]. J Pediatr Gastroenterol Nutr. doi:10.1097/MPG.0000000000002809
Children, viral shedding, feces, respiratory samples, Brazil	22-May-20	Prolonged Fecal Shedding of SARS-CoV-2 in Pediatric Patients. A Quantitative Evidence Synthesis	Journal of Pediatric Gastro-enterology and Nutrition	Short Communication	In this review, four studies reporting data from 36 children were included that compare the pattern of fecal and respiratory shedding of SARS-CoV-2 RNA. A higher proportion of children had viral shedding in stools after 14 days of symptoms onset compared to respiratory samples (RR=3.2, 95% CI 1.2 to 8.9, I^2=51%). Viral RNA shedding was longer in fecal samples with a mean difference of approximately 9 days (Mean Difference = 8.6, 95% CI 1.7 to 15.4, I^2=77%) compared with respiratory samples. Although fecal SARS-CoV-2 viral RNA presence does not confirm its transmissibility in feces, the	Based on findings from this study, SARS-CoV-2 shedding seems to be present in feces for a longer time than in the respiratory tract of children.	Santos VS, Gurgel RQ, Cuevas LE, Martins-Filho PR. Prolonged fecal shedding of SARS-CoV-2 in pediatric patients. A quantitative evidence synthesis [published online 2020 May 22]. J Pediatr Gastroenterol Nutr.

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					high and fast spread of COVID-19 worldwide indicates other transmission routes are plausible.		doi:10.1097/MPG.0000000000002798
Children, pediatric operative procedure, infection control, New York	22-May-20	The Perioperative Services Response at a Major Children's Hospital During the Peak of the COVID-19 Pandemic in New York City	Annals of Surgery	Surgical Perspectives	This report captures specific steps taken by perioperative leadership in children's operating rooms (ORs) to maintain a safe environment (for staff and patients) for emergency, time-sensitive pediatric operative procedures. Considerations include redeployment of personnel and equipment, surgical volume and case adjudication. The authors also outline processes to expand OR activities for semi-urgent patients while the ban on elective surgery was still in effect. The new pediatric COVID-19-related multisystem inflammatory syndrome is also briefly described.	This report describes steps taken to maintain a safe perioperative environment for time-sensitive pediatric operations at New York hospitals.	Stylianos S, Mesa-Jonassen AE, Albanese CT, et al. The Perioperative Services Response at a Major Children's Hospital During the Peak of the COVID-19 Pandemic in New York City [published online 2020 May 22]. Ann Surg. doi:10.1097/SLA.0000000000004104
Children, hospitalization, ICU admission, outpatients, Spain	22-May-20	SARS-CoV-2 Infection in Ambulatory and Hospitalised Spanish Children	Archives of Disease in Childhood	PostScript	This study describes patients (<18 years) diagnosed with SARS-CoV-2 infection at Hospital La Paz (Madrid, Spain) in the first month of the outbreak (March 22 to April 9, 2020). Out of 349 children tested, 58 (16.6%) had a positive PCR for SARS-CoV-2. Twenty-five (43%) children were followed up as outpatients; nine of them (35%) presented at the hospital a second time, but none required admission. Thirty-three (57%) children were admitted, after a median of 3 days of symptoms (interquartile range (IQR) 2–5). Among inpatients, 14 (42.4%) received oxygen therapy for a median of 3 days (IQR 2–6.75), and 12 (36.4%) were given antibiotics (ceftriaxone 11/12). Three patients with severe disease received remdesivir, and tocilizumab was added in two with an inflammatory syndrome. Five children were admitted to the PICU (15% of those hospitalized), three for severe COVID-19, one for hypertensive crisis and the other for diabetic ketoacidosis. A 5-month-old infant with dilated cardiomyopathy and Hurler's disease died. Median hospital stay was 3 days (IQR 2–5).	This is the largest series of children with COVID-19 in Spain to date. Most children had good outcomes, but there were high rates of hospitalization and ICU admission.	de Ceano-Vivas M, Martín-Espín I, Del Rosal T, et al. SARS-CoV-2 infection in ambulatory and hospitalised Spanish children [published online 2020 May 22]. Arch Dis Child. doi:10.1136/archdischild-2020-319366
Placental pathology, maternal vascular malperfusion, perinatal outcomes, Chicago, USA	22-May-20	Placental Pathology in COVID-19	American Journal of Clinical Pathology	Original Article	The placentas of pregnant women with COVID-19 delivering between March 18, 2020, and May 5, 2020 were examined and compared to historical controls and women with placental evaluation for a history of melanoma. In total, 16 placentas from patients with SARS-CoV-2 infection were examined (15 with live birth in the third trimester, 1 delivered in the second trimester after intrauterine fetal demise). Compared to controls, third trimester placentas were significantly more likely to show at least one feature of maternal vascular malperfusion (MVM), particularly abnormal or injured maternal vessels, which reflect abnormalities in oxygenation within the intervillous space associated with adverse perinatal outcomes, and intervillous thrombi. The placenta from the patient with intrauterine fetal demise showed villous edema and a retroplacental hematoma. Overall, only 1 COVID-19 patient was hypertensive despite the association of MVM with hypertensive disorders and pre-eclampsia. These changes may reflect a systemic inflammatory or hypercoagulable state due to COVID-19, influencing placental physiology.	Comparing the placentas of women with COVID-19 during pregnancy with historical controls, histopathologic findings were notable for maternal vascular perfusion reflecting oxygenation abnormalities and systemic inflammatory states in pregnant women with COVID-19.	Shanes ED, Mithal LB, Otero S, Azad HA, Miller ES, Goldstein JA. Placental Pathology in COVID-19 [published online 2020 May 22]. Am J Clin Pathol. doi:10.1093/ajcp/aqaa089
Neonatal infection, acute	22-May-20	A Case Report of Neonatal Acute Respiratory	Journal of the Pediatric Infectious	Case Report	On April 1, 2020, a 10-day-old male infant (born at 39 weeks' gestation via normal spontaneous vaginal delivery) presented to the Emergency Department (ED) with increased nasal secretion and labored breathing,	This case presents a unique presentation of respiratory failure due	Precit MR, Yee R, Anand V, Mongkolrattanothai K, Pandey U, Dien Bard J. A

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respiratory failure, USA		Failure Due to SARS-CoV-2	Diseases Society		approximately 1 week after exposure to family members who had upper respiratory symptoms the week prior. At the ED, laboratory and clinical findings were consistent with hypoxic respiratory failure. On admission to the PICU, increased nasal flaring and secretions, increased 'work of breathing', subcostal retractions, and lethargy were noted, and SARS-CoV-2 was detected by RT-PCR on his nasopharyngeal (NP) swab. On day 3, the patient was successfully weaned off nasal cannula oxygen to room air and was discharged the following day. Five days later, the patient returned with increased nasal congestion, subcostal retractions, and decreased feeding. NP swabs from both the patient and the mother tested positive for SARS-CoV-2; the infant's NP swab showed qualitatively lower viral load than the first specimen tested five days prior. The patient's respiratory symptoms resolved, and he was discharged the next morning.	to SARS-CoV-2 in a neonatal patient.	Case Report of Neonatal Acute Respiratory Failure Due to SARS-CoV-2 [published online 2020 May 22]. J Pediatric Infect Dis Soc. doi:10.1093/jpids/piaa064
Labor and delivery, visitor policy, labor companionship, breastfeeding	22-May-20	Labor and Delivery Visitor Policies During the COVID-19 Pandemic: Balancing Risks and Benefits	JAMA	Viewpoint	Although variation exists in visitor policies, many hospitals have instituted a limit of 1 adult visitor for each patient in labor and delivery units. As recommended by the Centers for Disease Control and Prevention and the American College of Obstetricians and Gynecologists, this visitor should be afebrile and screened for symptoms prior to entry. Apart from the emotional rationale, ethical and clinical reasoning supports excluding labor and delivery units from visitor prohibition policies. As noted by the WHO, continuous companionship during labor is recommended for all pregnant women to potentially improve labor outcomes. In addition, although guidelines to physically distance infants are evidence-based, they are not pragmatic. Many families, especially if both the patient and visitor are SARS-CoV-2 positive, lack the resources to isolate from the newborn for 14 days. Furthermore, risk of harm to bonding and breastfeeding initiation exists. Implementing a labor and delivery unit visitor policy necessitates balancing risks and benefits to the patient, the visitor, the community, the health care team, and the infant.	This article considers the risks and benefits of restrictive visitory policies on labor and deliver units.	Arora KS, Mauch JT, Gibson KS. Labor and Delivery Visitor Policies During the COVID-19 Pandemic: Balancing Risks and Benefits [published online 2020 May 22]. JAMA. doi:10.1001/jama.2020.7563
Children, malnutrition, indoor air pollution, case rate, prevalence scenarios, India	22-May-20	Risks to Children under-five in India from COVID-19	medRxiv	Preprint (not peer reviewed)	Though children are at relatively lower risk for SARS-CoV-2 infection compared to adults, the Indian population has a large young demographic that is likely to be at higher risk due to exposure to pollution, malnutrition and poor access to medical care. The authors combined district family household survey data with data from the COVID-19 outbreak in China to analyze the potential impact of COVID-19 on children under the age of 5 in India, under three different scenarios; each of which assumed the prevalence of infection to be 0.5%, 1%, or 5%. In the lowest prevalence scenario, across the most populous 18 Indian states, asymptomatic, non-hospitalized symptomatic and hospitalized symptomatic cases could reach 87,200, 412,900 and 31,900, respectively. In a moderate prevalence scenario, these figures reach 174,500, 825,800, and 63,800. In the worst case, high prevalence scenario these cases could climb as high as 872,200, 4,128,900 and 319,700.	Estimates from this study show that the COVID-19 pandemic may pose substantial threat to children, in India, especially those suffering from malnutrition and exposure to indoor air pollution, with limited access to health services.	Frost I, Tseng K, Hauck S, et al. Risks to Children under-five in India from COVID-19 [published online 2020 May 22]. medRxiv. doi:10.1101/2020.05.18.20105239
Pregnancy, neonates, severe pneumonia,	22-May-20	Clinical Course of Coronavirus Disease-2019	Acta Obstetricia et Gynecologica Scandinavica	Original Article	Data on the first 60 pregnant women with COVID-19 at the Puerta de Hierro University Hospital, Madrid, Spain from March 14 to April 14, 2020 were reviewed. The most common symptoms were fever and cough (75.5%, each) followed by dyspnea (37.8%). 41 patients (68.6%) required hospital	In this study of pregnant patients with COVID-19, CRP and D-dimer levels positively	Pereira A, Cruz-Melguizo S, Adrien M, Fuentes L, Marin E, Perez-Medina T. Clinical course of Coronavirus

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inflammatory markers, neutrophil /lymphocyte ratio, breastfeeding, Spain		(COVID-19) in Pregnancy			admission (18 due to disease worsening and 23 for delivery) of whom 21 patients (35%) underwent pharmacological treatment, including hydroxychloroquine, antivirals, antibiotics and tocilizumab. No renal or cardiac failures or maternal deaths were reported. Lymphopenia (50%), thrombocytopenia (25%), and elevated C-reactive protein (CRP) (59%) were observed in the early stages of the disease. Median CRP, D-dimer and the neutrophil/lymphocyte ratio were elevated. High CRP and D-dimer levels were the parameters most frequently associated with severe pneumonia. The neutrophil/lymphocyte ratio was found to be the most sensitive marker for disease improvement (relative risk: 6.65; 95% CI: 4.1-5.9). During the study period, 23 women delivered, 18 (78%) vaginally. All newborns tested negative for SARS-CoV-2 by RT-PCR on nasopharyngeal swabs. Of 21 breastfed neonates, two were admitted to the NICU for respiratory distress syndrome and hemolytic anemia, respectively. No SARS-CoV-2 was detected in placental tissue.	correlated with severe pneumonia and the neutrophil/lymphocyte ratio decreased as the patients improved clinically. No cases of vertical or horizontal transmission were diagnosed in neonates, breastfed or not.	Disease-2019 (COVID-19) in pregnancy [published online 2020 May 22]. Acta Obstet Gynecol Scand. doi:10.1111/aogs.13921
Children, chest CT, radiological findings, diagnosis, management, China	22-May-20	CT Features of Coronavirus Disease (COVID-19) in 30 Pediatric Patients	American Journal of Roentgen-ology	Original Research	This retrospective study reviewed computed tomography (CT) findings and clinical symptoms of 30 pediatric patients (10 months - 18 years) with laboratory-confirmed COVID-19 at six centers in China from January 23, 2020, to February 8, 2020. Overall among children, CT findings were often negative (77%). Positive CT findings seen in children included ground-glass opacities with a peripheral lung distribution, a crazy paving pattern, and the halo and reverse halo signs. There was a correlation between increasing age and increasing severity of findings, consistent with reported symptomatology in children. Eleven of 30 patients (37%) underwent follow-up chest CT, with 10 of 11 examinations (91%) showing no change, raising questions about the utility of CT in the diagnosis and management of COVID-19 in children.	The present study describes chest CT findings in children with COVID-19 and questions the utility of CT in the diagnosis and management of pediatric patients.	Steinberger S, Lin B, Bernheim A, et al. CT Features of Coronavirus Disease (COVID-19) in 30 Pediatric Patients [published online 2020 May 22]. AJR Am J Roentgenol. doi:10.2214/AJR.20.23145
Children, family cluster, RNA-persistence, gastro-intestinal tract, nasopharynx, Germany	22-May-20	Clinical and Epidemiological Features of a Family Cluster of Symptomatic and Asymptomatic SARS-CoV-2 Infection	Journal of the Pediatric Infectious Diseases Society	Brief Report	This report describes the clinical and virological characteristics of three children in a family cluster of SARS-CoV-2 infection. While the youngest child was not infected, both parents and two older children (2 and 5 years old) became infected. The children were only briefly symptomatic with predominant gastrointestinal symptoms. They initially shed viral RNA from the upper respiratory tract but cleared the virus after five to six days in the nasopharynx. However, SARS-CoV2 RNA was continuously detected in the stools of the children for more than 4 weeks indicating predominant replication within the gastrointestinal tract.	From this report of a family cluster, two children with mildly symptomatic COVID-19 displayed persistent shedding of viral RNA in stool samples.	Wolf GK, Glueck T, Huebner J, et al. Clinical and Epidemiological Features of a Family Cluster of Symptomatic and Asymptomatic SARS-CoV-2 Infection [published online 2020 May 22]. J Pediatric Infect Dis Soc. doi:10.1093/jpids/piaa060
Child and adolescent mental health, corona, Covid-19, Croatia	21-May-20	Covid-19, child and adolescent mental health – Croatian (in)experience	Irish Journal of Psychological Medicine	Perspective Article	This paper, received for publication in April 2020, reviews Croatian child and adolescent mental health (CAMH) services before the COVID-19 pandemic, and reflects on how the pandemic has affected services and their capacity for future facility. COVID-19 has inspired fear and uncertainty for Croatian's health and economic wellbeing, in addition to increasing self-isolation due to lockdown procedures. CAMH services will be essential to handle the anticipated psychological consequences of the pandemic. However, CAMH services in Croatia do not have appropriate funding for a large influx of patients, and are affiliated with only 4 university hospitals - one of which was closed at the time of the article, due to damage from an earthquake on	This paper reviews Croatian child and adolescent mental health (CAMH) services before the COVID-19 pandemic, and reflects on how the pandemic has affected services and their capacity for future facility.	Franic T, Dodig-Curkovic K. Covid-19, child and adolescent mental health - Croatian (in)experience. Ir J Psychol Med. 2020;37(3):214-217. doi:10.1017/ipm.2020.55

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					March 22, 2020. In addition, many health facilities have had to re-organize due to COVID-19, making increased availability of CAMH more difficult. The COVID-19 pandemic has increased discussions on mental health and has introduced new health care methods such as telepsychiatry and video-conferencing, which have received good response in Croatia. The authors stress that these new techniques and approaches will be needed to meet the increased need for CAMH services after the pandemic.	Drawbacks in funding and organization must be balanced against new health care methods as Croatia looks to meet the increased need for CAMH services after the pandemic.	
COVID-19; neonate; neonatal ICU; breastfeeding; prematurity; parental bonding; parent-newborn separation	21-May-20	The impact of COVID-19 pandemic on the healthcare of premature babies	European Journal of Midwifery	Editorial	The author discusses the impact of the COVID-19 pandemic on the health of premature and sick infants. Most neonatal ICUs (NICUs) have limited parental access during the pandemic, and restrictions differ from hospital to hospital. Moreover, the author reports that parents have not been provided with an evidence-based explanation for the necessity of keeping parents out of the NICUs. Early separation is harmful to both newborns and parents, since it disrupts the biological and emotional bonding that has developed during gestation. This may lead to significant physical and mental consequences for parents and infants. By keeping mothers isolated from their infants, a reduction in breastfeeding may develop, as supportive techniques, such as skin-to-skin contact and midwifery counseling, may not be possible in the NICU. Importantly, follow-up appointments, therapy, and psychological support services have stopped in many places, as clinics and rehabilitation centers have suspended their operations during lockdown, causing many parents to worry about the consequences to their children's health. Urgent action must be taken to protect parents and newborns, and to prevent any collateral damage to their health.	The author discusses the impact of the COVID-19 pandemic on the health of premature and sick infants. Limited parental access to neonatal ICUs disrupts the biological and emotional bonding between parents and infants. By keeping mothers isolated from their infants, a reduction in breastfeeding may also develop.	Vavouraki E. The impact of COVID-19 pandemic on the healthcare of premature babies. Eur J Midwifery. 2020;4:21. doi:10.18332/ejm/122385.
medical abortion; telemedicine; COVID-19; France	21-May-20	COVID-19 impact in abortions' practice, a regional French evaluation	Journal of Gynecology Obstetrics and Human Reproduction	Article	This retrospective quantitative survey of health workers performing abortions in the South and Corse regions of France from August 6-October 2, 2020, was conducted to assess whether emergency measures undertaken for the management of abortions during the COVID-19 pandemic led to practice changes and to obtain practitioners opinions on the continuation of the new efforts. Emergency guidelines for access to abortion services recommended by the French National Health Agency (HAS) were to promote the practice of at-home medical abortions (MA) between 7-9 weeks gestation (WG), and for consultations required in abortion cases to be via telemedicine. 124 surveys were included in the analysis, and of these, 59/77 practitioners offered MA at home between 7-9 WG, and 61/89 (68.5%) wished to carry on this practice post-pandemic. 44.7% (55/123) of the practitioners offered telemedicine for consultation of abortion needs, and 61.7% of them wished to carry on this practice. The emergency measures implemented by the HAS during the COVID-19 pandemic for abortion services are approved and followed by a majority of health workers. These measures may be continued post-pandemic for improving access to services.	The authors performed a retrospective quantitative study of health professionals' experiences and opinions in the South and Corse regions of France on the use of emergency measures to provide access to abortion services during the COVID-19 pandemic. Most practitioners provided services for at-home medical abortions and wished to carry on the practice post-pandemic.	Gibelin K, Agostini A, Marcot M, Piclet H, Bretelle F, Miquel L. COVID-19 impact in abortions' practice, a regional french evaluation. Journal of Gynecology Obstetrics and Human Reproduction. 2021;50(5):102038. doi: https://doi.org/10.1016/j.jogoh.2020.102038.
IVF, fertility, laboratory practices,	21-May-20	Managing the IVF laboratory during a	Reproductive Biomedicine Online	Original Article	As a result of the COVID-19 pandemic, fertility clinics closed or sharply reduced clinical operation, which shifted the management of IVF laboratories in three phases: shutdown preparation; maintenance during	Since much is unknown about the virus, laboratory managers	Hickman C, Rogers S, Huang G, et al. Managing the IVF laboratory during a

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laboratory management		pandemic: international perspectives from laboratory managers			shutdown; and restart. Since evidence-based response options were not available, many laboratory managers-based decisions regarding procedures on opinion and experience. The article consists of the personal experiences of laboratory managers from seven different countries at different stages of the pandemic (China, Italy, Spain, France, UK, Brazil, and Australia) to provide additional measures in response to the COVID-19 pandemic, since pandemic-specific guidelines are not available. The authors detail risks involved with each of the three phases considering the current scientific evidence and how much is still unknown. The authors provide these responses to guide future practices for IVF laboratories responding to pandemics.	have had to make decisions without scientific evidence, so this paper is a presentation of different approaches for laboratory practice across different countries.	pandemic: international perspectives from laboratory managers. Reprod Biomed Online. 2020;41(2):141-150. doi:10.1016/j.rbmo.2020.05.006
Pregnancy, breastfeeding, breast milk samples, Germany	21-May-20	Detection of SARS-CoV-2 in human breastmilk	The Lancet	Correspondence	Recent investigations show no evidence for SARS-CoV-2 in human breast milk, however sample sizes are small. In this report, authors analyzed milk samples from two nursing mothers who were diagnosed with COVID-19 days after delivery of and room sharing, with each other and with their newborns. Following admission and delivery, four samples from Mother 1 tested negative. By contrast, SARS-CoV-2 RNA was detected in milk from Mother 2 at days 10, 12, and 13; samples taken subsequently were negative. Detection of viral RNA in Mother 2 coincided with mild COVID-19 symptoms and a SARS-CoV-2 positive diagnostic test of Newborn 2. Mother 2 had been wearing a surgical mask since the onset of symptoms and followed safety precautions when handling or feeding the neonate. Whether Newborn 2 was infected by breastfeeding or other modes of transmission remains unclear.	In this report (previously posted as a preprint) of two nursing mothers with COVID-19, both newborns tested positive for SARS-CoV-2 infection within 1-2 weeks of birth. SARS-CoV-2 RNA was only detected in one mother's consecutive breast milk samples.	Groß R, Conzelmann C, Müller JA, et al. Detection of SARS-CoV-2 in human breastmilk. Lancet. doi:10.1016/S0140-6736(20)31181-8
Pregnancy, regular screening, morbidity, New York City	21-May-20	COVID-19 in Pregnant Women: Case Series From One Large New York City Obstetrical Practice	American Journal of Perinatology	Original Article	From March 22 to April 30, 2020, all pregnant women from one large obstetrical practice in New York City were contacted regularly to inquire about symptoms of COVID-19 (fever, cough, shortness of breath, malaise, anosmia), or sick contacts. In total, 757 pregnant women were evaluated, and 92 had known or suspected COVID-19 (12.2%, 95% CI: 10.0-14.7%). Of these 92 women, 33 (36%) had positive COVID-19 test results. Only one woman required hospital admission for 5 days due to COVID-19 (1.1%, 95% CI: 0.2-5.9%). One other woman received home oxygen. No women required mechanical ventilation and there were no maternal deaths. One woman had an unexplained fetal demise at 14 weeks' gestation around the time of her COVID-19 symptoms. Twenty one of the 92 women have delivered, and all were uncomplicated; neonatal testing is not currently available.	Preliminary results from an obstetric practice in New York City found that overall morbidity was low among 92 women with confirmed or presumed COVID-19.	Fox NS, Melka S. COVID-19 in Pregnant Women: Case Series from One Large New York City Obstetrical Practice [published online 2020 May 21]. Am J Perinatol. doi:10.1055/s-0040-1712529
Pregnancy, neonates, clinical outcomes, China	21-May-20	Update on Clinical Outcomes of Women With COVID-19 During Pregnancy	International Journal of Gynaecology and Obstetrics	Brief Communication	The present article reports what is currently known about pregnancy outcomes among women with SARS-CoV-2 infection at the time of publication. A total of 16 pregnant women with RT-PCR confirmed COVID-19, identified up until February 16, 2020 at an obstetric unit in Wuhan, China, were included in this retrospective cohort study. Most women (n=14, 87.5%) had pregnancy comorbidities and/or fetal complications. Seven patients required supplemental oxygen, but none required ventilatory support. Of the 16 patients, 12 women delivered via cesarean section, while four delivered vaginally. There were no neonatal or maternal deaths. The median gestational age of neonates at delivery was 37+5 weeks, and all neonates tested negative for SARS-CoV-2. Twelve neonates were transferred to a children's hospital, mainly for preventive isolation.	In a small cohort of pregnant women with COVID-19, findings show no evidence of vertical transmission; all neonates tested negative for SARS-CoV-2, and no maternal or neonatal deaths are reported.	Zeng Y, Lin L, Yan Q, et al. Update on clinical outcomes of women with COVID-19 during pregnancy [published online 2020 May 21]. Int J Gynaecol Obstet. doi:10.1002/ijgo.13236

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Neonates, care practices, mother-newborn separation, breastfeeding, discharge, Penn State, USA	21-May-20	Management of Newborns Exposed to Mothers With Confirmed or Suspected COVID-19	Journal of Perinatology	Review Article	Management of neonates born to women with confirmed or suspected COVID-19 is largely center-specific, given local customs and availability of resources. The authors of this report draw upon their limited experience and anecdotal reports from nearby institutions to develop a triage algorithm at the Penn State Hospital at Milton S. Hershey Medical Center that may be useful for other centers anticipating similar surges in cases of exposed newborns. Several care practices that have changed in the COVID-19 era are discussed including the use of antenatal steroids, delayed cord clamping, mother-newborn separation, and breastfeeding in accordance with the recommendations of international organizations like the WHO. Moreover, this paper provides guidance on the most suitable respiratory support for newborns, as well as for the discharge process and beyond.	This paper provides guidance for management of newborns exposed to mothers with confirmed or suspected COVID-19, in the perinatal period.	Amatya S, Corr TE, Gandhi CK, et al. Management of newborns exposed to mothers with confirmed or suspected COVID-19 [published online 2020 May 21]. J Perinatol. doi:10.1038/s41372-020-0695-0
Children, Kawasaki-like hyper-inflammatory syndrome, antibody titers, Italy	21-May-20	SARS-CoV-2-Induced Kawasaki-Like Hyperinflammatory Syndrome: A Novel COVID Phenotype in Children	Pediatrics	Case Report	This report describes two children (12 and 7 years old) with persistent fever and profuse diarrhea who developed signs of mucocutaneous involvement (conjunctivitis, fissured lips, skin rash, erythema, and edema of the hands and feet). Blood tests revealed elevated markers of inflammation, lymphopenia, thrombocytopenia, and complement consumptions. Afterward, diffuse edema with hypoalbuminemia appeared in the context of a capillary leak syndrome. In both patients, repeated nasal swabs for SARS-CoV-2 were negative but each had high titers of IgG and IgM against the SARS-CoV-2 virus. The negative PCR in the presence of IgM and IgG suggest that the inflammatory response developed in the late phase of viral infection, when SARS-CoV-2 was not detectable in the upper airway. Both patients improved after IV corticosteroid treatment. The authors propose the name of "SARS-CoV-2-induced Kawasaki-like Hyperinflammatory Syndrome" (SCiKH Syndrome) to describe these patients.	This report presents two cases of hyperinflammatory syndrome in children who tested negative for SARS-CoV-2 on nasal swab but had high antibody titers against the virus.	Licciardi F, Pruccoli G, Denina M, et al. SARS-CoV-2-Induced Kawasaki-Like Hyperinflammatory Syndrome: A Novel COVID Phenotype in Children [published online 2020 May 21]. Pediatrics. doi:10.1542/peds.2020-1711
Children, emergency department protocol, intrahospital transmission, Italy	21-May-20	A Pediatric Emergency Department Protocol to Avoid Intrahospital Spread of SARS-CoV-2 During the Outbreak in Bergamo, Italy	The Journal of Pediatrics	Brief Report	To evaluate whether children play a role in intrahospital spread of SARS-CoV-2 infection, the authors developed a pediatric emergency department protocol at Hospital Papa Giovanni XXIII, which is the largest referral site in Bergamo, Lombardy, Italy. The protocol was adopted on March 6, 2020 and consisted of 3 parts: triage optimization, risk assessment and management in the emergency room, and patient management on the pediatric unit. During the study period, 58 nasopharyngeal/oropharyngeal (NP/OP) swabs were performed to screen all pediatric patients presenting to the Emergency Department (ED). Among patients admitted from the ED, 9 of 15 (69%) suspected cases had a positive NP/OP swab. Only 2 children were admitted for respiratory problems, 6 children had no or very mild respiratory symptoms, and 6 newborns/infants had fever without signs of localization. After the adoption of spatial reorganization of the ED through the protocol, only 4 cases of COVID-19 occurred among health care professionals.	The authors propose a strict surveillance and management protocol to prevent intrahospital spread of SARS-CoV-2 in pediatric emergency departments.	Nicastro E, Mazza A, Gervasoni A, Di Giorgio A, D'Antiga L. A Pediatric Emergency Department Protocol to Avoid Intrahospital Spread of SARS-CoV-2 during the Outbreak in Bergamo, Italy [published online 2020 Apr 21]. J Pediatr. 2020;S0022-3476(20)30470-4.

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Child, IgG antibodies, cutaneous vasculitis, Italy	21-May-20	Images in Practice: Painful Cutaneous Vasculitis in a SARS-Cov-2 IgG-Positive Child	Pain and Therapy	Case Report	During the pandemic period in Italy, the authors observed more than ten pediatric patients who tested IgG positive for SARS-CoV-2 with painful vasculitic skin lesions on the feet that required modest pain relief therapy. Here, the case history of one of these patients is described along with pictures of her condition. The 11-year-old patient had erythematous chilblain-like skin lesions on her feet and several ulcerative lesions with dyschromia of the nails. The lack of finger pressure clearing of the lesions suggests that the vasculitis in this patient was of an ischemic hemorrhagic nature. All blood tests were negative, and no SARS-CoV-2 virus was detected on nasal or oropharyngeal swab, while serologic testing detected SARS-CoV-2 IgG antibodies. After 7 days, analgesic therapy was discontinued, and after 15 days the skin lesions were completely resolved	In this pediatric case, the authors draw correlation between skin lesions and positive results for SARS-CoV-2 IgG antibodies.	Papa A, Salzano AM, Di Dato MT, Varrassi G. Images in Practice: Painful Cutaneous Vasculitis in a SARS-Cov-2 IgG-Positive Child [published online 2020 May 21]. Pain Ther. doi:10.1007/s40122-020-00174-4
Children, hydroxy-chloroquine, safety profile, dosing, clinical trials	21-May-20	Efficacy, Safety and Cost-Effectiveness of Hydroxychloroquine in Children With COVID-19: A Call for Evidence	Acta Paediatrica	A Different View	The COVID-19 pandemic has created an urgent need to identify effective medications for its prevention and treatment. Among these treatments, the off-label use of hydroxychloroquine (HCQ), a less toxic derivate of chloroquine, has become a common practice among clinicians, including pediatricians, despite lack of evidence of its clinical efficacy for this indication (especially for pediatric patients) at present. The majority of children with COVID-19 have mild symptoms, and widespread use of HCQ may confer only minimal benefit. In addition, there are concerns surrounding the safety profile of HCQ and uncertainties regarding its dosing. Randomized controlled trials are necessary to clarify further the clinical benefit of HCQ in pediatric patients with SARS-CoV-2 infection.	There is limited evidence of the clinical efficacy of hydroxychloroquine in treating COVID-19, and many uncertainties exist surrounding its safety profile and dosing especially in children.	Rodríguez-Martínez CE, Fernandes RM, Hawcutt DB, Sinha IP, Pacheco RL. Efficacy, safety and cost-effectiveness of hydroxychloroquine in children with COVID-19: a call for evidence [published online 2020 May 21]. Acta Paediatr. doi:10.1111/apa.15373
Preterm newborn, breastfeeding, breast milk sample, expressed maternal milk, Italy	21-May-20	Lack of Viral Transmission to Preterm Newborn From a COVID-19 Positive Breastfeeding Mother at 11 Days Postpartum	Journal of Medical Virology	Letter to the Editor	This paper reports the case of a mother who presented with clinical symptoms of respiratory tract infection 11 days after the spontaneous delivery of a preterm female newborn (32 weeks + 2 days gestation). Since birth, the newborn was both directly breastfed and fed expressed maternal milk; she also received Kangaroo Mother Care sessions. 11 days after delivery, the mother tested positive for SARS-CoV-2 on RT-PCR of her nasopharyngeal swab. RT-PCR assay of her breast milk samples (pumped at the peak of maternal febrile symptoms) was negative for SARS-CoV-2 allowing the continued provision of nutrition with expressed maternal milk. During hospital stay, the mother and healthcare providers followed hygiene precautions, including wearing surgical masks, hand washing, and using alcohol-based solutions to clean the surfaces. The neonate continued to show normal vital parameters and was discharged. Breast milk contains many components, including immunoglobulins, probiotic organisms, and growth factors that support maturation of the infant's own immune system.	In this case, a nursing mother was diagnosed with COVID-19 11 days postpartum. At the peak of symptoms, her breast milk sample tested negative for SARS-CoV-2 on RT-PCR, thus her newborn continued to be fed with expressed maternal milk.	Perrone S, Giordano M, Meoli A, et al. Lack of viral transmission to preterm newborn from a COVID-19 positive breastfeeding mother at 11 days postpartum [published 2020 May 21]. J Med Virol. doi:10.1002/jmv.26037
Children, clinical characteristics, respiratory tract infection, SARS-CoV	21-May-20	Clinical Characteristics of COVID-19 in Children: Are They Similar to Those of SARS?	Pediatric Pulmonology	Review	By examining the clinical data available in the public domain, the present work clarifies the clinical presentations in children with COVID-19 in China. Statistical significance tests and adjusted odds ratios estimation were performed on the children (age below 18) and adults (age 18 or above) cohorts in China. SARS-CoV and SARS-CoV-2 shared similar clinical features. Lower respiratory tract infection was less prominent in children as evidenced by the relatively low prevalence in chest pain/discomfort and dyspnea. Similar to SARS, younger children had a less aggressive clinical course, compared with adolescents. While fewer symptoms were observed in	SARS-CoV and SARS-CoV-2 share similar clinical features and less aggressive course in younger children.	Leung C. Clinical characteristics of COVID-19 in children: are they similar to those of SARS? [published online 2020 May 21]. Pediatr Pulmonol. doi:10.1002/ppul.24855

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					children compared to adults, there is not yet sufficient evidence to conclude shorter hospital stay in children.		
Children vs. adults, epidemiology, France	21-May-20	Changes in RT-PCR-positive SARS-CoV-2 rates in adults and children according to the epidemic stages	medRxiv	Preprint (not peer reviewed)	In this prospective multicenter study involving 45 pediatric units, the RT-PCR results of nasopharyngeal swabs in France from March 2, 2020 to April 26, 2020 are reported. During the study period, 52,588 RT-PCR tests for SARS-CoV-2 were performed, 6,490 in children and 46,098 in adults. The rate of positive tests for children was 2- to 7-fold less than that for adults. These rates varied according to the time of the epidemic and were higher at the peak. The lower rates of positivity in children persisted during the surveillance period but varied according to the time in the epidemic.	Findings from this study showed lower rates of positive SARS-CoV-2 RT-PCR tests in children compared to adults, but rates varied according to epidemic stage.	Levy C, Basmaci R, Bensaid P, et al. Changes in RT-PCR-positive SARS-CoV-2 rates in adults and children according to the epidemic stages [published online 2020 May 21]. medRxiv. doi:10.1101/2020.05.18.20098863
COVID-19 in children; COVID-19 in neonates; SARS-CoV-2 in pediatric patients	20-May-20	Coronavirus Disease 2019 (COVID-19) in Children: Vulnerable or Spared? A Systematic Review	Cureus	Review	The authors performed a literature search for peer-reviewed articles on COVID-19 and children, and 34articles were included in the final analysis. Out of 42 articles gathered from the year prior to the search date [unknown; published May 2020], 34 were selected. This review aimed to assess vulnerability to SARS-CoV-2 among the pediatric population [no defined age]. Modes of transmission for all ages are described as coughing, sneezing, shaking hands, rubbing eyes, and close contact, which is especially true for pediatric patients. The authors state children have limited exposure to the external environment but remain vulnerable to SARS-CoV-2 from contact with family members. The authors reference one article that describes the common symptoms in severely ill pediatric patients as polypnea, fever, cough, expectoration, nausea/vomiting, diarrhea, fatigue/myalgia, headache, and constipation. Further deterioration is possible in pediatric patients and can lead to septic shock, metabolic acidosis, or coagulation disorders. Data has shown that although children can become very ill, 90% of infected children have mild to moderate symptoms and rarely require hospitalization. Children can also be carriers of the virus and play a pivotal role in spreading the infection. The authors wanted to create awareness with this review of the importance of prevention measures that can be taken to avoid further spreading of the virus.	This review from May 2020 evaluated 34 articles on COVID-19 and its relationship to pediatric patients (no ages defined). Pediatric patients can become severely ill, although, in 90% of cases, the SARS-CoV-2 infection is mild to moderate in children. Children can contract the virus from household members, and children can be carriers of the virus and spread it to others. The knowledge that children are susceptible must be considered for prevention measures to limit the spread of SARS-CoV-2.	Saleem H, Rahman J, Aslam N, Murtazaliev S, Khan S. Coronavirus Disease 2019 (COVID-19) in Children: Vulnerable or Spared? A Systematic Review. *Cureus*. 2020;12(5):e8207. Published 2020 May 20. doi:10.7759/cureus.8207
Pregnancy, anesthesia, USA	20-May-20	COVID-19 Pandemic and Obstetric Anaesthesia	Anesthesia Critical Care & Pain Medicine	Editorial	The COVID-19 pandemic had made obstetric anesthesia more challenging due to the added anxiety and concerns about the possibility of infection experienced by expectant mothers. Therefore, a working group convened by the Obstetric Anesthesia and Critical Care Club produced a series of clinical practice recommendations and visual aids to guide anesthesiologists during these challenging times. As stated by the author, the key messages are that: 1) neuraxial procedures should be offered as usual; 2) early epidural placement may be favorable in reducing the likelihood that a general anesthetic may become necessary if a woman requires an intrapartum C-section; 3) be prepared for the logistics and altered workflow that will be necessary to avoid equipment and supplies contamination; 4) protect yourself with adequate PPE and be familiar with the best way to rapidly and	Obstetric anesthesia recommendations have not changed despite the COVID-19 pandemic. Of note, it is important to be adequately protected when administering general anesthesia in COVID-19 patients due to higher risk of exposure to aerosols.	Landau R. COVID-19 Pandemic and Obstetric Anaesthesia. Anaesth Crit Care Pain Med. 2020;39(3):327-328. doi:10.1016/j.accpm.2020.05.010

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					safely don and doff your PPE; 5) ensure optimal communication with your obstetrical colleagues, midwives and nurses.		
Early pregnancy, termination, fetal development, SARS-CoV China	20-May-20	Is Termination of Early Pregnancy Indicated in Women With COVID-19?	European Journal of Obstetrics & Gynecology and Reproductive Biology	Correspondence	Recently, a news program of Hubei TV (China) suggested that early pregnant women infected with COVID-19 should terminate their pregnancies, triggering wide controversy. In February, there were 3 pregnant women with mild COVID-19 infection in a hospital of Wuhan who decided to terminate their pregnancy in the first trimester. Viral infection during early pregnancy could potentially affect embryogenesis and fetal organ development, but there is still no evidence for the vertical transmission of COVID-19. Prior to COVID-19, there is no evidence that SARS-CoV or MERS-CoV itself can cause fetal malformations, because neither passes across the placental barrier. In addition, SARS-CoV-2 infection outcome seems to have a better prognosis than SARS-CoV infection in pregnant women. Decisions of early pregnancy termination should be considered on an individual basis, based upon risk factors including viral load, transmission generations, range of lung lesions by CT, maternal age, and comorbidities.	There is little evidence to support vertical transmission of COVID-19, thus the authors argue that decisions to terminate early pregnancy in women with COVID-19 should be individualized and made carefully.	Wu YT; FRCOG, Li C, Zhang CJ, Huang HF. Is termination of early pregnancy indicated in women with COVID-19? [published online 2020 May 20]. Eur J Obstet Gynecol Reprod Biol. doi:10.1016/j.ejogrb.2020.05.037
Pregnancy, obstetrical unit, hospital footprint, communication strategies, New York metropolitan area	20-May-20	The Care of Pregnant Women During the COVID-19 Pandemic - Response of a Large Health System in Metropolitan New York	Journal of Perinatal Medicine	Original Article	The rapid progression of the COVID-19 outbreak has placed a strain on resources in the New York metropolitan region, leading to major changes in the delivery of obstetrical care, while maintaining patient safety. In this report, the authors describe their pandemic response at the largest health system in the metropolitan region. The hospital footprint for Obstetrics was dramatically reduced to make room for the rapidly increasing numbers of COVID-19 patients, and established guidelines were quickly modified to reduce potential staff and patient exposures. New communication strategies were developed to facilitate maternity care across our hospitals, with significantly limited resources in personnel, equipment, and space. The lessons learned from these unexpected challenges offered an opportunity to reassess the delivery of obstetrical care without compromising quality and safety.	The authors report their experiences in changing the delivery of obstetrical care at a large health system in the New York metropolitan region, during the COVID-19 pandemic.	Rochelson B, Nimaroff M, Combs A, et al. The care of pregnant women during the COVID-19 pandemic - response of a large health system in metropolitan New York [published online 2020 May 20]. J Perinat Med. doi:10.1515/jpm-2020-0175
Symptomatic infants, children, adolescents, nasopharyngeal viral load, New York, USA	20-May-20	Symptomatic Infants Have Higher Nasopharyngeal SARS-CoV-2 Viral Loads but Less Severe Disease Than Older Children	Clinical Infectious Diseases	Correspondence	This correspondence reports nasopharyngeal (NP) viral load among infants, children and adolescents who were hospitalized and discharged from a children's hospital in New York between March 14 and April 24, 2020. Among 57 patients testing positive for SARS-CoV-2, 20 (35.1%) were infants (12 months or younger). Older children and adolescents ranged from 1 year to 21 years of age. Mean NP viral load was significantly higher in infants compared to older children and adolescents (mean Ct 21.05 vs 27.25, $p<0.01$). However, a significantly lower proportion of infants had severe disease as compared to the other patients (n=1 (5%) vs n=12 (32.4%), $p=0.02$). Mean time to test positivity from symptom onset was lower in infants than older children (2 vs 3.8 days, $p<0.01$). Similar proportions in both groups were tested within seven days of symptom onset (91.2% vs 100%, $p=0.47$).	This report suggests that symptomatic infants have higher nasopharyngeal viral loads at presentation but develop less severe disease, as compared to older children and adolescents.	Zachariah P, Halabi KC, Johnson CL, Whitter S, Sepulveda J, Green DA. Symptomatic Infants have Higher Nasopharyngeal SARS-CoV-2 Viral Loads but Less Severe Disease than Older Children [published online 2020 May 20]. Clin Infect Dis. doi:10.1093/cid/ciaa608

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Pregnancy, mother-infant dyad, delivery, NICU, breastfeeding, rooming-in, Italy	20-May-20	Management of the Mother-Infant Dyad With Suspected or Confirmed SARS-CoV-2 Infection in a Highly Epidemic Context	Journal of Neonatal and Perinatal Medicine	Article Commentary	During the COVID-19 pandemic, networking among maternity centers and anticipatory planning is essential to organize assistance to mothers and neonates in maternity and neonatal wards. Early identification of SARS-CoV-2 infected mothers, before delivery, allows their management through dedicated protocols and minimizes the risk of transmission for other patients and healthcare providers. Vertical transmission of SARS-CoV-2 cannot be excluded at present and should be ruled out as soon as possible after birth. Rooming in of infected mothers and neonates, provided their good clinical conditions, is not contraindicated based on current knowledge. The choice of breastfeeding should be carefully discussed with parents based on current, evolving scientific evidence.	This summary addresses a number of aspects of mother-infant dyad management during SARS-CoV-2 epidemic.	Pietrasanta C, Pugni L, Ronchi A, et al. Management of the mother-infant dyad with suspected or confirmed SARS-CoV-2 infection in a highly epidemic context [published online 2020 May 20]. J Neonatal Perinatal Med. doi:10.3233/NPM-200478
Children, immuno-suppression, chronic kidney disease, nephrotic syndrome, Spain	20-May-20	SARS-CoV-2 Infection in Spanish Children With Chronic Kidney Pathologies	Pediatric Nephrology	Brief Report	From March until April 15, 2020, 16 children with chronic renal pathologies were diagnosed with COVID-19 in Spain. Of these, 6 had end-stage kidney disease (ESKD) (3 transplant recipients and 3 on chronic hemodialysis). The severity of symptoms was mild in all the patients, with little radiological involvement. Three patients were asymptomatic. Fever and upper respiratory symptoms were the most frequent findings. Basal glomerular filtration worsened in 3 patients; however, recovery was rapidly achieved with rehydration and drug dose adjustment. In 2 patients diagnosed with steroid-dependent nephrotic syndrome, COVID-19 provoked a disease relapse. None required oxygen therapy, and 7 could be managed as outpatients.	COVID-19 disease appears to have a similar clinical course in children with underlying chronic renal pathologies, even in immunosuppressed cases, as in healthy children of the same age; however, special attention must be paid to fluid management and drug dose adjustment.	Melgosa M, Madrid A, Alvárez O, et al. SARS-CoV-2 infection in Spanish children with chronic kidney pathologies [published online 2020 May 20]. Pediatr Nephrol. doi:10.1007/s00467-020-04597-1
Pregnancy, clinical characteristics, obesity, African American, Michigan, USA	20-May-20	Pregnancy Affected by SARS-CoV-2 Infection: A Flash Report From Michigan	Journal of Maternal Fetal and Neonatal Medicine	Short Report	This short report describes the details of the hospital course of the first 16 cases involving pregnant women, admitted to an urban-suburban community general hospital in Wayne County Michigan, from March 26 to April 10, 2020. 198 patients were included during the observation period, and 16 (8.3%) were COVID-19 positive. Of these, 4 (25%) were positive for COVID-19 risk factors screening on admission, and the remaining 12 (75%) had screened negative at the time of admission but later tested positive. In total, 11 (68.7%) patients were African American, and 10 (62.5%) were obese Class I and above. Gestational age ranged from 22 to 40 3/7 weeks. Eight (66%) patients had uncomplicated spontaneous vaginal delivery; there was one preterm birth. None of the patients experienced severe or critical respiratory failure, and all of the neonates tested negative for SARS-CoV-2.	Early experience from Michigan indicates a variety of clinical forms in pregnancy women with COVID-19, and reports no cases of neonatal SARS-CoV-2 infection.	Qadri F, Mariona F. Pregnancy affected by SARS-CoV-2 infection: a flash report from Michigan [published online 2020 May 20]. J Matern Fetal Neonatal Med. doi:10.1080/14767058.2020.1765334
Children, age-related difference, ACE2 gene expression, nasal epithelium, asthma, New York	20-May-20	Nasal Gene Expression of Angiotensin-Converting Enzyme 2 in Children and Adults	JAMA	Research Letter	It is hypothesized that the lower risk of COVID-19 among children is due to differential expression of angiotensin-converting enzyme 2 (ACE2), the receptor that SARS-CoV-2 uses for host entry. In this retrospective study, nasal epithelium samples were collected from individuals (4-60 years) within the Mount Sinai Health System, New York for research on nasal biomarkers of asthma. ACE2 gene expression was lowest (mean $\log_2$ counts per million, 2.40; 95% CI, 2.07-2.72) in younger children (<10 years, n=45) and increased with age, with mean $\log_2$ counts per million of 2.77 (95% CI, 2.64-2.90) for older children (10-17 years, n=185), 3.02 (95% CI, 2.78-3.26) for young adults (18-24 years, n=46), and 3.09 (95% CI, 2.83-3.35) for adults (≥25 years,	The results from covariate-adjusted models show age-dependent expression of ACE2 in nasal epithelium; lower ACE2 expression in children relative to adults may help explain lower	Bunyavanich S, Do A, Vicencio A. Nasal Gene Expression of Angiotensin-Converting Enzyme 2 in Children and Adults [published online 2020 May 20]. JAMA. doi:10.1001.jama.2020.8707

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					n=29). Linear regression with ACE2 gene expression as the dependent variable and age group as the independent variable showed that compared with younger children, ACE2 gene expression was significantly higher in older children (*P*=.01), young adults (*P*<.001), and adults (*P*=.001). Associations remained after adjustment for distributions of sex and asthma among the age groups.	prevalence of COVID-19 in children.	
Children, ACE2 gene expression, respiratory epithelium	20-May-20	Nasal ACE2 Levels and COVID-19 in Children	JAMA	Editorial	Bunyavanich et al. identified lower ACE2 expression in nasal epithelium of children, which may explain lower rates of SARS-CoV-2 infection in this population. These results warrant further evaluation of ACE2 expression by single-cell RNA sequencing in children to explain whether a lower percentage of ACE2-expressing cells or a decrease in ACE2 expression per cell is related to observed lower ACE2 expression. ACE2 has an important role in counterbalancing the effects of ACE, ultimately suppressing inflammation and generating vasodilation, thus may play a protective role in severe lung injury. If ACE2 can mitigate lung injury but serves as a receptor for viral entry, then is more ACE2 or less ACE2 expression protective for children? In the nasal epithelium of the upper airway, lower ACE2 expression could be helpful in decreasing acquisition of SARS-CoV-2 infection. However, in the lower respiratory tract, it appears that decreased ACE2 expression could portend a higher risk of developing severe acute respiratory distress and lung injury. Bunyavanich et al. suggested that ACE2 expression in the nasal epithelium in their cohort does not reflect ACE2 expression in the pulmonary epithelium. This emphasizes the importance of understanding the distribution of ACE2 in cells in different parts of the respiratory epithelium but also between cell-bound and plasma fractions.	This editorial responds to the study by Buyavanich et al., calling for further study on tissue expression of ACE2 in the lower respiratory tract of children, since ACE2 can play different roles in different parts of the respiratory epithelium.	Patel, AB, Verma A. Nasal ACE2 Levels and COVID-19 in Children [published online 2020 May 20]. JAMA. doi:10.1001.jama.2020.8946
Malnutrition, prealbumin levels, sarcopenia, hospitalization, nutrition protocol, rehabilitation unit, Italy	20-May-20	Nutritional Management of COVID-19 Patients in a Rehabilitation Unit	European Journal of Clinical Nutrition	Perspective	Recent reports have described poor nutritional status as a negative prognostic factor for COVID-19. Nutritional considerations include low prealbumin levels, prolonged immobilization and sarcopenia that may accompany SARS-CoV-2 respiratory syndrome, and chronic pathologies and reduction of food intake caused by nausea, diarrhea, and the loss of appetite that increase risk of malnutrition in COVID-19 patients. It has been demonstrated that malnutrition delays healing times and increases hospitalization periods. Therefore, the prevention, diagnosis, and treatment of malnutrition must be regularly included in the management of hospitalized COVID-19 patients in a rehabilitation department, to improve both short and long-term prognosis. Collaboration between the Rehabilitation Unit of the San Raffaele Scientific Institute (Milan, Italy) and the dietetics service created an interdisciplinary and integrated management of the nutritional status of COVID-19 patients, based on the latest scientific data. This three-step nutritional protocol, reported here, includes nutritional assessment and malnutrition screening; nutritional treatment; and continuous monitoring.	The authors describe factors associated with increased risk of malnutrition in COVID-19 patients and present a nutritional protocol for COVID-19 patients in a rehabilitation unit.	Brugliera L, Spina A, Castellazzi P, et al. Nutritional management of COVID-19 patients in a rehabilitation unit [published online 2020 May 20]. Eur J Clin Nutr. doi:10.1038/s41430-020-0664-x
Asthma, pediatric	19-May-20	Pediatric Asthma and Coronavirus (COVID-19) - Clinical Presentation in	SN Compr Clin Med	Case Report	The author presents a 12-year-old female patient with known asthma who was admitted to a hospital in Northern Ireland with an asthma exacerbation and COVID-19 during the COVID-19 pandemic in 2020. She presented with low grade fever, cough, wheeze, and increased difficulty breathing on day 6 of illness. Chest x-rays demonstrated mild pneumonia and PCR was positive	The author reports the successful treatment of a pediatric patient with known asthma admitted during her	Barsoum Z. Pediatric Asthma & Coronavirus (COVID-19)-Clinical Presentation in an Asthmatic Child-Case

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		an Asthmatic Child			for SARS-CoV-2. She was treated with Salbutamol inhalers and one inadvertent dose of steroids. She recovered and was discharged on hospital day 2.	COVID-19 illness with a mild exacerbation of asthma. The report demonstrates that COVID-19 illness in pediatric asthmatic patients may present with only a mild asthma exacerbation and full recovery.	Report. SN Compr Clin Med. 2020 May 19:1-3. doi: 10.1007/s42399-020-00310-3. Epub ahead of print. PMID: 32838131; PMCID: PMC7235436.
Children, lockdown, social distancing, South Africa	19-May-20	What are we doing to the children of South Africa under the guise of COVID-19 lockdown?	The South African Medical Journal	Editorial	This editorial provides evidence that the welfare of South African children has been compromised by the country's lockdown in response to COVID-19. The authors warn of the consequences of not allowing mothers into pediatric wards, refusing to see or care for children if their COVID-19 status is unknown, and declining to provide essential health services, such as immunization. Reports exist of children being treated by pediatricians with empirical antibiotics, hydroxychloroquine and azithromycin, even for mild disease, although these are not recommended. The authors warn that cases of child malnutrition will increase as a result of school closures, and cases of measles, gastro-enteritis, and pneumonia will see a resurgence with the loss of vaccination programs.	This editorial argues that South Africa's lockdown in response to COVID-19 has compromised child welfare. In particular, they warn of adverse health outcomes due to inappropriate treatment of mild COVID-19 in children, loss of school-provided meals, and disruption vaccination services.	Van Bruwaene L, Mustafa F, Cloete J, et al. What are we doing to the children of South Africa under the guise of COVID-19 lockdown? [publish online, 2020 May 19]. S Afr Med J. 2020;110(7):574-575.
Maternity, pregnancy, postpartum, intrapartum, neonatal, obstetrics, Taiwan	19-May-20	The maternity response to COVID-19: An example from one maternity unit in Taiwan	Midwifery	Commentary	As of the date of this article, Taiwan had a low number of COVID-19 infections, including no cases in pregnant or postpartum women. Early in the pandemic (January-February 2020), Taiwan activated their Central Epidemic Command Centre, meticulously implemented a national database tracking cases and travel, and ensured adequate facemask access to the public. This article documents the infection control actions of one hospital maternity unit of a hospital in Taipei. This hospital limits visitors, and requires all patients, visitors, and staff to be screened for COVID-19 symptoms and have identification checked. Symptomatic patients are tested for COVID-19, and are separated from infants until a negative result is received. No group education or external vendors are allowed on the unit, and environmental cleaning has increased. Postpartum women are instructed to self-isolate with their families. It is noted, though, that Chinese tradition has always included virtual self-isolation for postpartum women. The authors credit the practices of Taiwanese government and hospitals with curbing the incidence of COVID-19 infection in that nation.	This article documents the infection control actions of the Taiwanese government, and of a hospital maternity unit of a hospital in Taipei. The authors report that such policies are responsible for low rates of COVID-19 in Taiwan.	Liao SC, Chang YS, Chien LY. The maternity response to COVID-19: An example from one maternity unit in Taiwan. Midwifery. 2020;88:102756. doi:10.1016/j.midw.2020.102756

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Reproduction, fertility, assisted reproductive technology, reproductive rights, Spain	19-May-20	Infertility and reproductive rights after the COVID-19 pandemic	Reproductive Biomedicine Online	Viewpoint	The authors predict that the economic impact that will follow the pandemic will exert pressure on the desired family planning of couples and single women in Spain, postponing the ideal time of conception. This is based on data from Spain during an economic recession in 2008, during which a global financial crisis occurred, and the yearly growth rate of the Spanish population fell from 1.57% in 2007 to –0.33% in 2013, returning to equal the European population yearly growth rate of 1% in 2018. As female age is the most important independent variable of success at the time of conception, the authors propose that assisted reproductive technology (ART) may contribute to alleviating the impact that the economic recession might have on fertility, and that governments should investigate easing access to these techniques for couples or women who desire them.	The pandemic could impact the family planning of couples in Spain, and delays in childbearing could affect female fertility. The authors conclude that governments should consider reducing barriers to assisted reproductive technologies to alleviate the impact on fertility and preserve reproductive rights.	Trinchant RM, Cruz M, Marqueta J, Requena A. Infertility and reproductive rights after the COVID-19 pandemic. Reprod Biomed Online. 2020;41(2):151-153. doi:10.1016/j.rbmo.2020.05.007
Abortion, nosocomial infection, hospital-based exposure, New York, pregnancy	19-May-20	A hospital-based COVID-19 abortion case in the early phase of the pandemic	Contraception	Case Report	This is a case report of a 33-year-old pregnant woman with Hemoglobin SS disease admitted on March 24 in New York at 13 weeks and 4 days gestation for vaso-occlusive crisis who ultimately sought hospital-based abortion services. An admission nasal swab test for COVID-19 was negative. A previous pregnancy had required weekly home blood transfusions, IV hydration, and extended inpatient admissions, and the patient was advised that she would need care similar prenatal care which would prove challenging during the pandemic. Risks included the potential for delays obtaining matched blood for transfusion given potential shortages of blood products and increased COVID-19 exposure for home-based care or hospitalization. The patient decided to proceed with surgical abortion. Dilation and evacuation were delayed for four days for blood matching and obtaining operating room committee approval (pandemic-specific) due to acute reductions in available staff. After the procedure, on day 13, the patient developed hypotension and a chest X-ray suggested pneumonia. A COVID-19 retest returned positive. Her hemodynamic status improved with treatment and she was discharged home on day 18. This case highlights the multiple challenges for providing hospital-based abortion care during the pandemic, including increased risk of nosocomial exposure to COVID-19.	The authors demonstrate the challenges the pandemic has posed for providing pregnancy and abortion care for women requiring hospital-based services, including the risk of possible nosocomial exposure to COVID-19.	Fang NZ, Castaño PM, Davis A. A hospital-based COVID-19 abortion case in the early phase of the pandemic. Contraception. 2020;102(2):137-138. doi:10.1016/j.contraception.2020.05.005
Pregnancy, clinical trials	19-May-20	Exclusion of Pregnant Women From Clinical Trials During the Coronavirus Disease 2019 Pandemic: A Review of International Registries	American Journal of Perinatology	Original article	To assess the current state of research for pregnant women during the COVID-19 pandemic, the authors conducted a search of international trial registries for trials relating to the novel coronavirus. The eligibility criteria for each trial were reviewed for inclusion/exclusion of pregnant women. Among 621,370 trials in the World Health Organization International Clinical Trials Registry, 927 (0.15%) were COVID-19 related. Of those, the majority (52%) explicitly excluded pregnancy or failed to address pregnancy at all (46%) and only 16 (1.7%) were pregnancy specific. Of the COVID-19 trials which included pregnant women, three were randomized-controlled drug trials.	Approximately 1.7% of current COVID-19 research is pregnancy related and the majority of trials either explicitly exclude or fail to address pregnancy. The knowledge gap concerning the safety and efficacy of interventions for COVID-19 created by the exclusion of	Smith DD, Pippen JL, Adesomo AA, et al. Exclusion of Pregnant Women from Clinical Trials during the Coronavirus Disease 2019 Pandemic: A Review of International Registries [published online 2020 May 19]. Am J Perinatol. 2020;37(8):792-799. doi:10.1055/s-0040-1712103

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						pregnant women may ultimately harm them.	
Pregnancy, obstetrical admission, academic vs. community hospitals, universal screening, PPE, USA	19-May-20	Community Obstetrical Units Less Likely Than Academic Units to Have Universal COVID-19 Testing	American Journal of Perinatology	Letter to the Editor	Differences in COVID-19 specific resources between academic and community hospital obstetric units could result in disparate disease transmission rates and care. In response to member concerns, the Society for Maternal-Fetal Medicine surveyed 56 maternal-fetal medicine physicians (n=35 from academic institutions, n=21 from community hospitals). In this small but geographically diverse sample (38 states and the District of Columbia), academic institutions and community hospitals had a similar volume of COVID-19 obstetric patients admitted per week (p=0.76). Universal testing varied within states and did not correlate with COVID-19 inpatient obstetrical volumes; 31% (5/16) of hospitals that admitted three or more COVID-19 affected patients per week were performing universal testing compared with 15% (6/40) of hospitals that admitted less than three COVID-19 affected patients per week (p=0.26). Universal testing rates differed significantly between hospital types with 29% (10/35) of academic-affiliated respondents reporting universal testing compared with 5% (1/21) of community hospitals (p=0.04). All respondents reported adequate access to surgical masks, 96% (54/56) reported using N95s for deliveries of COVID-19 affected patients and 25% (14/56) reported using N95s for all deliveries. Universal N95 masking at delivery did not differ significantly between academic and community hospitals (29% compared with 19%, p=0.53).	Findings from the reported survey show universal COVID-19 testing at the time of obstetrical admission is more common at academic than community hospitals and does not correlate with COVID-19 positive patient volume.	Werner EF, Louis JM, Hughes B, Han CS, Norton ME, Srinivas SK. Community Obstetrical Units Less Likely than Academic Units to Have Universal COVID-19 Testing [published online 2020 May 19]. Am J Perinatol. doi:10.1055/s-0040-1712454
Pregnancy, neonates, skin-to-skin contact, breastfeeding, perinatal outcomes	19-May-20	Skin-to-Skin Care and COVID-19	Pediatrics	Perspectives	Current American Academy of Pediatrics (AAP) guidelines recommend physical separation of COVID-19 positive women from their infants following delivery, when space allows, unless they choose rooming-in despite being counseled on risk. On the other hand, the WHO's recommendation encourages breastfeeding initiation within an hour of birth and routine newborn care with added emphasis on respiratory and hand hygiene. Neonates could be relatively protected from infection through transplacental maternal IgG, and breastfeeding has known immune benefits in other viral respiratory infections. The author argues that the benefits of postpartum skin-to-skin contact, bonding, and breastfeeding outweigh concerns about infection and the potential benefits of isolation. The most commonly reported perinatal outcomes in this pandemic, for example premature birth, could be mitigated through greater prenatal support for pregnant women through social services.	The author argues in favor of skin-to-skin contact and breastfeeding over recommendations to physical separate COVID-19 positive mothers and newborns.	Boscia C. Skin-to-Skin Care and COVID-19 [published online ahead of print, 2020 May 19]. Pediatrics. 2020. doi:10.1542/peds.2020-1836
Children, vulnerable households, social distancing measures, cash transfer, basic services subsidy, Mexico	19-May-20	Costing of Actions to Safeguard Vulnerable Mexican Households With Young Children From the Consequences of COVID-19 Social	International Journal of Equity Health	Letter to the Editor	As the COVID-19 pandemic evolves, the social distancing measures that have been globally enforced, while essential, are having undesirable side effects among vulnerable populations. In Mexico, families who depend upon informal employment face increased threats to their wellbeing, and households who in addition have young children may face long-term consequences, such as major income reductions as well as food insecurity. The Mexican government has not yet taken actions, but a coalition of non-governmental organizations is advocating in partnership with academic institutions for social protection actions such as a cash transfer and basic services subsidies for families with young children. According to weighted estimates, 4,522,182 households would be eligible for the cash transfer and	Estimated costs of cash transfer and basic service subsidy interventions are calculated to support vulnerable families with young children, affected by social distancing measures during the pandemic, in Mexico.	Vilar-Compte M, Pérez V, Teruel G, Alonso A, Pérez-Escamilla R. Costing of actions to safeguard vulnerable Mexican households with young children from the consequences of COVID-19 social distancing measures. Int J Equity Health. 2020;19(1):70.

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		Distancing Measures			subsidies, and in total, both interventions would have a monthly cost of $807.2 million US dollars (less than 0.06% of the GDP of Mexico).		doi:10.1186/s12939-020-01187-3
Infant, acute inflammation, myocarditis, IL-6, Italy	19-May-20	Acute Inflammation and Elevated Cardiac Markers in a Two-Month-Old Infant with Severe Acute Respiratory Syndrome Coronavirus 2 Infection Presenting with Cardiac Symptoms	The Pediatric Infectious Diseases Journal	Brief Report	In complicated cases of SARS-CoV-2 infection in children, it is unknown whether inflammation is predictive of disease severity, as in adults. This case reports a 2-month-old infant with RT-PCR confirmed SARS-CoV-2 infection presenting with fever, tachycardia and elevated interleukin(IL)-6, which preceded the rise of procalcitonin, D-dimer, and the reduction of hemoglobin concentration; IL-6 elevation was otherwise concurrent with cardiac marker elevation preceding echocardiographic signs. The patient was diagnosed with myocarditis and showed good response to treatment with IV immunoglobulins. Possible mechanisms for cardiovascular complications in COVID-19 include direct acute myocardial injury, thrombotic events, microangiopathy and tachycardia; the enhanced systemic inflammatory response appears tightly related to all of these mechanisms.	This report presents a unique case of major heart injury in a pediatric patient, noting that elevation of IL-6 may be a possible early warning sign of relevance even in the youngest individuals with SARS-CoV-2 infection.	Giacomet V, Manfredini VA, Meraviglia G, et al. Acute Inflammation and Elevated Cardiac Markers in a Two-Month-Old Infant with Severe Acute Respiratory Syndrome Coronavirus 2 Infection Presenting with Cardiac Symptoms [published online 2020 May 19]. Pediatr Infect Dis J. doi:10.1097/INF.0000000000002750
Infants, severe, neutropenia, viral infections, Italy	19-May-20	Severe Neutropenia in Infants With Severe Acute Respiratory Syndrome Caused by the Novel Coronavirus 2019 Infection	The Journal of Pediatrics	Letter to the Editor	In a systematic review on laboratory data identified in 12 articles, with a total of 66 pediatric patients, lymphopenia was found in only 3% of children, whereas lymphopenia often is described in adult patients. Neutropenia was recorded in 6% of cases, but it was never less than 0.500×10^9/L in this population. In this article, two infants (39 days and 23 days) with mild COVID-19 and severe neutropenia are reported. At admission, leukocyte and neutrophil counts were normal, and nasopharyngeal swabs tested positive for SARS-CoV-2. On day 5, both developed severe neutropenia, with a nadir of 0.244×10^9/L neutrophils and 0.482×10^9/L neutrophils, respectively. This finding is noteworthy, because post-infectious transient neutropenia has been associated with many other viral infections in infancy, which might share pathogenic mechanisms.	This report describes two infants with isolated severe neutropenia, which has not been described in children with COVID-19 to date.	Venturini E, Palmas G, Montagnani C, et al. Severe neutropenia in infants with severe acute respiratory syndrome caused by the novel coronavirus 2019 infection [published online 2020 May 19]. J Pediatr. doi:10.1016/j.jpeds.2020.04.051
Nutrition, inflammation, cytokine storm, immune function, nutrients	19-May-20	COVID-19: The Inflammation Link and the Role of Nutrition in Potential Mitigation	Nutrients	Review	Notably, there are several significant risk factors for severe COVID-19 infection. These include poor nutritional status and pre-existing noncommunicable diseases (NCDs) such as diabetes mellitus, chronic lung diseases, cardiovascular diseases, obesity, and various other diseases that render the patient immunocompromised. These diseases are characterized by systemic inflammation, which may be a common feature of these NCDs, affecting patient outcomes against COVID-19. This review discusses some of the anti-inflammatory therapies that are currently under investigation intended to dampen the cytokine storm of severe COVID-19 infections. Furthermore, nutritional status and the role of diet and lifestyle is considered, as it is known to affect patient outcomes in other severe infections and may play a role in COVID-19 infection. This review speculates the importance of nutrition as a mitigation strategy to support immune function amid the COVID-19 pandemic, identifying food groups and key nutrients of importance that may affect the outcomes of respiratory infections.	This review investigates the role of nutrition in mitigating the cytokine storm associated with COVID-19 and inflammation related to underlying comorbidities that affect outcomes of patients with COVID-19.	Zabetakis I, Lordan R, Norton C, Tsoupras A. COVID-19: The Inflammation Link and the Role of Nutrition in Potential Mitigation. Nutrients. 2020;12(5):E1466. Published 2020 May 19. doi:10.3390/nu12051466
Pregnancy, vaginal delivery,	19-May-20	Severe COVID-19 in a pregnant patient admitted	International Journal of	Brief Communication	A 35-year-old woman (34 weeks of gestation) was admitted with clear vaginal fluid discharge that had been ongoing for 3 hours. Spontaneous labor occurred later that day, and a healthy female neonate was delivered	This case study presents a pregnant woman from Wuhan, China who	Yu Y, Fan C, Bian J, Shen Y. Severe COVID-19 in a pregnant patient admitted

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neonate, pulmonary insufficiency, China		to hospital in Wuhan	Gynaecology and Obstetrics		vaginally; the neonate tested negative for SARS-CoV-2 on throat swab. One day later, the woman presented with persistent low fever and dry cough, and the woman's throat swabs tested positive for SARS-CoV-2 by RT-PCR. The following day, the woman developed severe acute respiratory distress syndrome after transfer to the ICU; tracheal intubation was performed. The woman's condition improved after 11 days. To the authors' knowledge, there have been no reports of pneumonia or death in women with SARS-CoV-2 infection after cesarean delivery in the third trimester. Due to increased oxygen consumption during pregnancy, cesarean delivery may help to avoid adverse events caused by pulmonary insufficiency during vaginal delivery.	rapidly developed severe respiratory infection following spontaneous labor, which may be related to pulmonary insufficiency during vaginal delivery.	to hospital in Wuhan [published online 2020 May 19]. Int J Gynaecol Obstet. doi:10.1002/ijgo.13232
Pregnancy, asymptomatic, universal screening, Chicago, IL, USA	19-May-20	Clinical Implications of Universal Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Testing in Pregnancy	Obstetrics & Gynecology	Research Letter	This prospective case series includes pregnant women admitted to Northwestern Memorial Hospital in Chicago, IL, USA between April 8 and 27, 2020. During this time, Chicago was in the acceleration phase of the pandemic. Over 20 days, 635 pregnant women were admitted and universally tested, and 23 (3.6%) were positive for SARS-CoV-2 infection. Of these, 10 (43.5% of 23) were asymptomatic on initial presentation. 21 (3.3% of 635) pregnant women who were admitted reported symptoms of COVID-19 infection. Of these, 13 (61.9% of 21) tested positive for SARS-CoV-2 infection. Of the 614 women who were asymptomatic, 10 (1.6%) tested positive for SARS-CoV-2. These findings corroborate previous observations that pregnant women with SARS-CoV-2 infection on admission do not seem to be reliably identified using symptom screening alone.	Using a universal screening strategy, this study from Chicago found a significant proportion of asymptomatic cases of SARS-CoV-2 infection among pregnant women admitted for delivery.	Miller ES, Grobman WA, Sakowicz A, Rosati J, Peaceman AM. Clinical Implications of Universal Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Testing in Pregnancy [published online 2020 May 19]. Obstet Gynecol. doi:10.1097/AOG.0000000000003983
Pregnancy, asymptomatic vs. symptomatic, respiratory support, preterm delivery, New York, USA	19-May-20	The Relationship Between Status at Presentation and Outcomes Among Pregnant Women With COVID-19	American Journal of Perinatology	Original Article	In this retrospective cohort study of pregnant women with COVID-19, 81 patients were tested because of a positive screen (symptoms [n=60] or exposure only [n=21]) and 75 patients were universally tested (all asymptomatic). In total, there were 46 symptomatic women and 22 asymptomatic women (tested based on exposure only [n=12] or as part of universal screening [n=10]) with confirmed COVID-19. Of symptomatic women (n=46), 27.3% had preterm delivery and 26.1% needed respiratory support while none of the asymptomatic women (n=22) had preterm delivery or need of respiratory support (p=0.007 and 0.01, respectively). No neonatal infections were reported on day 0 of life in this study.	Symptomatic pregnant women have a higher rate of preterm delivery and need for respiratory support than asymptomatic pregnant women, in this study.	London V, McLaren R Jr, Atallah F, et al. The Relationship between Status at Presentation and Outcomes among Pregnant Women with COVID-19 [published online 2020 May 19]. Am J Perinatol. doi:10.1055/s-0040-1712164
Neonatal resuscitation, obstetric emergency, clinical simulation, multi-disciplinary teams, UK	19-May-20	Simulation-guided Preparations for the Management of Suspected or Confirmed COVID-19 Cases in the Obstetric Emergency Theater	Journal of Maternal Fetal and Neonatal Medicine	Short Report	The simulation training objective of this study was to enhance the neonatal, maternity, and anesthetics teams' preparedness for the management of the emergency delivery of pregnant women with suspected or confirmed COVID-19 infection. Three one-hour clinical simulation training sessions were conducted in March 2020 at the University Hospital Plymouth, Plymouth, UK. Key recommendations from these sessions include: (1) floor plan adjustment, increase of the clinical area by converting some offices to clinical spaces, and standard operating procedures for transporting patients; (2) enhancement of the efficiency of the communication and coordination between the clinical teams; (3) availability of extra support for the staff in the Central Delivery Suite; and (4) introduction of a neonatal care pathway to manage neonatal resuscitation in such an emergency. Overall, joint training between different clinical teams involved in the care of COVID-19 patients was one of the most effective ways of improving performance.	This report presents suggestions made to a clinical simulation training session intended to enhance multidisciplinary team preparedness for the management of obstetric emergencies in pregnant women with suspected or confirmed COVID-19.	Muhsen WS, Marshall-Roberts R. Simulation-guided preparations for the management of suspected or confirmed COVID-19 cases in the obstetric emergency theater [published online 2020 May 19]. J Matern Fetal Neonatal Med. doi:10.1080/14767058.2020.1765333

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Pregnancy, clinical characteristics, urgent delivery, preterm delivery, neonatal infection, pregestational BMII, Italy	19-May-20	Clinical Findings and Disease Severity in Hospitalized Pregnant Women With Coronavirus Disease 2019 (COVID-19)	Obstetrics & Gynecology	Original Research	This prospective multicenter cohort study includes 77 pregnant women with SARS-CoV-2 infection who were admitted to 12 Italian maternity hospitals between February 23 and March 28, 2020. Of 77 total women, 14 (18%) had severe disease. Two thirds of the patients in the cohort were admitted during the third trimester, and 84% were symptomatic on admission. Eleven patients underwent urgent delivery for respiratory compromise (16%), and six were admitted to the ICU (8%). One woman received extracorporeal membrane oxygenation; no deaths occurred. Preterm delivery occurred in 12% of patients, and nine newborns were admitted to the NICU. Four newborns (three vaginal deliveries, one cesarean delivery) of 57 were diagnosed with SARS-CoV-2 infection in the early postpartum period. For all newborns, rooming-in and breastfeeding were performed. Patients in the severe subgroup had significantly higher pregestational body mass indexes (BMIs) and heart and respiratory rates and a greater frequency of fever or dyspnea on admission compared with women with a non-severe disease evolution.	In this cohort, one in five women hospitalized with COVID-19 delivered urgently for respiratory compromise or were admitted to the ICU. Four newborns tested positive for SARS-CoV-2 infection; rooming-in and breastfeeding were performed.	Savasi VM, Parisi F, Patanè L, et al. Clinical Findings and Disease Severity in Hospitalized Pregnant Women With Coronavirus Disease 2019 (COVID-19) [published online 2020 May 19]. Obstet Gynecol. doi:10.1097/AOG.0000000000003979
Neonatal infection, premature birth, ventilation, anal shedding, chest CT	19-May-20	Several Neonates Reported Positive for COVID-19	Infectious Diseases (London)	Letter to the Editor	After a search of databases provided by PubMed and EMBASE, 13 unique neonates with COVID-19 were identified. Ten mothers in this series were confirmed to be COVID-19 positive and the other three had respiratory symptoms but were not tested. Two neonates needed ventilation for COVID-19 unrelated etiology. Both were born premature and whereas one had respiratory distress syndrome and sepsis, the other had respiratory depression from maternal sedation. Symptoms were transient and not severe in other neonates, the most common being fever, lethargy, vomiting, tachypnea and cough. Diagnosis of COVID-19 infection was made on Day 1–27 of life, testing positive for viral nucleic acid. While cessation of viral presence from the pharyngeal specimens was confirmed in 6 neonates within a week, 2 neonates were found to have persistent anal shedding lasting up to 17 days after initial infection. Seven neonates had abnormalities on chest radiogram, which appeared out of proportion to the clinical features, thus radiologic findings should not be a basis for intervention by itself.	This review describes the clinical characteristics and benign course of infection of 13 neonates with SARS-CoV-2 infection, born to COVID-19 positive mothers.	Jones J, Jones S, Jones V. Several neonates reported positive for COVID-19 [published online 2020 May 19]. Infect Dis (Lond). doi:10.1080/23744235.2020.1762920
Pregnancy, maternal-fetal outcomes, systematic review, meta-analysis	19-May-20	COVID-19 Pneumonia and Pregnancy; A Systematic Review and Meta-Analysis	Journal of Maternal Fetal and Neonatal Medicine	Original Article	Nine articles on COVID-19 pneumonia and pregnant women were extracted. The present meta-analysis was conducted on 87 SARS-CoV-2 positive pregnant women. Almost 65% of patients reported a history of exposure to an infected person, and 78% suffered from mild or moderate COVID-19. With regard to clinical characteristics, 86% had fever, and 68% and 70% had cough and lymphopenia, respectively (p=.022). The overall proportion of successful termination (i.e. delivery) was estimated to be 99.9% (p<.001). The proportions of vertical transmission, still birth, and neonatal death were 0%, 0.2%, and, 0.2%, respectively (p=1, p=.86, and p=.89, respectively). The means of the first- and fifth-minute Apgar scores were 8.86 and 9, respectively (p<.001 for both). The confounding role of history of underlying diseases with an estimated overall proportion of 33% (p=.03) resulted in further investigations due to sample size limitation. Currently, no evidence of vertical transmission has been suggested in late pregnancy. No hazards have been detected for fetuses or neonates. Most pregnant patients	This meta-analysis concludes that there is no evidence of vertical transmission in late pregnancy, and no hazards for neonates born to SARS-CoV-2 positive women.	Kasraeian M, Zare M, Vafaei H, et al. COVID-19 pneumonia and pregnancy; a systematic review and meta-analysis [published online 2020 May 19]. J Matern Fetal Neonatal Med. doi:10.1080/14767058.2020.1763952

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					suffered from mild or moderate COVID-19 disease with no pregnancy loss, proposing a similar pattern of the clinical characteristics of COVID-19 pneumonia to that of other adult populations.		
Pregnancy, preterm delivery, rupture of membranes, antenatal corticosteroids, decision analysis	19-May-20	Antenatal Corticosteroids for Pregnant Women With COVID-19 Infection and Preterm Prelabor Rupture of Membranes: A Decision Analysis	Journal of Maternal Fetal and Neonatal Medicine	Original Article	While antenatal corticosteroids are routinely used to decrease adverse neonatal outcomes following preterm delivery, corticosteroids are also associated with worse outcomes in patients with viral respiratory infections. It is unclear whether antenatal corticosteroids for infant benefit outweigh the potential harm to a pregnant woman with a COVID-19 infection. In the decision-analytic model designed in this study, among a theoretical cohort of 10,000 women, with COVID-19 infection and preterm pre-labor rupture of membrane (PPROM) between 24 and 32 weeks, corticosteroid administration resulted in 2,200 women admitted to the ICU and 110 maternal deaths at each gestational age. No antenatal corticosteroid use resulted in 1,500 ICU admissions and 75 maternal deaths at each gestational age. Antenatal corticosteroid administration also resulted in fewer cases of respiratory distress syndrome, intraventricular hemorrhage, and infant death. Overall, the authors found that between 24 and 30 weeks of gestation, administering antenatal corticosteroids was the optimal management strategy as it resulted in higher combined maternal and neonatal quality-adjusted life years (QALYs), than no corticosteroid use. For 31 and 32 weeks of gestation, antenatal corticosteroid administration resulted in lower combined QALYs. On sensitivity analyses, the probability of antenatal corticosteroids being the optimal management strategy decreased with increasing gestational age.	Findings from this decision-analytic model found that administration of antenatal corticosteroids, for hospitalized women with preterm pre-labor rupture of membranes and COVID-19, was an effective management strategy compared to no corticosteroid administration at gestational ages less than 31 weeks.	Zhou CG, Packer CH, Hersh AR, Caughey AB. Antenatal corticosteroids for pregnant women with COVID-19 infection and preterm prelabor rupture of membranes: a decision analysis [published online 2020 May 19]. J Matern Fetal Neonatal Med. doi:10.1080/14767058.2020.1763951
Pregnancy, neonates, perinatal outcomes, vertical transmission, breast milk samples, systematic review	19-May-20	Effects of Coronavirus Disease 2019 (COVID-19) on Maternal, Perinatal and Neonatal Outcomes: A Systematic Review	Ultrasound Obstetrics and Gynecology	Systematic Review	A systematic review, conducted until April 20, 2020, identified a high number of case reports and case series on COVID-19 in pregnancy, but only 24 studies including a total of 324 pregnant women with COVID-19 were included. These comprised 8 consecutive case series, 1 non-consecutive case series, and 15 case reports. In the combined data from the 8 consecutive case series, which included 211/295 (71.5%) cases of laboratory-confirmed and 84/295 (28.5%) cases of clinically diagnosed COVID-19, the maternal age ranged from 20 to 44 years and the gestational age on admission ranged from 5 to 41 weeks. The most common symptoms at presentation were fever, cough, dyspnea/shortness of breath, fatigue and myalgia. The rate of severe pneumonia reported amongst the case series ranged from 0 to 14%, with the majority of cases requiring ICU admission. Almost all cases from the case series had positive chest CT findings. The 6 and 22 cases that had nucleic-acid testing in vaginal mucus and breast milk samples, respectively, were negative for SARS-CoV-2. Only 4 cases of spontaneous miscarriage or abortion were reported. 219/295 women had delivered at the time of reporting (range 28-41 gestational weeks), and the majority of these had Cesarean section. Apgar scores at 1 and 5 min ranged from 7 to 10 and 7 to 10, respectively. Only 8 neonates had birth weight <2500g, and nearly one-third of cases were transferred to the NICU. There was 1 case each of neonatal asphyxia and neonatal death. In 155 neonates that had nucleic-acid testing in throat swabs, all but 3 cases were negative for SARS-CoV-2. In the non-consecutive case series, describing 9 cases of severe COVID-19, there	Despite the increasing number of published studies on COVID-19 in pregnancy, there are insufficient good-quality data to draw unbiased conclusions with regard to the severity of the disease or specific complications of COVID-19 in pregnant women, as well as vertical transmission, perinatal and neonatal complications.	Juan J, Gil MM, Rong Z, Zhang Y, Yang H, Poon LC. Effects of coronavirus disease 2019 (COVID-19) on maternal, perinatal and neonatal outcomes: a systematic review [published online 2020 May 19]. Ultrasound Obstet Gynecol. doi:10.1002/uog.22088

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					were 7 maternal deaths, 4 intrauterine fetal deaths (1 with twin pregnancy) and 2 neonatal deaths (twin pregnancy). In the case reports, describing a total of 20 pregnant patients with COVID-19, 2 maternal deaths, 1 neonatal death and 2 cases of neonatal SARS-CoV-2 infection were reported.		
Pregnancy, cesarean section, anesthesia, medical personnel, protection measures, China	19-May-20	Anesthesia and Protection in an Emergency Cesarean Section for Pregnant Woman Infected With a Novel Coronavirus: Case Report and Literature Review	Journal of Anesthesia	Clinical Report	Considering the risk of SARS-CoV-2 transmission among pregnant women, the delivery process produces a large amount of contaminated media, presenting challenges for medical personnel to ensure both the safety of mother and infant as well as self-protection. Only rare cases of pregnant women with COVID-19 are available for reference. This report describes a 30-year-old woman with RT-PCR confirmed COVID-19, who was hospitalized at 36 weeks + 2 days of gestation. Significant variability of fetal heart rate, at baseline, and severe variable decelerations occurred repeatedly on the third day of admission. An emergency cesarean section was performed, at 37 weeks 1 day of gestation, under combined spinal and epidural anesthesia, with strict protection for all personnel. The operation was uneventful, and none of the participants were infected.	This case report describes strict protection measures during anesthesia and operation to reduce viral transmission during cesarean delivery of a SARS-CoV-2 positive mother.	Du Y, Wang L, Wu G, Lei X, Li W, Lv J. Anesthesia and protection in an emergency cesarean section for pregnant woman infected with a novel coronavirus: case report and literature review [published online 2020 May 19]. J Anesth. doi:10.1007/s00540-020-02796-6
Pregnancy, knowledge, attitudes, concerns, breastfeeding safety, Turkey	19-May-20	Near-term Pregnant Women's Attitude Toward, Concern About and Knowledge of the COVID-19 Pandemic	Journal of Maternal Fetal and Neonatal Medicine	Original Article	This cross-sectional survey presents analysis of prospectively collected data, at a single tertiary "Coronavirus Pandemic Hospital" referral center in Turkey, from non-SARS-CoV-2 infected women with a confirmed pregnancy (>30 weeks' gestation). A total of 172 pregnant women (mean age 27.5 ± 5.3 years) were included. Overall, four women refused to participate to the survey (1.9%). Median gestational week and parity were 35 ± 11 weeks and 1 ± 2, respectively. Pregnant women were observed to trust the authorities (65%) and healthcare staff (92.4%), and their respect was increased (82.5%) during the outbreak. Most women (87.2%) comply with self-quarantine rules. Half of the women (52%) reported that they felt vulnerable, and 80% felt concerned. Approximately one-third of the women reported constantly thinking that they might get infected (35.5%) or they might get infected during/following delivery or their newborn might get infected after being born (42%). Half of the women (50%) reported that they either had no idea about or thought that breastfeeding was not safe during the outbreak. About 45% of women were confused or had doubts about whether or not the COVID-19 pandemic would affect their mode of delivery. The majority of women did not know if COVID-19 might cause birth defects (76%) or preterm birth (64.5%). These findings may guide health care providers in developing targeted messages to provide information to pregnant women.	This survey of attitude, concerns, and knowledge of COVID-19 among non-infected pregnant women revealed that most had increased concerns and limited knowledge of pregnancy-related outcomes of COVID-19. Of note, half of women regarded breastfeeding to be safe during the pandemic.	Yassa M, Birol P, Yirmibes C, et al. Near-term pregnant women's attitude toward, concern about and knowledge of the COVID-19 pandemic [published online 2020 May 19]. J Matern Fetal Neonatal Med. doi:10.1080/14767058.2020.1763947
Preterm infant, ARDS, host inflammatory response, remdesivir, horizontal transmission, UK	19-May-20	Horizontal transmission of severe acute respiratory syndrome coronavirus 2 to a premature infant: multiple organ injury and association with	The Lancet Child & Adolescent Health	Case Report	A male infant, born at 27 weeks' gestation, presented to the emergency department (ED) at 8 weeks of age with a 2-day history of poor feeding, sneezing, and dyspnea. 10 days before presentation, the infant had been discharged from the neonatal unit after recovering from neonatal respiratory distress syndrome; he had been fed with maternal expressed breast milk from day 3 of life. There were no cases of COVID-19 on the neonatal unit before or following discharge, members of the infant's household (parents and a 4-year-old sibling) were asymptomatic, and there were no other reported contacts. On initial assessment in the ED, the infant was in respiratory failure and presumed septic shock; resuscitation and respiratory support were commenced. Quantitative RT-PCR showed that the	This report presents the first detailed description, to the authors' knowledge, of a premature infant with severe SARS-CoV-2 infection in whom longitudinal assessment of multiple organ injury, blood inflammatory	Cook J, Harman K, Zoica B, et al. Horizontal transmission of severe acute respiratory syndrome coronavirus 2 to a premature infant: multiple organ injury and association with markers of inflammation [published online 2020 May 19]. Lancet Child & Adol Health.

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		markers of inflammation			patient's nasopharyngeal swab sample was positive for SARS-CoV-2. A blood culture was also positive for *Staphylococcus epidermidis*, at which point IV vancomycin was initiated as targeted treatment. The infant became increasingly difficult to ventilate, and repeat chest X-rays showed worsening bilateral airspace opacification consistent with acute respiratory distress syndrome. Along with antimicrobial treatment, remdesivir was prescribed on compassionate grounds and administered intravenously. Over the following days, there was a gradual improvement in respiratory function, and the infant was weaned from all respiratory support on day 24. Respiratory improvement in this infant appeared to be associated with a decrease in IL-6 concentration, ferritin, and lactate dehydrogenase, rather than a decrease in viral load, suggesting that the host pulmonary inflammatory response might have been important with regard to respiratory failure.	markers, and viral load are described.	doi:10.1016/S2352-4642(20)30166-8
Children, gastrointestinal symptoms, appendicitis, UK	19-May-20	Gastrointestinal features in children with COVID-19: an observation of varied presentation in eight children	The Lancet Child & Adolescent Health	Correspondence	This report describes eight children with COVID-19 presenting at a single center in the UK with symptoms of atypical appendicitis (fever, abdominal pain, diarrhea, vomiting) before rapid deterioration requiring hospitalization and, in some cases, intensive care support. All children had imaging confirming terminal ileitis. In two cases, plans for operative intervention were abandoned due to hemodynamic instability, need for intensive care, or positive SARS-CoV-2 PCR. All but two patients are receiving ongoing inpatient care, and their outcomes are unknown; no patients have died.	The authors draw attention to an unusual presentation of COVID-19 in children, recommending both abdominal imaging and SARS-CoV-2 PCR testing when investigating for possible appendicitis in children with abdominal symptoms.	Tullie L, Ford K, Bisharat M, et al. Gastrointestinal features in children with COVID-19: an observation of varied presentation in eight children [published online 2020 May 19]. Lancet Child & Adol Health. doi:10.1016/S2352-4642(20)30165-6
Adolescents, septic shock, peritonitis, multisystem inflammatory syndrome, obesity, Geneva, Switzerland	19-May-20	Septic shock presentation in adolescents with COVID-19	The Lancet Child & Adolescent Health	Correspondence	By April 30, 1199 PCR tests (on various types of samples) for SARS-CoV-2 had been performed in children in Geneva, Switzerland, and 57 children had positive results. This report describes the clinical characteristics of three adolescents (10–12 years) with confirmed SARS-CoV-2 infection, who presented with septic shock, defined as a severe infection leading to cardiovascular dysfunction; two had signs of peritonitis and multiple organ dysfunction syndrome and met the definition for pediatric multisystem inflammatory syndrome temporally associated with COVID-19. Despite the fact that 35–50% of children in sepsis and septic shock have no infectious organism found, the temporality of these patients' presentations and their SARS-CoV-2 positive testing strongly indicate causality. Of note, all three patients had a body-mass index greater than the 97th percentile for age, raising the question of obesity as a risk factor for severe disease, as reported in adult studies. No deaths were reported.	This case series describes the presentation of septic shock in 3 adolescents with COVID-19 in Geneva, Switzerland; two met criteria for the pediatric multisystem inflammatory syndrome temporally associated with COVID-19.	Dallan C, Romano F, Siebert J, et al. Septic shock presentation in adolescents with COVID-19 [published online 2020 May 19]. Lancet Child & Adol Health. doi:10.1016/S2352-4642(20)30164-4
BCG vaccination, country-wise outbreaks, growth curve, cases and deaths	19-May-20	Mandated Bacillus Calmette-Guérin (BCG) vaccination predicts flattened curves	medRxiv	Preprint (not peer reviewed)	BCG vaccination may reduce the risk of a range of infectious diseases, and, if so, could serve as a protective factor against COVID-19. The authors of this study compared countries that mandated BCG vaccination, at least until 2000, with countries that did not (129 countries in total). To minimize any systematic effects of reporting biases, the rates of day-by-day increase in both confirmed COVID-19 cases and deaths in the first 30-day period of country-wise outbreaks were analyzed. The 30-day window was adjusted to begin at the country-wise onset of the pandemic. Linear mixed models	In this revision of an earlier preprint, the authors strengthen their analysis of the effect of mandated BCG vaccination on the growth curve of COVID-19 cases and deaths in	Berg MK, Yu Q, Salvador CE, et al. Mandated Bacillus Calmette-Guérin (BCG) vaccination predicts flattened curves for the spread of COVID-19 [published online 2020 May 19]. medRxiv.

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		for the spread of COVID-19			revealed a significant effect of mandated BCG policies on the growth rate of both cases and deaths after controlling for median age, gross domestic product per capita, population density, population size, net migration rate, and various cultural dimensions (e.g. individualism and the tightness vs. looseness of social norms). This analysis suggests that mandated BCG vaccination can be effective in the fight against COVID-19.	countries; improvements include expanded sample size, controlling for the main effects of covariates over time, and weighting countries by estimates of the proportion of COVID-19 cases being reported.	doi:10.1101/2020.04.05.20054163
Pregnancy, neonatal infection, cesarean delivery, vertical transmission, systematic review	19-May-20	Effects of COVID-19 Infection During Pregnancy and Neonatal Prognosis: What is the Evidence?	medRxiv	Preprint (not peer reviewed)	A systematic literature identified 42 papers on COVID-19 and pregnancy and neonatal outcomes: 19 case reports (45%), 15 cross-sectional descriptive studies (35%), 6 cross-sectional analytical studies (14%), one case-control study (3%) and one cohort study (3%), presenting low levels of evidence. A total of 650 pregnant women and 511 infants were assessed. More than half of pregnant women had cesarean deliveries (n=324, 64%). Only 410 (80%) infants were tested for SARS-CoV-2, of which 8 (2%) were positive, however, based on what was assessed that there is no evidence of vertical transmission so far, as there are gaps concerning the care taken during and after delivery as well as biological sampling for testing of SARS-CoV-2.	This systematic review found little evidence for vertical transmission of SARS-CoV-2.	de Sousa AFL, de Carvalho HEF, de Oliveira LB, et al. Effects of COVID-19 Infection During Pregnancy and Neonatal Prognosis: What is the Evidence? [published online 2020 May 19]. medRxiv. doi:10.1101/2020.04.17.20069435
Pregnancy, second trimester	18-May-20	Prolonged viral persistence in COVID-19 second trimester pregnant patient	European Journal of Obstetrics, Gynecology and Reproductive Biology	Case Report	The authors report on a 43-year old gravida 3 para 2 pregnant woman who tested positive for SARS-CoV-2 via nasopharyngeal swab at 18 weeks' gestation. Due to mild symptoms, she did not receive treatment for COVID-19. Upon karyotyping, it was observed that the child had fetal Down Syndrome. The couple decided to terminate the pregnancy, and the fetus tested negative for SARS-CoV-2 via fetal nasopharyngeal and throat swabs. Placenta examination did not reveal definite viral inclusion, organism or extraplacental membrane inflammation. The authors determine that their report of SARS-CoV-2 infection in the 2nd trimester is not different from reports of non-pregnant patients. The fetus had unchanged fetal heartbeat and ultrasonic results, indicating no obvious immediate effects to the fetus after prolonged maternal infection. They also noted that pregnancy did not aggravate COVID-19 and the prolonged infection did not cause pregnancy complications in the patient. Additionally, the treatment used was the same as in non-pregnant patients, with an additional step of fetal monitoring. The authors proposed further studies to understand fetal and maternal consequences of SARS-CoV-2 infection in the 2nd trimester.	The authors report the case of a 43-year old SARS-CoV-2 positive pregnant woman, who, terminated her pregnancy at 18-weeks' gestation. The authors suggested that prolonged SARS-CoV-2 infection did not cause complications in pregnancies, neither did pregnancy aggravate COVID-19. The fetus tested negative for SARS-CoV-2, with placental examination excluding viral inclusion, organism or extraplacental membrane inflammation.	Panichaya P, Thaweerat W, Uthaisan J. Prolonged viral persistence in COVID-19 second trimester pregnant patient. Eur J Obstet Gynecol Reprod Biol. 2020 Jul;250:263. doi: 10.1016/j.ejogrb.2020.05.030. Epub 2020 May 18. PMID: 32425299; PMCID: PMC7233222.
Pediatrics, triage, low-income countries, oxygen,	18-May-20	Paediatric care in the time of COVID-19 in countries with under-resourced	Archives of Disease in Childhood	Op-ed	This viewpoint article explores COVID-19's potential direct and indirect impacts on children in low-income countries (LIC). Children in LIC have poorer overall health than children in wealthier countries due to high burdens of HIV, TB, and malnutrition; poorly managed non-communicable diseases; overcrowded housing and social congregation; inadequate	This viewpoint article explores COVID-19's potential direct and indirect impacts on children in low-income	Duke T, English M, Carai S, et al. Paediatric care in the time of COVID-19 in countries with under-resourced healthcare

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mechanical ventilation		healthcare systems			sanitation and income insecurity; and health system weaknesses. Child mortality from severe childhood pneumonia already exceeds 10% in many low-income settings. The authors recommend LIC not purchase more mechanical ventilators and instead identify gaps and procure additional oxygen sources required to treat people in need of oxygen therapy. Provision of oxygen alone has been shown to reduce mortality in children with pneumonia by 35%, and 75% of adults hospitalized for COVID-19 improve with standard oxygen therapy and supportive care. The authors suggest allocating a separate ward for pediatric patients with COVID-19 symptoms where testing is limited and keeping all children with non-severe conditions out of the hospital, advising families to self-quarantine as needed. The authors urge hospitals in LIC to identify what they do well and invest efforts into those measures to maintain child health services and protect their communities from COVID-19 outbreaks.	countries. The authors urge hospitals in LIC to identify what they do well rather than purchasing expensive mechanical ventilators. Precautionary changes to care and increasing oxygen provisions will help maintain child health services and assist in COVID-19 treatment and prevention.	systems. Arch Dis Child. 2020;105(7):616-617. doi:10.1136/archdischild-2020-319333
Vertical transmission, transplacental transmission, pregnancy, neonates, Italy	18-May-20	Vertical transmission of coronavirus disease 2019: severe acute respiratory syndrome coronavirus 2 RNA on the fetal side of the placenta in pregnancies with coronavirus disease 2019–positive mothers and neonates at birth	American Journal of Obstetrics & Gynecology MFM	Research Letter	Vertical transmission of SARS-CoV-2 is still a controversial issue and studies on transplacental transmission correlations are limited. This study included 22 pregnant women who received a diagnosis of COVID-19 in their third trimester of pregnancy and delivered at the Papa Giovanni XXIII Hospital in Bergamo, Italy, between March 5 - April 21, 2020. Nasopharyngeal (NP) swabs from each mother and newborn were analyzed via RT-PCR, along with placental biopsy samples. Of the 22 neonates born from COVID-19–positive mothers, 2 tested positive (9%); both placental samples had SARS-CoV-2 RNA in the syncytiotrophoblasts signifying the presence of the virus on the fetal side of the placenta (the authors provide images of these placental samples alongside control samples for reference). The first neonate was delivered vaginally and stayed in the mother's room while the mother wore a surgical mask. Skin-to-skin contact was not allowed, except for breastfeeding. The second neonate was delivered via C-section, immediately separated from the mother, and placed in the neonatal-ICU. No complications were observed for either cases. These findings support the possibility of vertical transmission of SARS-CoV-2 from mother to fetus in utero.	To determine the possibility of vertical transmission, this study included 22 pregnant women who received a diagnosis of COVID-19 in their third trimester of pregnancy and delivered in Bergamo (Italy). SARS-CoV-2 RNA was found in NP swabs of 2 neonates and in the fetal side of placental samples from their mothers, indicating the possibility of vertical transmission from mother to fetus in utero.	Patanè L, Morotti D, Giunta MR, et al. Vertical transmission of coronavirus disease 2019: severe acute respiratory syndrome coronavirus 2 RNA on the fetal side of the placenta in pregnancies with coronavirus disease 2019-positive mothers and neonates at birth [published online, 2020 May 18]. Am J Obstet Gynecol MFM. 2020;2(3):100145. doi:10.1016/j.ajogmf.2020.100145
Child, pulmonary contusion, pneumonia, chest CT, imaging	18-May-20	COVID-19 Pneumonia Misdiagnosed as Pulmonary Contusion in a Child	British Journal of Hospital Medicine	Images in Medicine	Imaging findings are presented from a pediatric case of a 7-year-old boy who was admitted to the emergency department (ED) after a fall from 2m. Physical examination revealed upper back pain, and laboratory tests revealed elevated levels of C-reactive protein. Chest CT demonstrated peripheral, multilobar areas of ground-glass opacities. Physicians in the ED interpreted the CT findings as showing pulmonary contusion because of the history of trauma. However, consultation with the radiology department pointed to interpretation of CT features as those of COVID-19 pneumonia. A nasopharyngeal swab, obtained 6 hours after CT was performed, was positive for COVID-19.	Pulmonary contusion and COVID-19 pneumonia presented with similar features on chest CT in this pediatric case.	Bekci T, Aslan S, Cakir ÌM. COVID-19 pneumonia misdiagnosed as pulmonary contusion in a child. Br J Hosp Med (Lond). 2020;81(5):1. doi:10.12968/hmed.2020.0224
Child, open heart surgery, perioperative management,	18-May-20	Intubation Precautions in a Pediatric Patient	Journal of Pediatric Surgery Case Reports	Case Report	In this case, a 3-year-old male presented for biventricular repair in the setting of persistent cyanosis after multiple palliative cardiac interventions. Early post-extubation hypoxia was managed with Bilevel Positive Airway Pressure. Nasopharyngeal swab for respiratory virus PCR panel including	The process of timing of surgical intervention for a child with severe	Shaw R, Tighe N, Odegard KC, et al. Intubation precautions in a pediatric patient with severe COVID-

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intubation precautions, Boston, USA		With Severe COVID-19			SARS-CoV-2 resulted positive. Complete heart block requiring synchronized ventricular pacing persisted, so permanent pacemaker placement was scheduled on post-operative day (POD) 11. Throughout the case, the patient received inotropic support and remained hemodynamically stable with adequate respiratory gas exchange. He was discharged on POD 19. The utility of preoperative COVID-19 testing, determination of recovery by an array of inflammatory markers and perioperative management are also described in this report. Considerations include procedure timing, personal protective equipment, pre-emptive planning, and simulation to ensure the best procedural outcome for patient while minimizing aerosolization and exposure to healthcare workers.	COVID-19 is described in this report.	19 [published online 2020 May 18]. J Ped Surg Case Rep. doi:10.1016.j.epsc.2020.101495
Preschool children, imaging characteristics, chest CT, China	18-May-20	Chest CT Imaging Characteristics of COVID-19 Pneumonia in Preschool Children: A Retrospective Study	BMC Pediatrics	Research Article	From January 26 to February 20, 2020, the clinical and initial chest CT imaging data of eight preschool children with laboratory-confirmed COVID-19 from two hospitals were retrospectively collected. Two cases (25%) were classified as mild and showed no obvious abnormal CT findings or minimal pleural thickening on the right side. Five cases (62.5%) were classified as moderate. Among these patients, one case showed consolidation located in the subpleural region of the right upper lobe, with thickening in the adjacent pleura; one case showed multiple consolidation and ground-glass opacities with blurry margins; one case displayed bronchial pneumonia-like changes in the left upper lobe; and two cases displayed asthmatic bronchitis-like changes. One case (12.5%) was classified as critical and showed bronchial pneumonia-like changes in the bilateral lungs, presenting blurred and messy bilateral lung markings and multiple patchy shadows scattered along the lung markings with blurry margins.	The chest CT findings of COVID-19 in preschool children are atypical and various. Accurate diagnosis requires a comprehensive evaluation of epidemiological, clinical, laboratory and CT imaging data.	Li Y, Cao J, Zhang X, Liu G, Wu X, Wu B. Chest CT imaging characteristics of COVID-19 pneumonia in preschool children: a retrospective study. BMC Pediatr. 2020;20(1):227. doi:10.1186/s12887-020-02140-7
Pregnancy, neonates, preterm birth, laboratory markers, vertical transmission, meta-analysis	18-May-20	Clinical manifestations and perinatal outcomes of pregnant women with COVID-19: a systematic review and meta-analysis	Nature Research	Preprint (not peer reviewed)	This systematic review and meta-analysis aimed to evaluate the impact of COVID-19 on pregnant women. Nine studies involving 93 pregnant women with COVID-19 and 103 infants were included in the meta-analysis. Pregnant women with COVID-19 have relatively mild symptoms. However, abnormal proportions of laboratory parameters were similar or even increased, compared to general population. Approximately 75%, 50% and 25% of infected pregnant women had elevated C-reactive protein, lymphopenia and leukocytosis, respectively. Around 30% of pregnant women with COVID-19 experienced preterm delivery, and the mean birth weight was 3214.7g. Fetal death, severe neonatal asphyxia, and detection of SARS-CoV-2 were observed in about 2%, whereas no neonatal death was found.	This meta-analysis found generally mild symptoms in pregnant patients with COVID-19 but abnormal laboratory markers, compared to the general population; preterm delivery occurred in 30% of births, and SARS-CoV-2 was detected in 2% of neonates.	Yee J, Kim W, Han JM, et al. Clinical manifestations and perinatal outcomes of pregnant women with COVID-19: a systematic review and meta-analysis [published online 2020 May 19]. doi:10.21203/rs.3.rs-29550/v1
Pregnancy, obesity, preterm birth, respiratory insufficiency, fetal death, maternal morbidity,	18-May-20	Clinical Characteristics of 46 Pregnant Women With a SARS-CoV-2 Infection in Washington State	American Journal of Obstetrics & Gynecology	Original Research	A retrospective study of pregnant patients with SARS-CoV-2 infection was conducted at six hospital systems in Washington State between January 21, 2020 and April 17, 2020. A total of 46 pregnant patients with SARS-CoV-2 were identified from hospital systems, capturing 40% of births in Washington State. Nearly all pregnant individuals with SARS-CoV-2 infection were symptomatic (93.5%, n=43) and the majority were in their second or third trimester (43.5%, n=20 and 50.0%, n=23, respectively). Symptoms resolved in a median of 24 days (IQR 13-37). Seven women were hospitalized (16%) including one admitted to the intensive care unit. Six cases (15%) were	In this study, nearly 15% of pregnant patients developed severe COVID-19, which occurred primarily in overweight or obese women with underlying conditions.	Lokken EM, Walker CL, Delaney S, et al. Clinical Characteristics of 46 Pregnant Women with a SARS-CoV-2 Infection in Washington State [published online 2020 May 18]. Am J Obstet Gynecol.

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Washington State, USA					categorized as severe COVID-19 disease with nearly all patients being either overweight or obese prior to pregnancy, having asthma or other co-morbidities. Eight deliveries occurred during the study period, including a preterm birth at 33 weeks to improve pulmonary status in a woman with Class III obesity. One stillbirth occurred of unknown etiology. Obesity and COVID-19 may synergistically increase risk for a medically indicated preterm birth to improve maternal pulmonary status in late pregnancy.		doi:10.1016/j.ajog.2020.05.031
Pregnancy, neonates, perinatal society, breastfeeding, guidelines	18-May-20	SARS-CoV-2 in Pregnancy: A Comprehensive Summary of Current Guidelines	Journal of Clinical Medicine	Review	International perinatal societies and institutions have released guidelines for the care of pregnant patients and their fetuses with COVID-19. This review summarizes these current guidelines in a comprehensive review for patients, healthcare workers, and healthcare institutions. 15 papers from 10 societies, through a literature search of society websites and their journal publications, were included up until April 20, 2020. Recommendations specific to antepartum, intrapartum, and postpartum care were abstracted from the publications and summarized in Tables. The summary of guidelines for the management of COVID-19 in pregnancy across different societies is fairly consistent, with some variation in the strength of recommendations. Currently, there is no definitive evidence to suggest vertical transmission of SARS-CoV-2, thus rooming-in and breastfeeding are still encouraged, unless the mother is acutely ill.	Recommendations for the care of pregnant patients and newborns with COVID-19 are summarized from 10 international perinatal societies.	Narang K, Ibirogba ER, Elrefaei A, et al. SARS-CoV-2 in Pregnancy: A Comprehensive Summary of Current Guidelines. J Clin Med. 2020;9(5):E1521. doi:10.3390/jcm9051521
Children, early childhood development, mitigation, policy actions	18-May-20	Effects of the Global COVID-19 Pandemic on Early Childhood Development: Short- And Long-Term Risks and Mitigating Program and Policy Actions	The Journal of Pediatrics	Commentary	Research on the effects of prior pandemics and disasters clearly indicates that there will be both immediate and long-term adverse consequences of the COVID-19 pandemic for many children, with particular risks faced during early childhood (prenatal to 8 years of age). In the short-term, illness, hospitalization, separation, and loss of caregivers have immediate harmful effects on young children's health, nutrition, wellbeing, and learning. Deteriorating economic circumstances will further exacerbate immediate risks and are compounded by the stress experienced by caregivers, undermining their ability to provide consistent nurturing care. In the long-term, studies have demonstrated reduced educational attainment and lifelong earnings as well as increased likelihood of non-communicable diseases and mental health problems depending on the timing of in utero exposure to disasters. Enduring economic downturn will lead to increased childhood poverty that may span all of the early childhood years or beyond. This report also presents evidence-based mitigating program and policy actions that may reduce the risks discussed.	This report reviews evidence on short- and long-term risks of the COVID-19 pandemic for children during early childhood development, as well as mitigation strategies to reduce these risks.	Yoshikawa H, Wuermli AJ, Britto PR, et al. Effects of the Global COVID-19 Pandemic on Early Childhood Development: Short- and Long-Term Risks and Mitigating Program and Policy Actions [published online 2020 May 18]. J Pediatr. doi:10.1016/j.jpeds.2020.05.020
Children, infants, neonates, clinical characteristics, child death, systematic review	18-May-20	Clinical Characteristics of COVID-19 Infection in Newborns and Pediatrics: A Systematic Review	Archives of Academic Emergency Medicine	Systematic Review	In this systematic review, medical databases were searched using English and Persian keywords including COVID-19, Pediatrics, Newborn, Coronavirus 2019, 2019-nCoV, SARS-CoV-2. In 14 related articles identified, a total of 2228 children, newborns and infants were studied. Most children were infected with COVID-19 due to family cluster or history of close contact. Clinical manifestation in children may be mild (72%), moderate (22%) or severe (6%), and the most common symptoms include dry cough (91%) and fever (96%). According to the included articles, two children had died, including a 14-year-old boy, whose exposure history and underlying disease were unclear, and a male newborn with gestational age of 35 weeks and 5	This systematic review of 2228 children, infants, and newborns found evidence of mild clinical symptoms, with only 2 deaths reported.	Panahi L, Amiri M, Pouy S. Clinical Characteristics of COVID-19 Infection in Newborns and Pediatrics: A Systematic Review. Arch Acad Emerg Med. 2020;8(1):e50. Published 2020 Apr 18.

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					days, whose first symptom was increased heart rate. No differences were found between male and female children regarding SARS-CoV-2 infection.		
Pregnancy, antibody testing, IgM, IgG, screening algorithm, Italy	18-May-20	COVID-19 Antibody Testing in Pregnancy	American Journal of Obstetrics & Gynecology MFM	COVID-19 Pregnancy Research	Almost all patients with COVID-19 test positive for antiviral immunoglobulin-G (IgG) within 10-20 days after symptom onset, but the clinical value of antibody testing has not yet been elucidated in pregnant patients. The most common methods of SARS-CoV-2 antibody testing include: IgM and IgG titer measured by either chemiluminescence immunoassay analysis, or enzyme-linked immunosorbent assay (ELISA); and a rapid IgM-IgG combined antibody test. Testing pregnant women for antibody response may have advantages, including identifying convalescent (IgG positive) women who were never tested with RT-PCR assay of nasopharyngeal swab specimens, and identifying women still at risk for infection (IgM and IgG negative). In particular, the point-of-care rapid combined antibody test can serve an important role in obstetric healthcare settings. The authors present an algorithm for using antibody testing to screen pregnant women in both inpatient and outpatient settings.	The authors explain available methods of SARS-CoV-2 antibody testing and propose the use of point-of-care rapid combined antibody tests to universally screen pregnant women at hospital admission.	Zullo F, Di Mascio D, Saccone G. COVID-19 Antibody Testing in Pregnancy [published online 2020 May 18]. Am J Obstet Gynecol MFM. doi:10.1016/j.ajogmf.2020.100142
Pregnancy, neonatal infection, placental pathology, chronic intervillositis, RNA ISH assay, syncytio-trophoblast, Italy	18-May-20	Vertical Transmission of COVID-19: SARS-CoV-2 RNA on the Fetal Side of the Placenta in Pregnancies With COVID-19 Positive Mothers and Neonates at Birth	American Journal of Obstetrics and Gynecology MFM	COVID-19 Pregnancy Research	All pregnant women diagnosed with COVID-19 who delivered at Papa Giovanni XXIII Hospital in Bergamo, Italy between March 5 and April 21, 2020 were included in this study on placental SARS-CoV-2 markers of infection in the third trimester of pregnancy. Of 22 total women, two delivered neonates with SARS-CoV-2 positive nasopharyngeal swabs. Their placentas showed chronic intervillositis, with CD68+ macrophage infiltration, both in the intervillous and villous space. The RNA in situ hybridization (ISH) assay allowed direct visualization of the virus in the placentas by detecting SARS-CoV-2 spike protein mRNA while retaining tissue morphology. The RNAscope probe detected positive staining for SARS-CoV-2 viral RNA in the infected tissues but not in uninfected placenta controls, demonstrating the specificity of RNAscope probes. The presence of SARS-Cov-2 RNA in the syncytiotrophoblast signifies presence of the virus on the fetal side.	This is the first study describing SARS-CoV-2 RNA on the fetal side of the placenta in two cases of mother-newborn dyads who were positive for the virus at birth. These findings support the possibility of vertical transmission of SARS-CoV-2 in utero.	Patanè L, Morotti D, Giunta MR, et al. Vertical transmission of COVID-19: SARS-CoV-2 RNA on the fetal side of the placenta in pregnancies with COVID-19 positive mothers and neonates at birth [published online 2020 May 18]. Am J Obstet Gynecol MFM. doi:10.1016/j.ajogmf.2020.100145
Pregnancy, neonates, maternal-fetal transmission, maternal viremia, cellular tropism, trans-placental passage	18-May-20	Evidence and Possible Mechanisms of Rare Maternal-Fetal Transmission of SARS-CoV-2	Journal of Clinical Virology	Review	Data remains scarce about the natural history of SARS-CoV-2 infection in pregnant women and the risk of mother-to-fetal transmission. Different mechanisms of viral infection and vertical transmission in placenta include placental tropism and replication, transcytosis of opsonized or free virus, or virus carried by an infected blood cell. However, current data indicate that viral RNA levels in maternal blood are low, and there is no evidence of placental infection with SARS-CoV-2. Published reports to date suggest that perinatal transmission of SARS-CoV- 2 can occur but is rare. Among 179 newborns tested for SARS-CoV2 at birth from mothers with COVID-19, transmission was suspected in 8 cases, 5 with positive nasopharyngeal SARS-CoV-2 RT-PCR and 3 with SARS-CoV-2 IgM. However, these cases arise from maternal infection close to childbirth, which may not allow sufficient time for transplacental passage, and there is no information about exposure during first or second trimester of pregnancy.	Current data fail to demonstrate maternal-fetal transmission, but are largely incomplete. According to these data, the transmission risk is probably very low, possibly under 1% following maternal SARS-CoV-1 infection during pregnancy.	Egloff C, Vauloup-Fellous C, Picone O, Mandelbrot L, Roques P. Evidence and possible mechanisms of rare maternal-fetal transmission of SARS-CoV-2 [published online 2020 May 18]. J Clin Virol. doi:10.1016/j.jcv.2020.104447
Children, newborns, clinical	18-May-20	SARS-COV-2 Infection in Children and	European Journal of Pediatrics	Review	This systematic review includes papers published between January 1 and May 1, 2020 on children (aged 0-18 years) with COVID-19. 62 studies and 3 reviews were included, with a total sample size of 7480 children (2428/4660	This systematic review found that SARS-CoV-2 affects children less	Liguoro I, Pilotto C, Bonanni M, et al. SARS-COV-2 infection in children and

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characteristics, laboratory findings, chest CT, systematic review		Newborns: A Systematic Review			males, 52.1%; weighted mean age 7.6 years). Patients showed mainly mild (608/1432, 42.5%) and moderate (567/1432, 39.6%) signs of infection. About 2% of children were admitted to the pediatric intensive care unit. The most commonly described symptoms were fever (51.6%) and cough (47.3%). Laboratory findings were often unremarkable. Children underwent a chest CT scan in 73.9% of all cases, and 32.7% resulted normal. Overall, the estimated mortality was 0.08%. A higher proportion of newborns was severely ill (12% of 25 total newborns), and dyspnea was the most common sign (40%). Larger epidemiological and clinical cohort studies are needed to better understand possible implications of COVID-19 infection in children.	severely than adults; laboratory and radiology findings are largely nonspecific in children but may help to identify those who are severely ill.	newborns: a systematic review [published online ahead of print, 2020 May 18]. Eur J Pediatr. doi:10.1007/s00431-020-03684-7
Pregnancy, neonates, lymphopenia, thrombocytopenia, obstetric outcomes, preterm delivery, China	18-May-20	Effects of SARS-CoV-2 Infection on Pregnant Women and Their Infants: A Retrospective Study in Wuhan, China	Archives of Pathology & Laboratory Medicine	Research Article	All suspected cases of pregnant women with COVID-19, admitted to one center in Wuhan, China from January 20 to March 19, 2020 were included. 27 pregnant women (4 early pregnancies included) with laboratory or clinically confirmed SARS-CoV-2 infection, and 24 neonates born to the 23 late pregnant mothers were analyzed. On admission, 46.2% (13/27) of the pregnant women had symptoms, including fever (11/27), cough (9/27) and vomiting (1/27). Decreased total lymphocytes count was observed in 81.6% (22/27) patients. 26 patients showed typical viral pneumonia by chest CT scan. One mother developed severe pneumonia three days after her delivery. No maternal and perinatal death occurred. Moreover, one early preterm newborn, born to a mother with complication of premature rupture of fetal membranes, with high suspicion of SARS-CoV-2 infection, was SARS-CoV-2 negative after repeated RT-PCR testing. More patients in late pregnancy showed lymphopenia and thrombocytopenia as compared to those in early pregnancy ($P<.05$).	In this study on the effects of SARS-CoV-2 infection on maternal, fetal, and neonatal outcomes from a cohort in Wuhan, China, no major complications were reported among pregnant women with COVID-19 and their newborns.	Yang H, Hu B, Zhan S, Yang LY, Xiong G. Effects of SARS-CoV-2 infection on pregnant women and their infants: A retrospective study in Wuhan, China [published online 2020 May 18]. Arch Pathol Lab Med. doi:10.5858/arpa.2020-0232-SA
Pregnancy, neonates, labor, obstetric management, breastfeeding, Nigeria, sub-Saharan Africa	18-May-20	Management of covid-19: A Practical Guideline for Maternal and Newborn Health Care Providers in Sub-Saharan Africa	Journal of Maternal Fetal and Neonatal Medicine	Other Articles	At the time of writing, there have been no confirmed obstetric cases of COVID-19 in Nigeria; the only confirmed case of COVID-19 in a child in Nigeria is a 6-week-old infant who returned from the UK with the mother. As the rate of obstetric cases will likely rise in Nigeria and other African countries, pregnant women will have to be attended to in facilities that are distinct from the COVID-19 isolation centers in the country. This guideline prepares and equips clinicians working in the maternal and newborn health care sectors in the sub-region to manage COVID-19 during pregnancy and childbirth. With regard to breastfeeding, the authors note that the practice to support, promote and protect breastfeeding should continue until there is sufficient evidence to advise otherwise. They recommend that the frequency of direct breastfeeding should be reduced to one to two times daily, and other feeds should be expressed breast milk, fed orally in order to limit mother-newborn contact and improve lactation.	These guidelines on obstetric and newborn management during the COVID-19 pandemic are intended for use by maternal and newborn care providers in sub-Saharan Africa.	Ezenwa BN, Fajolu IB, Akinajo OR, et al. Management of covid-19: a practical guideline for maternal and newborn health care providers in Sub-Saharan Africa [published online 2020 May 18]. J Matern Fetal Neonatal Med. doi:10.1080/14767058.2020.1763948
Adolescent, epilepsy, multi-organ failure, cardiac injury, coagulopathy, Washington D.C., USA	18-May-20	Cardiac dysfunction and thrombo-cytopenia-associated multiple organ failure inflammation	The Lancet Child & Adolescent Health	Case Report	A 16-year-old male with chromosome 18q deletion and well controlled epilepsy presented to the Children's National Hospital (Washington, DC, USA) with hemodynamic shock after 4 days of fever and one generalized seizure at home. Although he had no respiratory symptoms, his mother was ill with a cough. Upon arrival, he was intubated and resuscitated. Initial testing did not detect SARS-CoV-2; however, a second test for SARS-CoV-2 was positive on day 3 after hospital admission. In addition to kidney injury, liver injury, and coagulopathy, the patient showed acute respiratory distress	In this case report, a 16-year-old male with confirmed SARS-CoV-2 infection presented with hyperinflammatory syndrome, coagulopathy, and cardiac injury mimicking	Latimer G, Corriveau C, DeBiasi RL, et al. Cardiac dysfunction and thrombocytopenia-associated multiple organ failure inflammation phenotype in a severe paediatric case of COVID-19

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		phenotype in a severe pediatric case of COVID-19			syndrome and significant myocardial injury. His overall presentation met criteria for the thrombocytopenia-associated multiple organ failure (TAMOF) inflammation phenotype: he had organ failure in at least three organ systems, as well as thrombocytopenia, acute kidney injury, and a lactate dehydrogenase concentration >250 U/L. The patient has been discharged to a rehabilitation facility after a 46-day ICU admission.	the profile of severe COVID-19 in adults.	[published online 2020 May 18]. Lancet Child & Adol Health. doi:10.1016/S2352-4642(20)30163-2
Adolescents, cutaneous manifestations, silent carriers, Italy	18-May-20	Silent COVID-19: what your skin can reveal	The Lancet Infectious Diseases	Correspondence	Clinical manifestations of COVID-19 are rare or absent in children and adolescents; hence, early clinical detection is fundamental to prevent further spreading. This report describes three young patients (14, 14, and 18 years), presenting with chilblain-like lesions, who were diagnosed with SARS-CoV-2 infection; two were asymptomatic. Lesions involved acral sites, especially the dorsum of the digits of the feet, beginning as erythematous-violaceous patches that slowly evolved to purpuric lesions and then to blisters and ulcero-necrotic lesions, with final complete return to normal. Burning and itching were also present with some of the lesions. Acute acro-ischemic manifestations along the course of SARS-CoV-2 infection could represent a cutaneous expression of the typical thrombotic pattern of COVID-19 due to hyperinflammation and altered coagulation and endothelial damage.	This report contributes to growing evidence of chilblain-like lesions in otherwise asymptomatic children and adolescents with COVID-19; the authors suggest that acute cutaneous manifestations could help early detection of silent carriers.	Guarneri C, Rullo EV, Pavone P, et al. Silent COVID-19: what your skin can reveal [published online 2020 May 18]. Lancet Infect Dis. doi:10.1016/S1473-3099(20)30402-3
Maternity hospital, workforce shortage, health care workers, universal screening	18-May-20	COVID-19 screening of health-care workers in a London maternity hospital	The Lancet Infectious Diseases	Correspondence	Between March 17 and April 16, 2020, the Portland Hospital for Women and Children (London, UK) tested nasopharyngeal swabs taken from 266 staff members (>50% of workforce) using SARS-CoV-2 RT-PCR, and 47 (18%) were found to be positive. Of these positive cases, 31 (66%) were symptomatic and 16 (34%) were asymptomatic. Overall, 28 (48%) staff members remained positive at 7 days after the initial test was taken, 16 (34%) at 10 days, and four (9%) at 14 days, with one health-care worker remaining positive until 26 days. Of 76 initially symptomatic staff members, 45 (59%) tested negative for SARS-CoV-2. Of 25 symptomatic staff members who initially tested negative and were retested, only one (4%) became positive after 7 days. Benefits of universal staff testing include the amelioration of current workforce depletion due to symptomatic staff self-isolating, because a substantial proportion do not have COVID-19. Regular testing also allows early identification and isolation of asymptomatic SARS-CoV-2-positive health-care workers, thus reducing nosocomial transmission.	Universal staff testing at a London maternity hospital revealed a high proportion of negative SARS-CoV-2 tests among symptomatic staff members, allowing those uninfected to return to work and helping reduce the current burden of workforce shortage.	Khalil A, Hill R, Ladhani S, et al. COVID-19 screening of health-care workers in a London maternity hospital [published online 2020 May 18]. Lancet Infect Dis. doi:10.1016/S1473-3099(20)30403-5
Children, viral load, throat vs. anal swabs, RT-PCR assay, China	18-May-20	Viral Loads in Throat and Anal Swabs in Children Infected With SARS-CoV-2	Emerging Microbes & Infections	Research Article	In this retrospective review of RT-PCR results of 2138 pediatric patients with suspected SARS-CoV-2 infection at Wuhan Children's Hospital, 212 cases were tested with RT-PCR assays on both throat and anal swabs, whereas 1926 cases were tested with RT-PCR assays on throat swabs only. 78/212 patients tested positive on either throat or anal swabs; the diagnostic potential of these two types of specimens showed significant difference (positive rate: 78.2% on throat swabs vs. 52.6% on anal swabs, McNemar Test P=0.0091) and exhibited weak positive consistency (Kappa value: 0.311, P<0.0001). In total, 217/2138 tested positive for SARS-CoV-2 on either throat or anal swabs, which showed no statistically significant difference or correlation in viral loads, suggesting the possibility of fecal-oral transmission. Based on correlation of viral loads to indexes of SARS-CoV-2 infection and kinetic changes of viral loads, the authors also suspected that increased viral	Data from SARS-CoV-2 RT-PCR-testing of pediatric patients in Wuhan, China revealed no difference in viral load between throat and anal swabs; findings also showed correlation between each type of specimen and particular phases of infection (or immune states of patients).	Yuan C, Zhu H, Yang Y, et al. Viral loads in throat and anal swabs in children infected with SARS-CoV-2 [published online 2020 May 18]. Emerg Microbes Infect. doi:10.1080/22221751.2020.1771219

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
					loads in throat swabs may represent an acute phase of SARS-CoV-2 infection, predicting the exhaustion of memory cytotoxic T lymphocytes and progression to acute respiratory distress syndrome; whereas decreased viral loads in anal swabs may indicate the resolution phase of SARS-CoV-2 infection, predicting increased levels of Tregs, IgG, and IgM and serving potential use in monitoring therapeutic responses.		
Neonates, pregnancy, clinical presentation, breastfeeding, isolation	18-May-20	COVID 19 in Neonates	Journal of Maternal Fetal and Neonatal Medicine	Review Article	There is limited evidence to support the possibility of vertical transmission. Clinical presentation in neonates is nonspecific, commonly observed as temperature instability, respiratory distress, poor feeding, lethargy, vomiting and diarrhea. A suspect case is defined as a neonate born to the mother with a history of 2019-nCoV infection between 14 days before delivery and 28 days after delivery, or as a neonate directly exposed to those infected with 2019-nCoV. The authors recommend that suspected COVID-19 positive mothers and their newborns should be kept together in a designated isolation room. Mothers can breastfeed their newborns with proper hand and breast hygiene precautions. For confirmed COVID-19 positive mothers, the authors recommend that neonates should be isolated immediately after delivery, if facilities for isolation are available. In these cases, breastfeeding can resume once the mother becomes asymptomatic and two consecutive maternal swabs, separated by at least 24 hours, are negative.	This article summarizes current evidence on clinical presentation of COVID-19 in neonates, as well as recommendations for delivery room and postnatal management of neonates born to suspected or confirmed COVID-19 positive mothers.	Kallem VR, Sharma D. COVID 19 in neonates [published online 2020 May 18]. J Matern Fetal Neonatal Med. doi:10.1080/14767058.2020.1759542
Children, routine immunization services, non-influenza vaccines, up-to-date status, Michigan, USA	18-May-20	Decline in Child Vaccination Coverage During the COVID-19 Pandemic — Michigan Care Improvement Registry, May 2016–May 2020	Morbidity and Mortality Weekly Report	Report	Michigan implemented a stay-at-home order on March 23, 2020. Such strategies might result in decreased accessibility to routine immunization services, leaving children at risk for vaccine-preventable diseases. Vaccination coverage declined in all milestone age cohorts (each including an average sample size of 9,269 between 2016-2019 and 9,539 for 2020), except for birth-dose hepatitis B coverage. Among children aged 5 months, up-to-date status for all recommended vaccines declined from approximately two thirds of children during 2016–2019 (66.6%, 67.4%, 67.3%, 67.9%, respectively) to fewer than half (49.7%) in May 2020. For the 16-month age cohort, coverage with all recommended vaccines declined, with measles-containing vaccination coverage decreasing from 76.1% in May 2019 to 70.9% in May 2020. In addition to a decline in up-to-date status in almost all age cohorts, the number of non-influenza vaccine doses administered and reported for children aged ≤18 years decreased 21.5%, and the number of doses administered to children aged ≤24 months decreased 15.5% during January–April 2020, compared with the same averaged periods in 2018 and 2019.	Disruptions in essential outpatient health services, like routine immunization, have occurred during efforts to mitigate transmission of SARS-CoV-2. In Michigan, vaccine coverage declined in all milestone age cohorts in 2020, compared to 2016-2019.	Bramer CA, Kimmins LM, Swanson R, et al. Decline in Child Vaccination Coverage During the COVID-19 Pandemic — Michigan Care Improvement Registry, May 2016–May 2020. MMWR Morb Mortal Wkly Rep. ePub: 18 May 2020. DOI: http://dx.doi.org/10.15585/mmwr.mm6920e1
Children, elderly, age-related difference, humoral immunity, serology, cross-reactivity	18-May-20	Distinct systems serology features in children, elderly and COVID patients	medRxiv	Preprint (not peer reviewed)	COVID-19 results in higher pathogenicity and mortality in the elderly compared to children. Examining baseline SARS-CoV-2 cross-reactive immunological responses, induced by circulating human coronaviruses (hCoV), is needed to understand whether pre-existing hCoV antibody-mediated immunity contributes to COVID-19 outcomes. The cross-reactivity of CoV antibody responses of healthy children (n=89), adults (n=98), elderly (n=57), and COVID-19 patients (n=19) were analyzed by systems serology. Vastly different serological signatures were observed between healthy children and elderly, with markedly higher cross-reactive SARS-CoV-2 IgA and IgG observed in elderly individuals, whereas children displayed elevated	Elevated cross-reactive SARS-CoV-2 IgM in children, compared to elderly individuals in this study, suggest that less experienced humoral immunity is associated with better response to SARS-CoV-2 infection.	Selva KJ, van de Sandt CE, Lemke MM, et al. Distinct systems serology features in children, elderly and COVID patients [published online 2020 May 18]. medRxiv. doi:10.1101/2020.05.11.20098459

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
					SARS-CoV-2 IgM, including receptor binding domain-specific IgM with higher avidity. These results suggest that less-experienced humoral immunity associated with higher IgM, as observed in children, may have the potential to induce more potent antibodies upon SARS-CoV-2 infection.		
Containment, hygiene, outbreak, pediatric, Bavaria, Germany	17-May-20	Successful containment of Covid-19 outbreak in a large maternity and perinatal center while continuing clinical service	Pediatric Allergy and Immunology	Original Article	In one of the largest university perinatal centers in Bavaria, Germany, an outbreak of COVID-19 occurred in March 2020, affecting 36 staff members, including doctors, nurses, and midwives. The authors described the outbreak and present the measures contributing to the successful containment of the outbreak within three weeks. Measures included extensive testing of personnel in pre-defined phases and increased hygiene measures, including an obligation to wear surgical face masks. The authors identified the need to monitor cases of illness across all groups of employees, to ensure social distancing within personnel, and to evaluate contacts of clinical personnel outside of the hospital environment to interpret chains of infections and to disrupt them. Transparent, timely, and direct communication of measures to all personnel and patients was prioritized. Continuous on-site visits by hygiene experts and continuous staff training for social behavior changes were utilized to minimize spread. The authors provided a summary of measures for containment of SARS-CoV-2 in a hospital outbreak and stressed the need to provide protective gear to all health workers in an effort to maintain patient care not only for COVID-19 patients but patients in general.	The authors described the outbreak of COVID-19 in a perinatal center in Bavaria, Germany and present the measures contributing to the successful containment of the outbreak within 3 weeks. Measures include extensive testing, mandatory PPE, monitoring sick leaves, social distancing measures, on-site visits by hygiene experts, staff training, and direct communication.	Kabesch M, Roth S, Brandstetter S, et al. Successful containment of Covid-19 outbreak in a large maternity and perinatal center while continuing clinical service. Pediatr Allergy Immunol. 2020;31(5):560-564. doi:10.1111/pai.13265
Neonates, pregnancy, clinical characteristics, mild infection, USA	17-May-20	Neonatal Coronavirus 2019 (COVID-19) Infection: A Case Report and Review of Literature	Cureus	Case Report	This report presents a case of neonatal infection in New York, USA. A 22-day-old, previously healthy, full-term neonate was hospitalized after presenting with a one-day history of fever and poor feeding. Routine neonatal sepsis evaluation was negative. SARS-CoV-2 PCR testing was obtained, given rampant community transmission, which returned positive. There were no other laboratory or radiographic abnormalities. The infant recovered completely and was discharged home in two days once his feeding improved (the child was exclusively breastfed). The family was advised to self-quarantine to prevent the transmission of COVID-19. The hypothesized mode of transmission was horizontal spread from his caregivers. This case highlights the milder presentation of COVID-19 in otherwise healthy, full-term neonates. COVID-19 must be considered in the evaluation of a febrile infant. Infants and children may play an important role in the transmission of COVID-19 in the community. This report also provides a review of 11 published cases of neonatal COVID-19 and their clinical characteristics.	This report presents a mild case of neonatal SARS-CoV-2 infection and a review of published cases of neonatal COVID-19, confirming observations of milder infection in this population.	Dumpa V, Kamity R, Vinci AN, Noyola E, Noor A. Neonatal Coronavirus 2019 (COVID-19) Infection: A Case Report and Review of Literature. Cureus. 2020;12(5):e8165. Published 2020 May 17. doi:10.7759/cureus.8165
Children, acute heart failure, multisystem inflammatory syndrome, IV immune-globulin, France, Switzerland	17-May-20	Acute Heart Failure in Multisystem Inflammatory Syndrome in Children (MIS-C) in the Context of Global SARS-CoV-2 Pandemic	Circulation	Research Article	Cardiac injury and myocarditis have been described in adults with COVID-19, whereas SARS-CoV-2 infection in children is typically minimally symptomatic. This series reports retrospectively collected data on 35 febrile pediatric patients (median 10 years, range 2-16 years) with acute heart failure potentially associated with SARS-CoV-2 infection and the multisystem inflammatory syndrome in children (MIS-C), who were admitted to PICUs over a two-month period contemporary with the SARS-CoV-2 pandemic in France and Switzerland. Among this cohort, co-morbidities were present in 28% including asthma and overweight. Gastrointestinal symptoms were prominent. Left ventricular ejection fraction was <30% in one third; 80%	Retrospective data from France and Switzerland reveal that children may experience acute cardiac decompensation due to severe inflammatory state following SARS-CoV-2 infection. Based on findings, treatment	Belhadjer Z, Méot M, Bajolle F, et al. Acute heart failure in multisystem inflammatory syndrome in children (MIS-C) in the context of global SARS-CoV-2 pandemic [published online 2020 May 17]. Circulation.

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					required inotropic support with 28% treated with extracorporeal membrane oxygenation (ECMO). Inflammation markers were suggestive of cytokine storm (IL-6 median 135 pg/mL) and macrophage activation (D-dimer median 5284 ng/mL). Mean brain natriuretic peptide was elevated (5743 pg/mL). 31/35 (88%) patients tested positive for SARS-CoV-2 infection by PCR of nasopharyngeal swab or serology. All patients received IV immunoglobulin, with adjunctive steroid therapy used in one third. Left ventricular function was restored in the 25/35 of those discharged from the ICU. No patient died, and all patients treated with ECMO were successfully weaned.	with IV immunoglobulin appears to be associated with recovery of left ventricular systolic function.	doi:10.1161/CIRCULATIONAHA.120.048360
Children, clinical characteristics, diarrhea, lymphopenia, creatine kinase MB	17-May-20	Children With Coronavirus Disease 2019 (COVID-19): A Review of Demographic, Clinical, Laboratory and Imaging Features in 2,597 Pediatric Patients	Journal of Medical Virology	Review	This review evaluates the demographic, clinical, laboratory and imaging features from 2,597 recently reported pediatric patients with COVID-19 (1,185 confirmed; 1,412 suspected cases). Of 2,492 cases where information on age distribution was available, 446 (17.9%) were <1 year, 593 (23.8%) were between 1-5 years, 626 (25.1%) were between 6-10 years, 492 (19.7%) were between 11-15 years, and 335 (13.4%) were >15 years. Respiratory symptoms in children were mild (12.6% cases had tachypnea), and the development of acute respiratory distress syndrome was rare. However, diarrhea occurred in 6.6% of pediatric patients, compared to 2-3.8% of adult cases from some clinical studies. Although lymphopenia is the most common lab finding in adults, it occurred infrequently in children (9.8%). Moreover, elevated creatine kinase MB isoenzyme, a myocardial marker, was much more commonly observed in children (27.0%) than in adults, suggesting that heart injury may be more likely to occur in pediatric patients.	This analysis contributes to growing evidence determining the spectrum of COVID-19 disease in children.	Cui X, Zhang T, Zheng J, et al. Children with Coronavirus Disease 2019 (COVID-19): A Review of Demographic, Clinical, Laboratory and Imaging Features in 2,597 Pediatric Patients [published online 2020 May 17]. J Med Virol. doi:10.1002/jmv.26023
Birth defects, birth defects registry, coronavirus, COVID-19, pregnancy, surveillance	16-May-20	Perspectives on challenges and opportunities for birth defects surveillance programs during and after the COVID-19 era	Birth Defects Research	Review	The authors provide a perspective on the potential impact of the COVID-19 pandemic, and the subsequent containment policies, on birth defects surveillance and analysis. The article discusses possible effects on clinical birth defect diagnoses, routine birth defects surveillance system activities, and epidemiologic considerations, as well as opportunities for mitigating the impact of COVID-19. Due to the impact of COVID-19, birth defects surveillance programs may be faced with organizational and methodological obstacles. The authors provide information for a better understanding of these potential challenges in order to facilitate better planning and collaboration across programs to overcome barriers to core activities and to prepare for novel opportunities for research and prevention.	The article discusses possible effects on clinical birth defect diagnoses, routine birth defects surveillance system activities, and epidemiologic considerations, as well as opportunities for mitigating the impact of COVID-19.	Ludorf KL, Salemi JL, Kirby RS, Tanner JP, Agopian AJ. Perspectives on challenges and opportunities for birth defects surveillance programs during and after the COVID-19 era. Birth Defects Res. 2020;112(14):1039-1042. doi:10.1002/bdr2.1710
Healthcare delivery, vascular tumor, hemangioma, infants	16-May-20	Management of infantile hemangiomas during the COVID pandemic	Pediatric Dermatology	Statement	Infantile hemangiomas (IH) can require urgent evaluation and risk stratification to determine which infants need treatment and which can be managed with continued observation. The Hemangioma Investigator Group created consensus recommendations for management of IH via telemedicine. This effort was prompted by the COVID-19 pandemic, but the authors recognized the utility of such guidelines in other situations in which telemedicine is used. FDA/EMA-approved monitoring guidelines, clinical practice guidelines, and relevant publications regarding initiation and monitoring of beta-blocker therapy were used to inform the recommendations. Clinical decision-making guidelines about when telehealth is an appropriate alternative to in-person visits, including medication initiation, dosage changes, and ongoing evaluation, are included. The importance of communication with caregivers in the context of	In this consensus statement, the authors provide guidance on prioritizing patient safety while providing timely treatment to patients with infantile hemangiomas (IH) that require early intervention. The authors envisage use of these guidelines in the case of the COVID-19	Frieden IJ, Püttgen KB, Drolet BA, et al. Management of infantile hemangiomas during the COVID pandemic. [published online, 2020 May 16]. Pediatr Dermatol. 2020;37(3):412-418. doi:10.1111/pde.14196

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					telemedicine is discussed, and online resources for both hemangioma education and propranolol therapy are provided.	pandemic, natural disasters, and limited access to specialists for IH.	
Pregnancy, neonates, placenta, intrauterine transmission	16-May-20	Coronavirus May Cross Placenta	New Scientist	News & Technology	A growing number of case studies suggest that, while pregnant people don't seem to be at greater risk of infection or disease, COVID-19 is linked to a higher rate of cesareans and preterm births, and the virus may be able to cross the placenta to reach the fetus. It is possible that the illness may trigger early labor or that newborns were delivered early as a precaution, to protect the mother's health. Some studies have found newborns who test positive shortly after birth and have detected SARS-CoV-2 in the placenta. However, most studies have found no evidence of trans-placental transmission, so if the virus is able to cross the placenta, it is likely a rare phenomenon.	Although some pregnant women with COVID-19 have experienced adverse outcomes, such as a higher rate of cesarean section and preterm birth, evidence on the possibility of trans-placental transmission remains limited.	Hamzelou J. Coronavirus may cross placenta. New Sci. 2020;246(3282):11. doi:10.1016/S0262-4079(20)30911-8
Pregnancy, critical disease, convalescent plasma, remdesivir, USA	16-May-20	The Use of Convalescent Plasma Therapy and Remdesivir in the Successful Management of a Critically Ill Obstetric Patient With Novel Coronavirus 2019 Infection: A Case Report	Case Reports in Women's Health	Case Report	Remdesivir is a novel therapeutic with known activity against SARS CoV-2 and related coronaviruses. Remdesivir, as well as convalescent plasma therapy, are currently under investigation as potential therapies for patients with COVID-19. In this case report, the use of convalescent plasma therapy, followed by remdesivir as a late addition, in the treatment of a critically ill obstetric patient (22 weeks and 2 days of gestation) with critical COVID-19 is described. The patient subsequently improved, was extubated 5 days after initiation of remdesivir, was transitioned to room air 24 hours later, and discharged at the completion of remdesivir therapy.	This case of critical COVID-19 disease in a pregnant patient shows promise for remdesivir as a viable therapy for COVID-19.	Anderson J, Schauer J, Bryant S, Graves CR. The use of convalescent plasma therapy and remdesivir in the successful management of a critically ill obstetric patient with novel coronavirus 2019 infection: A case report [published online 2020 May 16]. Case Rep Womens Health. doi:10.1016/j.crwh.2020.e00221
Pediatrics vs. adult patients, rheumatic disease, tDMARD, Spain	16-May-20	Incidence of COVID-19 in a Cohort of Adult and Paediatric Patients With Rheumatic Diseases Treated With Targeted Biologic and Synthetic Disease-Modifying Anti-Rheumatic Drugs	Seminars in Arthritis and Rheumatism	Original Article	A cross-sectional study comprising of a telephone survey and electronic health records review was performed including 959 adult and pediatric patients with rheumatic diseases treated with targeted biologic and synthetic disease modifying anti-rheumatic drugs (tDMARDs) in a large rheumatology tertiary centre in Barcelona, Spain. There were 11 confirmed SARS-CoV-2 positive cases in the adult cohort and no confirmed positive cases in the paediatric cohort. COVID-19 incidence rates of the rheumatic patient cohort were very similar to that of the general population [(0.48% (95% CI 0.09 to 0.87%)] and [0.58% (95% CI 0.56 to 0.60%)], respectively. We found significant differences in tDMARDs proportions between the suspected and non-suspected cases (p=0.002).	Adult and pediatric patients with rheumatic diseases on tDMARDs do not seem to present a higher risk of SARS-CoV-2 infection or more severe disease outcomes when compared to the general population.	Michelena X, Borrell H, López-Corbeto M, et al. Incidence of COVID-19 in a cohort of adult and paediatric patients with rheumatic diseases treated with targeted biologic and synthetic disease-modifying anti-rheumatic drugs [published online 2020 May 16]. Semin Arthritis Rheum. doi:10.1016/j.semarthrit.2020.05.001
Twin pregnancy, ARDS, emergency cesarean section,	16-May-20	Novel coronavirus-related acute respiratory distress syndrome in a	Case Reports in Women's Health	Case Report	A 39-year-old woman (gravida 1, para 0) presented at 27 weeks' gestation with nasal congestion and dry cough for 7 days. Her physical examination was benign, and laboratory studies were unremarkable. A PCR test was positive for SARS-CoV-2, and a chest CT scan showed bilateral multi-focal ground-glass opacities. A fetal non-stress test was reassuring. During her hospital stay, she developed progressively worsening respiratory failure that	In this case of acute respiratory distress syndrome due to SARS-CoV-2 in a pregnant patient, oxygenation status dramatically	Mehta H, Ivanovic S, Cronin A, et al. Novel coronavirus-related acute respiratory distress syndrome in a patient with twin pregnancy: A case report

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premature delivery, USA		patient with twin pregnancy: A case report			progressed to acute respiratory distress syndrome requiring mechanical ventilation. She then suffered from sudden hypoxemia and hemodynamic collapse, on maximal ventilatory support, prompting an emergency cesarean section at bedside, which led to rapid stabilization. Both of the twins were born prematurely, and one tested positive for SARS-CoV-2. Following birth, the twins were transferred to the NICU and were not breast fed.	improved after delivery of twins; one twin tested positive for SARS-CoV-2 72h after birth.	[published online 2020 May 16]. Case Rep Womens Health. doi:10.1016/j.crwh.2020.e00220
Children, screening, olfactory and gustatory dysfunction, China, France, Germany	16-May-20	Olfactory and Gustatory Dysfunction as An Early Identifier of COVID-19 in Adults and Children: An International Multicenter Study	medRxiv	Preprint (not peer reviewed)	In this multicenter case series from China, France, and Germany, 161 (41%) of 394 PCR confirmed COVID-19 positive patients reported olfactory or gustatory dysfunction (n=239 Chinese, n=39 German, n=116 French) and were included in this study. The median age of included subjects was 39 years old, 92/161 (57%) were male, and 10/161 (6%) were children (range: 15-17 years). Of 161 included subjects, 10% had only olfactory or gustatory symptoms, and 19% had olfactory and/or gustatory complaints prior to any other COVID-19 symptom. Of subjects with objective olfactory testing, 10/90 demonstrated abnormal chemosensory function despite reporting normal subjective olfaction. 43% (44/102) of subjects with follow-up showed symptomatic improvement in olfaction or gustation.	Olfactory and/or gustatory disorders may represent early or isolated symptoms of SARS-CoV-2 infection, in both adults and children (15-17 years old in this study).	Qiu C, Cui C, Hautefort C, et al. Olfactory and Gustatory Dysfunction as An Early Identifier of COVID-19 in Adults and Children: An International Multicenter Study [published online 2020 May 16]. medRxiv. doi:10.1101/2020.05.13.20100198
Kawasaki disease, myocarditis, children, inflammation	15-May-20	COVID-19 and Kawasaki syndrome: should we really be surprised?	Cardiology in the Young	Letter to the Editor	The hyperinflammatory response to COVID-19 in children is being labeled as a new entity, one that is distinct from Kawasaki Disease (KD). The authors argue that this observed phenomenon may be KD but with a new trigger. They note that that while the etiology of KD has remained elusive, there is substantial data pointing to a viral cause. Once exposed to a specific virus, children then mount an exaggerated inflammatory response which clinically manifests as KD. Previous coronaviruses have been demonstrated to trigger KD. They also argue that a hyperinflammatory response to COVID-19 has also been described at length in adults. They state that the medical community must put findings from COVID-19 in context of what is already known about other viruses and critical illness. They caution against inappropriately creating new clinical entities or exaggerating known ones because of an association with COVID-19.	In this letter, the authors argue that the hyperinflammatory response to COVID-19 in children may in fact be Kawasaki disease. They warn the medical community from creating a new clinical diagnosis due to an association with COVID-19.	Loomba RS, Villarreal E, Flores S. COVID-19 and Kawasaki syndrome: should we really be surprised?. [published online, 2020 May 15]. Cardiol Young. doi:10.1017/S1047951120001432
Gynecology, guidelines, China	15-May-20	Management of Gynecology Patients During the Coronavirus Disease 2019 Pandemic: Chinese Expert Consensus	American Journal of Obstetrics and Gynecology	Special report	During the COVID-19 outbreak in mainland China, the Chinese Obstetricians and Gynecologists Association distributed guidelines developed by the Department of Obstetrics and Gynecology at the Peking Union Medical College Hospital regarding the care of gynecologic patients. Experts from 31 provinces and autonomous regions of mainland China contributed to their development. With the implementation of these guidelines, no nosocomial infections of COVID-19 have been identified at the Peking Union Medical College Hospital. The guidelines describe basic infection precaution principles, an epidemiologic screening tool, prioritization of surgical procedures, and operating room requirements, and the authors include several protocols and workflows within the article. The authors also review the management of gynecologic patients during the COVID-19 epidemic in the outpatient setting, operative and nonoperative inpatient settings, and in clinical trials.	The authors share guidelines for care of gynecologic patients during a COVID-19 outbreak that might be helpful to departments of obstetrics and gynecology internationally.	Qiu L, Morse A, Di W, et al. Management of gynecology patients during the coronavirus disease 2019 pandemic: Chinese expert consensus. Am J Obstet Gynecol. 2020;223(1):3-8. doi:10.1016/j.ajog.2020.05.024
Children, neonates, epidemiology,	15-May-20	Coronavirus Disease 2019 (COVID-19) in	Frontiers in Pediatrics	Review Article	This review summarizes current understanding of SARS-CoV-2 infection in neonates and children from January 24 to May 1, 2020 using experience from China. Epidemiology, pathogenesis, diagnosis, and management of	A review of COVID-19 in children and neonates, based primarily on	Yu Y, Chen P. Coronavirus Disease 2019 (COVID-19) in Neonates and Children

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pathogenesis, diagnosis, management, breastfeeding, China		Neonates and Children From China: A Review			COVID-19 in children and neonates are presented. Given that symptoms of COVID-19 in children and neonates are atypical, and transmission within family clusters is common, more effort should be made to protect this high-risk population. Although there is still no direct evidence of vertical transmission, the authors argue that rescue of newborns of infected pregnant women in delivery should not be delayed. The authors also recommend avoiding breastfeeding if a pregnant woman or newborn is diagnosed or suspected to have SARS-CoV-2 infection.	Chinese experience and literature, is presented.	From China: A Review [published online 2020 May 15]. Front Pediatr. doi:10.3389/fped.2020.00287
Pregnancy, neonatal infection, vertical transmission	15-May-20	Is SARS-CoV-2 Vertically Transmitted?	Frontiers in Pediatrics	Review Article	Few studies on the vertical transmission of SARS-CoV-2 are found in the literature. In all case reports and case series, the mothers' infection occurred in the third trimester of pregnancy, there were no maternal deaths, and most neonates had a favorable clinical course. Viral RNA was not detected in neonatal nasopharyngeal swab samples at birth, in the placenta, in the umbilical cord, in the amniotic fluid, in the breast milk or in the maternal vaginal swab samples in any of these articles. Only three papers reported neonatal SARS-CoV-2 infection, but there is a bias that positive pharyngeal swab samples were collected at 36 hours and on the 2nd, 4th, and 17th days of life (the possibility of nosocomial infection cannot be ruled out). The possibility of intrauterine infection has been based mainly on the detection of IgM and IL-6 in the neonates' serum. In conclusion, to date, no convincing evidence has been found for vertical transmission of SARS-CoV-2.	This mini-review does not find convincing evidence of SARS-CoV-2 vertical transmission in existing literature.	Simões e Silva AC, Leal CRV. Is SARS-CoV-2 Vertically Transmitted? [published online 2020 May 15]. Front Pediatr. doi:10.3389/fped.2020.00276
Pediatric burns, steam inhalation, misconception, burn centers, UK	15-May-20	Steam Inhalation and Paediatric Burns During the COVID-19 Pandemic	The Lancet	Correspondence	Steam inhalation is traditionally used as a home remedy for common colds and upper respiratory tract infections. The evidence base of the practice is weak, with unproven theories that the steam loosens mucus, opens nasal passages, and reduces mucosal inflammation, or that the heat inhibits replication of viruses. Since lockdown measures were implemented in the UK, the Burns Centre at Birmingham Children's Hospital received a 30-fold increase in the number of scalds directly resulting from steam inhalation. The youngest child was aged 2 weeks, and the most severe case involved 8% of the child's total body surface area. A survey across Burn Services in England revealed that 50% of center had observed similar increases in cases of scalds. The authors caution that steam inhalation is a hazard to children, and parental education is paramount to preventing these injuries.	The authors link common misconceptions that steam inhalation is beneficial for respiratory tract symptoms in children to an increase in the number of scalds due to steam inhalation at burn centers across the UK.	Brewster CT, Choong J, Thomas C, Wilson D, Moiemen N. Steam inhalation and paediatric burns during the COVID-19 pandemic [published online 2020 May 15]. Lancet. doi:10.1016/S0140-6736(20)31144-2
Childhood immunization, trained innate immunity, antibody cross-protection, vaccines	15-May-20	Reflection on Lower Rates of COVID-19 in Children: Does Childhood Immunizations Offer Unexpected Protection?	Medical Hypotheses	Original Article	According to pathological studies of COVID-19 and SARS, a sharp decrease in T lymphocytes leads to breakdown of the immune system. Differences in the cellular immune system of children from that of adults may be the key to understanding atypical clinical manifestations or even covert infection in children. The authors hypothesize that frequent childhood vaccinations and repeated exposure to infectious pathogens may result in trained immunity of innate immune cells, immune fitness of adaptive immune cells or cross-protection of antibodies in children. Therefore, due to current lack of a specific vaccine for SARS-CoV-2, some vaccines for tuberculosis, influenza and pneumonia may have application potential for front-line health workers in the prevention and control of COVID-19.	Greater trained immunity and cross-protection of antibodies, through frequent vaccinations and exposure to pathogens, in children may explain their milder clinical presentation of COVID-19.	Lyu J, Miao T, Dong J, Cao R, Li Y, Chen Q. Reflection on lower rates of COVID-19 in children: Does childhood immunizations offer unexpected protection? [published online 2020 May 15]. Med Hypotheses. doi:10.1016/j.mehy.2020.109842
Pediatric testing, sequential	15-May-20	Can Pediatric COVID-19 Testing	Anesthesia & Analgesia Journal	Letter to the Editor	A significant proportion of children with COVID-19 may be asymptomatic or undiagnosed carriers, capable of transmitting the virus. This report describes a pediatric patient, who tested positive for SARS-CoV-2 after an initial	Based on limited studies, the false negative rate of	Soneru CN, Petersen TR, Bajracharya M, Hadid S, Demeter A. Can pediatric

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tests, sensitivity, false negative rate, USA		Sensitivity Be Improved With Sequential Tests?			negative result, and a review of literature showing that the false negative rate of two sequential tests would be approximately 6-12%. However, the clinical negative predictive value is difficult to estimate precisely during the current period of high prevalence, which compounds the difficulty of estimating sensitivity of sequential tests.	sequential SARS-CoV-2 tests would be 6-12%. This raises concern for pediatric patients who may be asymptomatic or undiagnosed carriers.	COVID-19 testing sensitivity be improved with sequential tests? [published online 2020 May 15]. Anesth Analg. doi:10.1213/ANE.0000000000004982
Children, age-related susceptibility, ACE2, immature immune system, antibody response, patho-physiology	15-May-20	Why Is SARS-CoV-2 Infection Milder Among Children?	Clinics (Sao Paulo)	Editorial	One hypothesis for the diminished susceptibility of children to SARS-CoV-2 suggests a different ACE2 configuration, concentration, or binding capacity or a less harmful alveolar epithelial cell response to ACE2 in children when compared with that in adults. Another hypothesis suggests that the relative resistance of children could be due to an immature immune system, leading to decreased inflammation and lung injury. The observation that immune-immature and some immunosuppressed hosts are spared from severe manifestations could elucidate COVID-19 aggression mechanisms and indicate pathways for treatment. In addition, antibodies could contribute to the severity of disease in adults, who have produced antibody responses against several antigens from related viruses that could cross-react with SARS-CoV-2 and induce activation of an inflammatory response. Many elements of the pathophyisology of SARS-CoV-2 remain unknown.	This article reviews the pathophysiology of COVID-19 and various hypotheses for decreased susceptibility of children to SARS-CoV-2 compared to adults.	Palmeira P, Barbuto JAM, Silva CAA, Carneiro-Sampaio M. Why is SARS-CoV-2 infection milder among children?. Clinics (Sao Paulo). 2020;75:e1947. doi:10.6061/clinics/2020/e1947
Pregnancy, neonates, asymptomatic, universal screening, Portugal	15-May-20	Covid-19 during pregnancy: A case series from an universally tested population from the north of Portugal	European Journal of Obstetrics & Gynecology and Reproductive Biology	Correspondence	The authors report a case series from a universally tested population at Hospital Pedro Hispano, located in the most COVID-19 affected region of Portugal. From March 25 to April 15, 2020, all 103 admitted pregnant women were tested for SARS-CoV-2. Twelve cases (11.7 %) were positive, 11 of which were asymptomatic. Of these, 10 had delivered at the time of writing, 6 by cesarean section and 4 vaginally. Gestational ages, 5 min Apgar scores and newborn weights ranged between 37–41 weeks, 9–10 and 2350–3380 g, respectively. Eight cases had mild fetal growth restriction, and there was one delivery of twins. There were no maternal complications, and all the newborns tested negative for SARS-CoV-2.	Based on universal testing of all pregnant women admitted to a hospital in Portugal, most cases were found to be asymptomatic, with largely favorable prognosis.	Dória M, Peixinho C, Laranjo M, Varejão AM, Silva PT. Covid-19 during pregnancy: a case series from an universally tested population from the north of Portugal [published online 2020 May 15]. Eur J Obstet Gynecol Reprod Biol. doi:10.1016/j.ejogrb.2020.05.029
Very preterm pregnancy, neonates, antenatal corticosteroids, prone positioning, post-partum hypoxemia, cesarean delivery, UK	15-May-20	SARS-CoV-2 infection in very preterm pregnancy: Experiences from two cases	European Journal of Obstetrics & Gynecology and Reproductive Biology	Correspondence	In two cases of very preterm pregnancy (28+4 and 28+6 weeks of gestation), women presented with respiratory symptoms. Case 1 was Afro-Caribbean and had a BMI of 42 and type 2 diabetes mellitus. Case 2 was Asian and had gestational diabetes. Early administration of corticosteroids and magnesium sulphate, for fetal neuroprotection, occurred prior to both women's respiratory deterioration, within 24 hours of presentation. In both women, operative delivery improved maternal respiratory mechanics and gas exchange; this rapid recovery differs from the clinical course of influenza and the recovery of non-pregnant patients with SARS-CoV-2 infection following intubation. In addition, prone positioning immediately post-operatively improved acute post-partum hypoxemia in both women. In both cases, SARS-CoV-2 RNA swab from the mothers were positive, and from the newborns were negative. Apgar scores were 6 at 1 minute and 8 at 5 minutes for newborn 1, and 1 at 1 minute and 3 at 5 minutes for newborn 2. Both newborns are recovering well.	Operative delivery rapidly improved maternal respiratory function in two pregnant women with very preterm (<32 weeks) pregnancy and deteriorating condition related to SARS-CoV-2 infection. Both newborns tested negative for SARS-CoV-2.	Cooke WR, Billett A, Gleeson S, et al. SARS-CoV-2 infection in very preterm pregnancy: experiences from two cases [published online 2020 May 15]. Eur J Obstet Gynecol Reprod Biol. doi:10.1016/j.ejogrb.2020.05.025

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Breastfeeding, WHO guidelines, human milk bank, milk donors, infection control, Brazil	15-May-20	Speech Therapy, Breastfeeding and COVID-19: Information to Speech Therapist	Codas	Letter to Editor	This report describes current evidence on potential SARS-CoV-2 transmission in breast milk, breastfeeding guidelines by major international organizations, including the WHO, and infection control measures for human milk banks and donors. The Brazilian Society of Pediatrics has supported the maintenance of breastfeeding in mothers with COVID-19, given the current evidence. In addition, speech therapists have an active, positive role in the guidance for breastfeeding, thus should follow new recommendations.	Breastfeeding guidelines by major international organizations and recommendations for infection control measures for human milk donation are summarized in this report.	Miranda VSG, Rech RS, Maahs MAP, Berbert MCB, Almeida ST. Speech therapy, breastfeeding and COVID-19: information to speech therapist. Codas. 2020;32(3):e20200124. doi:10.1590/2317-1782/20192020124
Nutritional management, ESPEN, feeding intolerance, gastrointestinal effects	15-May-20	Nutrition in Critically Ill Patients With COVID-19: Challenges and Special Considerations	Clinical Nutrition		The European Society for Clinical Nutrition and metabolism (ESPEN) recently published guidelines for nutritional management of individuals with SARS-CoV-2 infection, which include recommendations for patients hospitalized in the ICU. These recommendations center on providing early enteral nutrition (EN), when possible, use of promotility agents to encourage gastric emptying, initiating peripheral nutrition (PN) if EN is not tolerated, and using EN post-extubation if oral nutrition is not tolerated. This report briefly outlines some of the unique considerations and challenges in providing nutrition to the critically ill COVID-19 population which have not been addressed in the recent guidelines. These challenges result from the direct effects of the SARS-CoV-2 virus on the gastrointestinal tract (e.g. intestinal dysmotility, bowel ischemia, and malabsorption) and are compounded by the elevated sedation required for this patient population.	This report highlights challenges of providing nutritional care for critically ill COVID-19 patients, with regard to the virus' gastrointestinal effects, that have not been addressed in recent ESPEN guidelines.	Arkin N, Krishnan K, Chang MG, Bittner EA. Nutrition in critically ill patients with COVID-19: Challenges and special considerations [published online 2020 May 15]. Clin Nutr. doi:10.1016/j.clnu.2020.05.007
Pregnancy, neonates, NICU, expert guidelines, Brazil	15-May-20	Expert Recommen-dations for the Care of Newborns of Mothers With COVID-19	Clinics (Sao Paolo)	Review Article	This article presents expert recommendations for managing care of newborns of mothers with suspected or diagnosed COVID-19. The consensus was developed by five experts in neonatal intensive care working at a reference university hospital in Brazil for the care of pregnant women and newborns with COVID-19. Despite the lack of scientific evidence regarding the potential for vertical transmission, it is important to elaborate the lines of care by specialists from hospitals caring for COVID-19 cases to guide multidisciplinary teams and families diagnosed with the disease or involved in the care of pregnant women and newborns in this context. Recommendations for neonatal care consider personal protective equipment and insulation precautions, assistance in the delivery room, newborn transport and ICU admission, clinical evaluation of newborns, breastfeeding (in support of breast milk expression), viral testing of newborns, visitation to hospitalized newborns, hospital discharge, and home isolation of mothers with COVID-19.	A consensus of experts in Brazil developed recommendations for the care of newborns born to mothers with suspected or confirmed COVID-19.	Carvalho WB, Gibelli MABC, Krebs VLJ, Calil VMLT, Johnston C. Expert recommendations for the care of newborns of mothers with COVID-19. Clinics (Sao Paulo). 2020;75:e1932. doi:10.6061/clinics/2020/e1932
Pediatric Emergency Departments, pandemic preparedness, PPE, simulation training, survey, Europe	15-May-20	Preparedness and Response to Pediatric CoVID-19 in European Emergency Departments: A Survey of the REPEM and	Annals of Emergency Medicine	Original Article	The authors designed a cross-sectional point prevalence survey to describe the variability and identify gaps in preparedness and response to the COVID-19 pandemic in European Emergency Departments (EDs) caring for children. Overall, 102 centers from 18 countries (86% response rate) completed the survey: 34% did not have an ED contingency plan for pandemics, and 36% had never had simulations for such events. Wide variation on PPE items was shown for recommended PPE use at pre-triage and for patient assessment, with 62% of centers experiencing shortage in one or more PPE items, most frequently FFP2/N95 masks. Only 17% of EDs had negative pressure isolation	Findings from a cross-sectional point prevalence survey identified variation and gaps in preparedness to the COVID-19 pandemic across 102 European referral Emergency	Bressan S, Buonsenso D, Farrugia R, et al. Preparedness and response to Pediatric CoVID-19 in European Emergency Departments: a survey of the REPEM and PERUKI networks [published online 2020 May 15]. Ann Emerg

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		PERUKI Networks			rooms. COVID-19 positive ED staff was reported in 25% of centers. In summary, a lack of early availability of a documented contingency plan, provision of simulation training, appropriate use of PPE, and appropriate isolation facilities must be optimized to improve preparedness and inform responses to future pandemics.	Departments for children.	Med. doi:10.1016/j.annemergmed.2020.05.018
Pregnancy, lactating women, breastfeeding, remdesivir, research inclusion	15-May-20	Protect Pregnant and Lactating Women With COVID-19 Through Research, Not From Research	Breastfeeding Medicine	President's Corner	Prior to the FDA's emergency use authorization of remdesivir, this promising therapy for severe COVID-19 was available for compassionate use in pregnant women and children <18 years, but women were forbidden to breastfeed. Breastfeeding mothers were also excluded from clinical trials of remdesivir, posing a dilemma for mothers between accessing potentially life-saving therapy or providing human milk and its immune benefits to their infants. Due to these exclusion criteria, there are no data on the presence of the drug in human milk or outcomes among infants breastfed while mothers were on therapy. Breastfeeding pharmacologists suggest that remdesivir, administered intravenously, is unlikely to reach the infant's circulation in its active form. Too often, clinicians advise women to wean when they start treatments, without considering the risks of iatrogenic weaning for the health and wellbeing of mother and child. Pregnant and lactating women deserve evidence-based treatment for medical conditions.	This article advocates for the inclusion of pregnant and lactating women in clinical research, namely COVID-19 therapeutic trials, to facilitate access to potentially life-saving treatments and prevent the risks of iatrogenic weaning on maternal and infant health.	Stuebe A. Protect Pregnant and Lactating Women with COVID-19 Through Research, Not from Research [published online 2020 May 15]. Breastfeed Med. doi:10.1089/bfm.2020.29155.ams
Children, inflammatory syndrome, antibody-mediated, delayed response, UK	15-May-20	Covid-19: Cases of Inflammatory Syndrome in Children Surge After Urgent Alert	BMJ	News	There has been a surge in cases of an inflammatory syndrome in children, believed to be linked to COVID-19, following an alert to doctors in the UK at the end of April. The syndrome has also been seen in Italy and the United States and has been compared to both Kawasaki Disease and toxic shock. Experts have said that the condition may be an "antibody mediated or delayed response" to COVID-19 that happens several weeks after the infection, which may explain why some children do not test positive for SARS-CoV-2 on PCR tests. While doctors must know what to look out for, the syndrome is rare and has good outcomes.	Experts believe that the pediatric inflammatory syndrome associated with COVID-19 may be an antibody mediated or delayed response to infection.	Mahase E. Covid-19: Cases of inflammatory syndrome in children surge after urgent alert. BMJ. 2020;369:m1990. Published 2020 May 15. doi:10.1136/bmj.m1990
Children, clinical research, patho-physiology, serology, therapeutic and vaccine development	15-May-20	Key Clinical Research Priorities for the Pediatric Community During the COVID-19 Pandemic	Pediatric Research	Comment	As the COVID-19 pandemic matures, it is important for the pediatric research community to identify and fill knowledge gaps to best address the needs of children. For children, several key issues require urgent preparation and action: 1) understanding the pathophysiology and clinical course of COVID-19 in children and the impact of maternal infection during pregnancy on the neonate, 2) ensuring the availability of rapid, point-of-care diagnostic testing, 3) conducting widespread serologic testing of children as a marker of susceptibility, 4) establishing a framework for evaluation of safety and efficacy of new therapeutic agents for COVID-19 in pediatric populations, and 5) evaluation of vaccines and other preventive measures for children.	The authors call on the pediatric research communities to fill key knowledge gaps, related to COVID-19 in children, which are listed in this publication.	Noel GJ, Davis JM, Ramilo O, Bradley JS, Connor E. Key clinical research priorities for the pediatric community during the COVID-19 pandemic [published online 2020 May 15]. Pediatr Res. doi:10.1038/s41390-020-0962-y
Children, lockdown policies, social interaction, telemedicine, vaccinations	15-May-20	COVID-19 pandemic for Pediatric Health Care: disadvantages and opportunities	Pediatric Research	Editorial	Disruptions in pediatric health and research centers and in the life of children are an important issue of the COVID-19 pandemic. Limited school activities and social interactions are some of the disadvantages related to the disease. Some opportunities may also come, including the explanation of the "milder" course in children, as well as increased use of telemedicine and reconsideration of vaccinations. This article suggests a new potential field of research related to the pandemic itself and lockdown policies.	This article weighs the disadvantages of lockdown policies with the potential opportunities created by telemedicine, among others, for children's health.	Praticò AD. COVID-19 pandemic for Pediatric Health Care: disadvantages and opportunities [published online 2020 May 15]. Pediatr Res. doi:10.1038/s41390-020-0955-x

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Pediatric classification, disease severity, radiological diagnosis	15-May-20	Toward a clinically based classification of disease severity for paediatric COVID-19	The Lancet Infectious Diseases	Correspondence	The authors respond to the article by Qiu et al. describing 36 children with COVID-19 using the Chinese classification for pediatric COVID-19 severity, based on clinical and/or radiological criteria. The authors argue that radiological diagnosis, which involves high costs, the need for sedation, and radiation exposure, is not appropriate for children. They propose a change in definition of moderate disease in the pediatric classification of COVID-19 severity to a clinical diagnosis of pneumonia, frequent fever and cough (mostly dry cough, followed by productive cough), presence or absence of wheezing but no obvious signs of hypoxemia (e.g. shortness of breath), abnormal breath sounds on auscultation, and dry or wet snoring. This description would provide a more appropriate clinical picture of the disease to pediatricians looking after children with suspected COVID-19.	The authors propose the removal of radiological criteria from pediatric classification of COVID-19 severity.	Buonsenso D, Parri N, De Rose C, et al. on behalf of the Gemelli-pediatric COVID-19 team. Toward a clinically based classification of disease severity for paediatric COVID-19 [published online 2020 May 15]. Lancet Infect Dis. doi:10.1016/S1473-3099(20)30396-0
Pediatric classification, radiological diagnosis, chest CT, digital radiology	15-May-20	Toward a clinically based classification of disease severity for paediatric COVID-19 – Authors' reply	The Lancet Infectious Diseases	Correspondence	The authors reply to the correspondence from Buonsenso et al. and state that radiological evidence is crucial in assessing organ damage, as indicated by the presence of pneumonia when COVID-19 progresses from mild or asymptomatic to severe. A clinical diagnosis based on a combination of symptoms may produce ambiguous results compared with the direct and objective evidence gained from radiological scans. In addition, the sensitivity of chest CT scans appears to be higher than that of RT-PCR, from the onset of SARS-CoV-2 infection to the diagnosis of COVID-19. Digital radiology may be a suitable choice to reduce the amount of radiation exposure in children.	In response to Bueonsenso et al., the authors maintain a stance in support of radiological diagnosis of moderate COVID-19 disease.	Chen D, Tang F, Lu S, Song Q. Toward a clinically based classification of disease severity for paediatric COVID-19 – Authors' reply [published online 2020 May 15]. Lancet Infect Dis. doi:10.1016/S1473-3099(20)30397-2
Pregnancy, maternal and neonatal outcomes, cesarean section, vertical transmission, breastfeeding	15-May-20	Impact of COVID-19 infection on maternal and neonatal outcomes: a review of 287 pregnancies	medRxiv	Preprint (not peer reviewed)	This review identified all articles, without language limitation, on pregnancies affected by COVID-19, between October 2019 and Apr 30, 2020. Within 28 articles identified, data on 287 pregnant women with COVID-19 from 6 countries were assessed. Most pregnant women were in their third trimester, and 102 (35.5%) cases were symptomatic at the time of admission. Common onset symptoms, abnormal laboratory findings, and chest CT patterns were fever (51.5%), lymphocytopenia (67.9%), and multiple ground-glass opacities (78.5%) respectively. 93% of all deliveries were performed via cesarean section. No maternal mortality and 3 % ICU admission were reported. Vertical transmission was not reported but its possibility was suggested in three neonates. One neonatal death, one stillbirth, and one abortion were reported. In 60 cases, where newborn feeding was reported, all newborns were fed with formula.	This review of articles on pregnancy and COVID-19 found minimal adverse maternal and neonatal outcomes. Data are limited on viral transmission in utero, during vaginal childbirth and breastfeeding, as well as the effects of COVID-19 on first and second trimester pregnancies.	Azarkish F, Janghorban R. Impact of COVID-19 infection on maternal and neonatal outcomes: a review of 287 pregnancies [published online 2020 May 15]. medRxiv. doi:10.1101/2020.05.09.20096842
Childhood, routine vaccine ordering, vaccine-preventable disease, United States	15-May-20	Effects of the COVID-19 Pandemic on Routine Pediatric Vaccine Ordering and Administration—United States, 2020	Morbidity and Mortality Weekly Report	Report	On March 24, the United States CDC posted guidance emphasizing the importance of routine well childcare and immunization, particularly for children aged ≤24 months. Vaccines for Children (VFC) is a national program that provides federally purchased vaccines to approximately 50% of U.S. children (0-18 years). In this report, cumulative doses of VFC-funded vaccines ordered by health care providers at weekly intervals were tallied during two periods: January 7, 2019 to April 21, 2019 and January 6, 2020 to April 19, 2020. Data indicate a notable decrease, beginning the week after the national emergency declaration, in orders for VFC-funded, non-influenza childhood vaccines and measles-containing vaccines between period 2 compared with period 1. The decrease was less prominent among children aged ≤24 months than among older children. Continued coordinated efforts	Declines in routine pediatric vaccine ordering and doses administered, during the COVID-19 pandemic, indicate that U.S. children may face increased risks for outbreaks of vaccine-preventable diseases.	Santoli JM, Lindley MC, DeSilva MB, et al. Effects of the COVID-19 Pandemic on Routine Pediatric Vaccine Ordering and Administration—United States, 2020. MMWR. 2020;69:591–593. doi:10.15585/mmwr.mm6919e2

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					between health care providers and public health officials at the local, state, and federal levels will be necessary to achieve rapid catch-up vaccination.		
abortion, sexual and reproductive health, policy	14-May-20	COVID-19 Abortion Bans and Their Implications for Public Health	Perspectives on Sexual and Reproductive Health	Viewpoint	As of May 19, 2020, at least 11 US states have attempted to restrict access to abortion by deeming it nonessential and claiming that medical resources and PPE need to be redirected to other medical needs. In response, The American College of Obstetricians and Gynecologists, issued a joint statement with other medical associations asserting that abortion remains an essential and time-sensitive service during the COVID-19 crisis. The American Medical Association issued a statement condemning government intrusion in the decision of what qualifies as "urgent" health care during the pandemic, arguing that these decisions were not made by scientific evidence or best practice. 1st trimester in-clinic procedures require very little PPE, and the provision of medication abortion (at least one third of all abortions in the US) can be safely offered with virtually no use of PPE. Forcing pregnant people to go out of state to receive abortion care runs counter to efforts to minimize interstate travel and may put them at greater risk of COVID-19. The authors argue that these restrictions will not actually reduce abortion, but may instead increase demand for later-term abortions or lead to less safe abortions. Research among US women found those who had been denied an abortion and carried to term were more likely to have poverty-level incomes 4+ years later and experience sustained physical violence from the man involved in the pregnancy. The authors propose the provision of medication abortion through the mail, forgoing blood draws and ultrasounds when medically appropriate, and conducting follow-up visits via phone or video in order to increase access to abortion care while minimizing risk during the COVID-19 pandemic.	The authors argue that US politicians have attempted to exploit the current COVID-19 public health crisis to limit access to abortion care. They list potential consequences of these decisions and offer strategies to increase access and minimize risk during the COVID-19 pandemic.	Jones RK, Lindberg L, Witwer E. COVID-19 Abortion Bans and Their Implications for Public Health. Perspect Sex Reprod Health. 2020;52(2):65-68. doi:10.1363/psrh.12139
Pharmacotherapy, pregnancy, antivirals, teratogens	14-May-20	How should we treat pregnant women infected with SARS-CoV-2?	British Journal of Obstetrics and Gynaecology	Original Article	In this article, the authors discuss the management of COVID-19 in pregnant patients, focusing on the pharmacologic options and anti-virals undergoing clinical evaluation for their use in the treatment of COVID-19. They discuss remdesivir, hydroxychloroquine, lopinavir, and ribavirin. Data is limited on the use of remdesivir in pregnancy, although no adverse effects have been reported. Hydroxychloroquine has well-documented safety and tolerance profile in pregnant women. For protease inhibitors during pregnancy, such as lopinavir, some teams have reported an increased risk of preterm delivery. However, an analysis of more than 4000 pregnant women found a similar incidence and rate of adverse pregnancy outcomes compared with controls at all three trimesters of pregnancy, including preterm birth, low birth weight and birth defects. Significant teratogenic effects have been demonstrated in all animal species exposed to ribavirin and it is therefore currently contra-indicated in pregnant women and in their male sexual partners. The authors conclude that to date, there is no proven effective strategy.	The authors discuss the potential use of various anti-viral therapies in the management of pregnant women with COVID-19, and report on their safety data in pregnancy.	Faure-Bardon V, Salomon LJ, Leruez-Ville M, Ville Y. How should we treat pregnant women infected with SARS-CoV-2?. BJOG. 2020;127(9):1050-1052. doi:10.1111/1471-0528.16270
Epidemiology, clinical features, Kazakhstan	14-May-20	Epidemiological Characteristics of New Coronavirus Diseases (COVID-19): Features of	Electronic Journal of General Medicine	Review Article	Since children play a significant role in the spread of SARS-CoV-2, special attention should be paid to how COVID-19 manifests in children. This article summarizes the diagnosis, clinical course and complications, epidemiological history, and clinical manifestations of COVID-19 in children, with an emphasis on cases reported in Kazakhstan where rates of infection in	This article summarizes the diagnosis, clinical course and complications, epidemiological history,	Kemelbekov K, Ospanova E, Baimakhanova B, et al. Epidemiological Characteristics of New Coronavirus Diseases

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		Risk Factors and Clinical Features of the Child Population			children have been 2.8 times higher. The authors also present risk factors that may help in early detection of critical cases. Children with congenital heart disease, bronchopulmonary dysplasia, respiratory tract defects, anemia/abnormal hemoglobin levels, severe malnutrition, immunodeficiency, or treated with immunosuppressive therapy for a long time should be considered especially high risk. The following symptoms should be early indicators of severe COVID-19: Shortness of breath (> 60 per minute for children 0-2 months; > 50 per minute for 2-12 months; > 40 per minute for 1-5 years), decreased O2 saturation (≤92%), fever over 3-5 days, lethargy, increasing blood enzymes (hepatic, myocardial, LDH, etc), unexplained metabolic acidosis, changes in chest x-ray, co-infection, organ malfunction, or if the child is < 3 months.	and clinical manifestations of COVID-19 in children, with an emphasis on cases reported in Kazakhstan. The authors also present risk factors that may help in early detection of critical cases.	(COVID-19): Features of Risk Factors and Clinical Features of the Child Population. Electron J Gen Med. 2020;17(6), em252. https://doi.org/10.29333/ejgm/8268
Neonatal infection, neonatal care, outcomes research	14-May-20	Caring for Newborns Born to Mothers With COVID-19: More Questions Than Answers	Pediatrics	Commentary	The mechanism of neonatal infection is unclear, and this uncertainty has led to notable variations in care practices for newborns born to mothers with COVID-19. While there is some agreement on certain components of newborn care, such as use of precautions for resuscitation or isolation of exposed infants needing intensive care, approaches to other aspects of care differ widely, including breastfeeding and location of care. The authors note that these differences are more likely driven by differences in balancing risks and benefits rather than differences in resource availability or care environments. The authors note that the Perlman report discussed in the article highlights three needs for research around neonatal care and outcomes related to COVID-19: (1) much larger sample sizes reflecting diverse populations, (2) detailed descriptions of care practices, and (3) follow-up information on maternal and neonatal outcomes after the birth hospitalization.	The authors discuss three needs to address in research around neonatal care and outcomes related to COVID-19: (1) larger and diverse sample sizes, (2) detailed descriptions of care, and (3) follow-up information on maternal and neonatal outcomes.	Gupta M, Zupancic JAF, Pursley DM. Caring for Newborns Born to Mothers With COVID-19: More Questions Than Answers. Pediatrics. 2020;146(2). doi:10.1542/peds.2020-001842
Children, viral shedding, community transmission, vaccines, vulnerable populations	14-May-20	Understanding COVID-19 in Children May Provide Clues to Protect At-Risk Populations	BMJ Pediatrics Open	Editorial	Since the outbreak of SARS-CoV-2, the vast majority of severe COVID-19 cases globally have occurred in older adults compared with children. It remains unknown whether children with COVID-19 have less severe illness than adults due to a combination of a lower incidence of infection, lower disease severity or both. Viral shedding has been detected in rectal swabs of children even beyond the recovery period, suggesting that transmission through the fecal-oral route is possible, a point likely to be of greater importance in low-income and middle-income countries. Being asymptomatic with high viral load, children may represent a source of community transmission of COVID-19. Due to differences in ACE2 expression and immune function, it is plausible that weaker inflammatory responses in children may prolong virus survival and therefore transmission to older contacts. Identifying any differences between adults and children is essential for the development of an effective vaccine.	Understanding the role children play in community transmission of COVID-19 will help accelerate the development of interventions such as vaccines and other societal measures aimed at protecting vulnerable populations.	Do LAH, Anderson J, Sutton P, Pellicci DG, Mulholland K, Licciardi PV. Understanding COVID-19 in children may provide clues to protect at-risk populations. BMJ Paediatr Open. 2020;4(1):e000702. doi:10.1136/bmjpo-2020-000702
Pregnancy, newborn triage, preterm birth, delivery room preparedness, New York, USA	14-May-20	Delivery Room Preparedness and Early Neonatal Outcomes During COVID19	Pediatrics	Review	In this prospective study, all pregnant women admitted to labor and delivery were tested by SARS-CoV-2 PCR, obtained from a nasopharyngeal swab, between March 22 and April 15, 2020 at New York Presbyterian Weill Cornell Medicine. Of 326 deliveries, 31 (9.5%) mothers tested positive for SARS-CoV-2: 15 (48%) were asymptomatic, and 16 (52%) were symptomatic. All newborns initially triaged to the well-baby nursery (n=29) tested negative for SARS-CoV-2 and were breastfed and cared for in the mother's room. Two	The authors stress the importance of awareness of the mother's SARS-CoV-2 status and rapid turnaround of testing in	Perlman J, Oxford C, Chang C, Salvatore C, Di Pace J. Delivery Room Preparedness and Early Neonatal Outcomes During COVID19 Pandemic in New York City [published online

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		Pandemic in New York City			premature newborns were triaged to the NICU where they received continuous positive pressure ventilation, and after testing negative for SARS-CoV-2, both were moved out of isolation.	delivery room preparedness.	2020 May 14]. Pediatrics. doi:10.1542/peds.2020-1567
Neonatal care, isolation, breastfeeding, recommendations, WHO	14-May-20	Caring for Newborns Born to Mothers With COVID-19: More Questions Than Answers	Pediatrics	Commentary	The uncertainty around neonatal SARS-CoV-2 infection risk has led to notable variations in care practices for newborns born to mothers with COVID-19. While there is some agreement, such as use of precautions for delivery room resuscitation or isolation of exposed infants requiring intensive care, approaches to other aspects of care differ widely, including location of care and breastfeeding for term infants that are well and born to mothers without severe symptoms. Recommendations on these areas from several national-level organizations, as well as the WHO, are summarized in this report. Critical and time-sensitive needs for research around neonatal care and outcomes are also outlined: (1) larger sample sizes reflecting diverse populations; (2) descriptions of care practices with ability to assess comparative effectiveness of different approaches; (3) follow-up information on maternal and neonatal outcomes after birth hospitalization.	This report summarizes recommendations for neonatal care, from national and international organizations, and outlines areas for further research.	Gupta M, Zupancic JAF, Pursley DM. Caring for Newborns Born to Mothers with COVID-19: More Questions than Answers [published online 2020 May 14]. Pediatrics. doi:10.1542/peds.2020-001842
Children, CDC, multisystem inflammatory syndrome, case definition	14-May-20	CDC details COVID-19-related inflammatory syndrome in children	American Academy of Pediatrics	News	In a recent health advisory, the Centers for Disease Control and Prevention (CDC) provided a case definition for a rare but serious multisystem inflammatory syndrome in children (MIS-C) that is linked to COVID-19. Criteria include: an individual under 21 years presenting with fever, laboratory evidence of inflammation and evidence of clinically severe illness requiring hospitalization with multisystem (>2) organ involvement (cardiac, renal, respiratory, hematologic, gastrointestinal, dermatologic or neurological); no alternative plausible diagnoses; and positive for current or recent SARS-CoV-2 infection by RT-PCR, serology or antigen test; or COVID-19 exposure within the four weeks prior to the onset of symptoms. Clinicians should report suspected cases to their health departments even if the patient also fulfills all or part of criteria for Kawasaki disease. While the CDC did not provide guidance on treatment, a member of the American Academy of Pediatrics Committee on Infectious Diseases has said that IV immunoglobulin and supportive care have been common approaches.	The CDC releases a case definition for multisystem inflammatory syndrome in children, linked to COVID-19.	Jenco M. CDC details COVID-19-related inflammatory syndrome in children [published online 2020 May 14]. AAP News.
Neonates, NICU preparedness, CDC, New York City	14-May-20	Neonatal Intensive Care Unit Preparedness for the Novel Coronavirus Disease-2019 Pandemic: A New York City Hospital Perspective	Current Problems in Pediatric and Adolescent Health Care	Full Length Article	There are limited data on the effect of COVID-19 in fetal life, and among neonates after birth. Therefore, there is an urgent need for proactive preparation to combat COVID-19 and safeguard patients, families, and healthcare personnel. This review article is based on the Centers for Disease Control and Prevention's (CDC) current recommendations for COVID-19 and its adaptation to local resources at a hospital in New York City. This article aims to provide basic consolidated guidance and checklists for clinicians in neonatal intensive care units. Recommendations consider risk of vertical transmission, preparation before delivery, preparation in the delivery room, newborn transport, mother and newborn contact, NICU care, horizontal transmission to newborns, breastfeeding, communication with caregivers, and hospital discharge.	This article consolidates guidance on NICU preparedness for the COVID-19 pandemic, based on CDC recommendations and experience at a New York City hospital.	Verma S, Lumba R, Lighter JL, et al. Neonatal Intensive Care Unit Preparedness for the Novel Coronavirus Disease-2019 Pandemic: A New York City Hospital Perspective [published online 2020 May 14]. Curr Probl Pediatr Adolesc Health Care. doi:10.1016/j.cppeds.2020.100795
Pregnancy, neonatal infection, vertical	14-May-20	Probable Congenital SARS-CoV-2 Infection in a Neonate	Canadian Medical Association Journal	Original Article	A 40-year-old woman (gravida 2, para 1) was admitted to a tertiary hospital in Toronto, Ontario with history of gestational diabetes and frequent bacterial infections. The patient presented with myalgia, decreased appetite, fatigue, dry cough, and fever. A nasopharyngeal swab was positive for SARS-	This case presents evidence of possible congenital transmission of SARS-CoV-2, with	Kirtsman M, Diambomba Y, Poutanen SM, et al. Probable congenital SARS-CoV-2 infection in a neonate

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transmission, placental pathology, Canada		Born to a Woman With Active SARS-CoV-2 Infection			CoV-2 via RT-PCR testing. The woman did not need any respiratory support at the time of birth. A semi-urgent cesarean delivery was performed owing to worsening coagulopathy and reducing platelet count. Delayed cord clamping was not performed, and the neonate was immediately separated. All 3 nasopharyngeal swabs, obtained from the neonate on the day of birth, day 2, and day 7 were positive for SARS-CoV-2; neonatal plasma tested positive on day 4, and stool was positive on day 7. At 36 hours of age, repeated episodes of hypoglycemia and feeding difficulties necessitated the newborn's admission to the NICU. He was transferred back to his mother's room, and both were discharged home on day 4 after birth. On histopathologic examination, the placenta showed multiple areas of infiltration by inflammatory cells, consistent with chronic histiocytic intervillositis, and extensive early infarction. Placental swabs (both maternal and fetal sides) and breast milk also tested positive for SARS-CoV-2. The authors stated that the potential for respiratory secretion contamination of breast milk cannot be ruled out but was minimized by breast hygiene and cleaning before specimen collection.	positive placental and breast milk findings described. The mother and newborn did not suffer any complications from COVID-19.	born to a woman with active SARS-CoV-2 infection [published online 2020 May 14]. CMAJ. doi:10.1503/cmaj.200821
Pregnancy, childbirth, neonates, quality of care, systematic review	14-May-20	Improving the Quality of Care in Pregnancy and Childbirth With Coronavirus (COVID-19): A Systematic Review	The Journal of Maternal-Fetal & Neonatal Medicine	Review Article	A systematic review of electronic databases identified 29 papers on pregnancy and COVID-19, published in English, prior to March 25, 2020. The results of the review of existing literature are presented in the following nine sections: Symptoms of the COVID-19 in pregnancy, Pregnancy management, Delivery Management, Mode of delivery, Recommendations for health care provider in delivery, Neonatal outcomes, Neonatal care, Vertical Transmission, and Breastfeeding. The authors conclude that improving quality of care in maternal health, as well as educating, training, and supporting healthcare providers in infection management, must be prioritized.	This systematic review aims to improve quality of care during pregnancy and childbirth for mothers and newborns with COVID-19.	Abdollahpour S, Khadivzadeh T. Improving the quality of care in pregnancy and childbirth with coronavirus (COVID-19): a systematic review [published online 2020 May 14]. J Matern Fetal Neonatal Med. doi:10.1080/14767058.2020.1759540
Children, patho-physiology, age-related differences, innate immunity	14-May-20	Pathophysiology of COVID-19: Why Children Fare Better Than Adults?	The Indian Journal of Pediatrics	Review Article	Insights in pathophysiological mechanisms of less severity in children with COVID-19 could be important for devising therapeutics for high-risk adults and elderly. Expression of the primary target receptor for SARS-CoV-2, i.e. angiotensin converting enzyme-2 (ACE-2), decreases with age. ACE-2 has lung protective effects by limiting angiotensin-2 mediated pulmonary capillary leak and inflammation. Children have strong innate immune response due to trained immunity (secondary to live-vaccines and frequent viral infections), likely leading to early control of infection at the site of entry. Adult patients show suppressed adaptive immunity and dysfunctional over-active innate immune response in severe infections, which is not seen in children. Excellent regeneration capacity of pediatric alveolar epithelium may also be contributing to early recovery from COVID-19. Children, less frequently, have risk factors such as co-morbidities, smoking, and obesity. But young infants and children with pre-existing illnesses could be high risk groups and need careful monitoring.	This article reviews the pathophysiology of COVID-19 in children, whose strong innate immune responses may explain lower observed severity of disease.	Dhochak N, Singhal T, Kabra SK, Lodha R. Pathophysiology of COVID-19: Why Children Fare Better than Adults? [published online 2020 May 14]. Indian J Pediatr. 2020;1-10. doi:10.1007/s12098-020-03322-y
Pediatric care centers, pandemic preparedness,	14-May-20	Strengthening Health Systems and Improving the Capacity of	Journal of Tropical Pediatrics	Editorial	The authors argue that existing pandemic preparedness plans do not adequately address the special needs of children, particularly those in resource-limited settings; the relatively low hospitalization and death rates of children in the COVID-19 pandemic may result in the continuation of	This article outlines areas for health systems strengthening to improve pediatric	Collins EM, Tam PI, Trehan I, et al. Strengthening Health Systems and Improving the Capacity of Pediatric Care

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health systems strengthening, resource-limited settings		Pediatric Care Centers to Respond to Epidemics Such as COVID-19 in Resource-limited Settings			those needs being overlooked. This editorial proposes recommendations for health systems strengthening to improve the capacity of pediatric care centers to respond to the COVID-19 pandemic, which may help systems better manage future outbreaks.	epidemic and pandemic preparedness.	Centers to Respond to Epidemics Such as COVID-19 in Resource-limited Settings [published online 2020 May 14]. J Trop Pediatr. doi:10.1093/tropej/fmaa028
Pediatric dialysis unit, health care workers, asymptomatic, subclinical seroconversion, Indiana, USA	14-May-20	Asymptomatic Seroconversion of Immuno-globulins to SARS-CoV-2 in a Pediatric Dialysis Unit	JAMA	Research Letter	This study describes SARS-CoV-2 seroconversion in 13 patients and 25 health care workers (9 dialysis nurses, 2 nurse practitioners, 4 staff, and 10 physicians) in a freestanding outpatient pediatric hemodialysis unit at Riley Hospital for Children, Indiana. Serial SARS-CoV-2 IgM and IgG antibody levels were measured on sera from whole blood samples on days 7, 14, and 21 (April 1 - April 15, 2020). One week before the study began, a single patient tested positive for SARS-CoV-2 on nasopharyngeal RT-PCR and was subsequently dialyzed in an isolation room. Between day 0 and day 7, 2 health care workers had negative PCR test results despite upper respiratory tract symptoms and fevers. One of these health care workers subsequently seroconverted on day 21 despite 3 negative PCR results. By day 21, 11 of 25 health care workers (44%) and 3 of 13 patients (23%) had positive SARS-CoV-2 antibodies; none developed symptoms between days 7 and 21. No health care workers who directly cared for the single PCR-positive patient seroconverted. The 1 symptomatic, PCR-positive patient may have been the source of spread, but other health care environment or community transmission cannot be ruled out.	This study found a high prevalence of subclinical seroconversion of SARS-CoV-2 antibodies in patients and health care workers interacting in a pediatric dialysis unit.	Hains DS, Schwaderer AL, Carroll AE, et al. Asymptomatic Seroconversion of Immunoglobulins to SARS-CoV-2 in a Pediatric Dialysis Unit [published online 2020 May 14]. doi:10.1001/jama.2020.8438
Pregnancy, birth, doulas, maternity care, United States	14-May-20	Pregnancy, Birth and the COVID-19 Pandemic in the United States	Medical Anthropology	Article	In this article, the authors ask, how quickly and in what ways are US maternity care practices changing due to the COVID-19 pandemic? Data indicate that partners and doulas are being excluded from birthing rooms leaving mothers unsupported, while providers face lack of protective equipment and unclear guidelines. The authors investigate rapidly shifting protocols for in- and out-of-hospital births and the decision making behind them. They argue that this pandemic may offer a testing ground for future policy changes to generate effective maternity care amidst pandemics and other types of disasters.	This article considers the changes in birth practices that have occurred in the United States as a result of the COVID-19 pandemic.	Davis-Floyd R, Gutschow K, Schwartz DA. Pregnancy, Birth and the COVID-19 Pandemic in the United States [published online 2020 May 14]. Med Anthropol. doi:10.1080/01459740.2020.1761804
Infant, cell culture isolation, electron microscopy, Italy	14-May-20	SARS-CoV-2 infection diagnosed only by cell culture isolation before the local outbreak in an Italian seven-week-old suckling baby	International Journal of Infectious Diseases	Case Report	This paper describes the case of a 7-week-old suckling infant from Italy, with no clinical suspicion of and/or risk factors for SARS-CoV-2 infection, who presented with signs of upper respiratory tract infection. No viruses were detected using both immunofluorescence assay and nucleic acid amplification assays on the nasopharyngeal aspirate sample. The infant was discharged in good condition after 3 days of hospitalization. Later, a cytopathic effect on the cell monolayers currently used for respiratory viruses was observed, and the viral particles were identified as Coronaviridae by transmission electron microscopy. SARS-CoV-2 was identified by RT-PCR performed both on cell culture and on the stored aliquot of the original sample.	In this case of a 7-week-old infant with SARS-CoV-2 infection, only culture isolation allowed the identification of the cytopathogenic agent and remains the only reference method for emerging viruses.	Calderaro A, Arcangeletti MC, De Conto F, et al. SARS-CoV-2 infection diagnosed only by cell culture isolation before the local outbreak in an Italian seven-week-old suckling baby [published online 2020 May 14]. Int J Infect Dis. 2020;96:387-389. doi:10.1016/j.ijid.2020.05.035
Clinical research/practice,	13-May-20	Mild COVID-19 in a pediatric renal	American Journal of	Case Report	The clinical course of COVID-19 in pediatric renal transplant recipients is largely unknown. These authors report a 13-year-old male with multiple co-morbidities who acquired COVID-19 5 years after renal transplantation in the	This report shares the clinical course and short-term outcome of	Bush R, Johns F, Acharya R, Upadhyay K. Mild COVID-19 in a pediatric renal

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immunosuppression, infection and infectious agents– viral, infectious disease, kidney transplantation /nephrology, lung disease: infectious, immunosuppressant, pediatric, pediatrics, renal transplantation, United States of America		transplant recipient	Transplantation		United States. He had received the transplant at 7 years of age for end-stage renal disease due to renal hypodysplasia. Maintenance immuno-suppression (IS) consisted of sirolimus and mycophenolate. There was no history of travel or exposure to sick contacts. He presented with fever, cough, rhinorrhea, hypoxemia, and diarrhea. Chest X-ray was normal. Management included hydration, oxygen via nasal cannula, and anti-pyretics. He also received presumptive antibiotics until all cultures were negative. He did not require intensive care or ventilation. There was a transient rise in his serum creatinine without change in urine output; dialysis was not required. When SARS-CoV-2 PCR testing returned positive, IS doses were slightly reduced. He had a rapid clinical recovery and was discharged home within 4 days. Respiratory symptoms resolved but the diarrhea was still present 4 weeks later. Nasopharyngeal swabs remained positive for SARS-CoV-2 at 4-week follow-up. Immuno-compromised children with COVID-19 may shed viral particles for an extended period of time. The authors suggest that being immuno-suppressed may be beneficial with COVID-19, as this may limit damage from a "cytokine storm" response, but this remains to be proven.	COVID-19 in a pediatric renal transplant patient in the United States.	transplant recipient. Am J Transplant. 2020; 20:2942-2945. https://doi.org/10.1111/ajt.16003
Placenta tissue, visualization, ACE2, vertical transmission, pregnancy	13-May-20	Visualization of severe acute respiratory syndrome coronavirus 2 invading the human placenta using electron microscopy	American Journal of Obstetrics and Gynecology	Case Report	The risk of vertical transmission of SARS-CoV-2 from infected pregnant women to their fetuses is controversial - recent studies have provided evidence that it is a possibility. This case detailed the rapid clinical deterioration caused by pneumonia secondary to COVID-19 of a woman at 28 weeks gestation. The patient presented with elevated D-dimer and increasing dependence on oxygen requirements, and the decision was made to proceed with delivery to optimize maternal treatment and decrease fetal morbidity. The infant tested negative for the virus. Electron microscopy was used to evaluate potential viral transmission, revealing visualized and identified coronavirus virions invading into the syncytiotrophoblasts in the placental villi, the first visualization of SARS-CoV-2 in the human placenta. Placental tissue contains ACE2 receptors, the receptor that SARS-CoV-2 uses to enter cells, further supporting the evidence that placental infection with SARS-CoV-2 is plausible. The authors hypothesize based on this information that vertical transmission is possible but assert that further studies are needed to confirm.	This is the first reported case of visualization of viral infection of placental tissue, providing vital evidence that placental tissue infection with SARS-CoV-2 is possible. This evidence supports the hypothesis that vertical transmission from mother to fetus is possible.	Algarroba GN, Rekawek P, Vahanian SA, et al. Visualization of severe acute respiratory syndrome coronavirus 2 invading the human placenta using electron microscopy. Am J Obstet Gynecol. 2020;223(2):275-278. doi:10.1016/j.ajog.2020.05.023
Pregnancy, management, prone positioning, France	13-May-20	Prone positioning and high-flow oxygen improved respiratory function in a 25-week pregnant woman with COVID-19	European Journal of Obstetrics and Gynecology and Reproductive Biology	Correspondence	The authors describe the clinical course and management of a 25-week pregnant woman with COVID-19. During 4 days in the ICU, positional therapy that alternated prone positioning with lateralization was utilized to increase her oxygen saturation while remaining on high-flow nasal oxygen, without sedation or invasive ventilation. They included her hemodynamic and arterial blood gas parameters before, during, and after prone positioning. The patient was able to return home still pregnant 24 days after the onset of the disease. Combining prone positioning with high-flow nasal oxygen could be a useful treatment strategy for avoiding intubation in pregnant women, but further studies are needed, particularly for treating acute respiratory failure in this specific population.	The authors present a case of a pregnant woman with COVID-19 whose condition and pregnancy were managed effectively by prone positioning without sedation or invasive ventilation.	Vibert F, Kretz M, Thuet V, et al. Prone positioning and high-flow oxygen improved respiratory function in a 25-week pregnant woman with COVID-19 [published online 2020 May 13]. Eur J Obstet Gynecol Reprod Biol. 2020;250:257-258. doi:10.1016/j.ejogrb.2020.05.022
Pregnancy, delivery, anesthesia,	13-May-20	Anaesthesia and intensive care in obstetrics during	Anaesthesia Critical Care	Review Article	The authors describe modifications to standard maternal care for pregnant patients with COVID-19 to minimize contamination and transmission of COVID-19. The components of care that they address include antenatal	The authors provide recommendations for modifications to	Morau E, Bouvet L, Keita H, et al. Anaesthesia and intensive care in obstetrics

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management, France		the COVID-19 pandemic	and Pain Medicine		consultation, screening and assessment of infection severity, anesthesia and analgesia management for delivery, delivery mode and timing, and staff training.	maternal and obstetric care during the COVID-19 pandemic to minimize COVID-19 transmission while ensuring high standards of care.	during the COVID-19 pandemic [published online 2020 May 13]. Anaesth Crit Care Pain Med. 2020;39(3):345-349. doi:10.1016/j.accpm.2020.05.006
Children, Kawasaki Disease, hyperinflammatory syndrome, causality	13-May-20	COVID-19 and Kawasaki Disease: Finding the Signal in the Noise	Hospital Pediatrics	Editorial	Attention over the possible association between COVID-19 and Kawasaki Disease (KD) and other hyperinflammatory states in children has mounted. Two key questions emerge: Are the associations causal? If they are in fact causal, to what extent do the associations inform care? While it is still early, the patterns that appears to be quite similar across multiple cities certainly points towards a causal association. However, any contribution of COVID-19 to overall KD incidence might be diluted by the disappearance of infectious reservoirs at school and daycare and apprehension about pursuing medical care due to fear of contagious exposure. If the association is in fact causal, then manifestations, outcomes, and responses to treatment may differ for COVID-associated KD as compared to other types of KD; additionally, there may be a separate hyperinflammatory syndrome distinct from the classic KD that occurs following recovery from acute SARS-CoV-2 infection. On the other hand, potential negative consequences of dissemination of this positive association include misdiagnosis of KD and overtreatment.	Given the potential for misattributions of causality, emerging data on COVID-19-associated Kawasaki Disease in children must be interpreted carefully and aggregated to create an evidence base for diagnosis and treatment.	Schroeder AR, Wilson KM, Ralston SL. COVID-19 and Kawasaki Disease: Finding the Signal in the Noise [published online 2020 May 13]. Hosp Pediatr. doi:10.1542/hpeds.2020-000356
Adolescent, eosinophilic myocarditis, autopsy, histological findings, Louisiana, USA	13-May-20	Fatal Eosinophilic Myocarditis in a Healthy 17-Year-Old Male With Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2c)	Fetal and Pediatric Pathology	Original Article	Cardiac damage is frequently referenced in patients with SARS-CoV-2, usually diagnosed by enzyme elevations, and is generally thought to be due to underlying coronary artery disease. There are references to cardiomyopathies accompanying coronavirus, but there has been no histologic confirmation. In this case report, a previously healthy 17-year-old, African American male presented in full cardiac arrest to the emergency department after a 2-day history of headache, dizziness, nausea and vomiting. Resuscitation was unsuccessful. Autopsy demonstrated an enlarged flabby heart with eosinophilic myocarditis. There was no interstitial pneumonia or diffuse alveolar damage. Postmortem nasopharyngeal swabs detected SARS-CoV-2; no other cause for the eosinophilic myocarditis was elucidated.	Pathologic examinations and autopsy findings are discussed in this case report of a 17-year-old boy who died due to fulminant myocarditis associated with SARS-CoV-2 infection.	Craver R, Huber S, Sandomirsky M, McKenna D, Schieffelin J, Finger L. Fatal Eosinophilic Myocarditis in a Healthy 17-Year-Old Male with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2c) [published online 2020 May 13]. Fetal Pediatr Pathol. doi:10.1080/15513815.2020.1761491
Children, healthcare visits, infectious diseases, injuries, China	13-May-20	Changes in Children's Healthcare Visits During COVID-19 Pandemic in Hangzhou, China	Journal of Pediatrics	Case Report	Lower-than-expected rates of children affected by COVID-19 do not mean that there was no impact on children's health. Using data on pediatric healthcare visits before and after the COVID-19 outbreak and historical data, this report identifies pediatric conditions that were most affected by the pandemic and epidemic control measures in Hanzhou, Zhejiang Province, China. Coinciding with the implementation of social distancing restrictions, the daily number of pediatric visits after January 25, 2020 fell to about one quarter of visits during the same period in 2019. Most decreases in visitations were for other infectious diseases, such as respiratory syncytial virus infection, influenza, infectious diarrhea, rotavirus enteritis, and hand foot mouth disease. In contrast, the number of visits for injuries rose significantly, especially indoor injuries.	Healthcare visits for common pediatric conditions were substantially decreased during the implementation of pandemic control measures in Hanzhou, China, compared to the same period in 2019.	Li H, Yu G, Duan H, Fu J, Shu Q. Changes in Children's Healthcare Visits During COVID-19 Pandemic in Hangzhou, China [published online 2020 May 13]. J Pediatr. doi:10.1016/j.jpeds.2020.05.013

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Child, renal transplantation, immuno-suppression, clinical course, United States	13-May-20	Mild COVID-19 in a Pediatric Renal Transplant Recipient	American Journal of Trans-plantation	Case Report	This case reports a 13-year-old child with multiple comorbidities who acquired COVID-19 five years post-renal transplantation (RT) in the United States. Maintenance immunosuppression (IS) consisted of sirolimus and mycophenolate. There was no history of travel or exposure to sick contacts. The presenting features were fever, cough, rhinorrhea and hypoxemia. Diarrhea was the only extra pulmonary manifestation. Chest x-ray was normal. He did not require intensive care or ventilation. There was a transient rise in his serum creatinine without change in urine output; dialysis was not required. Slight reduction in IS was initiated. He had excellent clinical recovery within four days and was able to be discharged home. His respiratory symptoms resolved, but the diarrhea persisted during a 4-week follow-up period.	This report provides a brief perspective on the short-term COVID-19 clinical course in an immunosuppressed child.	Bush R, Johns F, Acharya R, Upadhyay K. Mild COVID-19 in a pediatric renal transplant recipient [published online 2020 May 13]. Am J Transplant. doi:10.1111/ajt.16003
Children, neuro-psychology, comorbidities, neurotropic factors	13-May-20	Neurotropic Mechanisms in COVID-19 and Their Potential Influence on Neuropsychological Outcomes in Children	Child Neuro-psychology	Review Article	This article represents an initial attempt to understand the potential ramifications of COVID-19 in children referred for neuropsychological assessment. Children have shown more physical resilience to COVID-19 than adults, but there is a cohort of vulnerable infants and young children who may experience disease burden, both in the acute phase and chronically. Concern about children is based on the knowledge that coronaviruses can affect the developing nervous systems of infants, children, and adolescents. Preliminary hypotheses concerning neurotropic factors have been documented by researchers. Children with COVID-19 and comorbid physical or mental disorders may be vulnerable to exacerbations of neurotropic factors and comorbidities.	Based on previous knowledge of neurotropic mechanisms in other coronaviruses, this article explores concerns related to neuropsychological ramifications of COVID-19 in children.	Condie LO. Neurotropic mechanisms in COVID-19 and their potential influence on neuropsychological outcomes in children [published online 2020 May 13]. Child Neuropsychol. doi:10.1080/09297049.2020.1763938
Infants, febrile, feeding difficulty, New York	13-May-20	A Case Series of the 2019 Novel Coronavirus (SARS-CoV-2) in Three Febrile Infants in New York	Pediatrics	Case Report	This case report describes three febrile infants, less than two months of age, admitted to a large, tertiary care children's hospital in New York and subsequently found to be infected with SARS-CoV-2. All three patients presented with fever, feeding difficulty, lymphopenia, and thrombocytosis on laboratory evaluation. Two of the three patients were found to have neutropenia and two had known exposures to sick contacts. All patients had unremarkable hospital courses; two required intravenous fluid support due to poor feeding. All were discharged without complications.	To the authors' knowledge, this report describes three of the youngest patients to be reported with SARS-CoV-2 in the United States.	Feld L, Belfer J, Kabra R, et al. A Case Series of the 2019 Novel Coronavirus (SARS-CoV-2) in Three Febrile Infants in New York [published online, 2020 May 13]. Pediatrics. doi:10.1542/peds.2020-1056
Pregnancy, therapeutic and vaccine trials, inclusion criteria	13-May-20	Consider pregnancy in COVID-19 therapeutic drug and vaccine trials	The Lancet	Correspondence	Early data regarding favorable pregnancy outcomes in COVID-19 are reassuring. However, pregnant women remain at risk of severe disease, and they deserve equity in access to therapeutic options informed by rigorous scientific data. There are currently more than 300 trials exploring therapeutics for COVID-19, yet near universal exclusion of pregnant women, despite many of these trials repurposing drugs already widely, and safely, used in pregnancy. Moreover, vaccination in pregnancy protects the mother, fetus, and newborn. This tripling of benefit means rapid vaccine development must allow pregnant women safe and timely inclusion in vaccine trials.	The authors argue for the safe inclusion of pregnant women in clinical trials for COVID-19 therapeutics and vaccines.	Whitehead CL, Walker SP. Consider pregnancy in COVID-19 therapeutic drug and vaccine trials [published online 2020 May 13]. Lancet. doi:10.1016/S0140-6736(20)31029-1
Children, Kawasaki-like disease, Italy	13-May-20	An outbreak of severe Kawasaki-like disease at the Italian epicenter of the	The Lancet	Article	At a center in Bergamo province, Italy, all patients diagnosed with a Kawasaki-like disease in the past 5 years were divided according to symptomatic presentation before (group 1) or after (group 2) the beginning of the SARS-CoV-2 pandemic. Group 1 comprised 19 patients (7 boys, 12 girls; mean age 3.0 years [SD 2.5]) diagnosed between January 1, 2015, and	In the past month, a center in Italy found a 30-fold increase in incidence of Kawasaki-like disease. Similar	Verdoni L, Mazza A, Gervasoni A, et al. An outbreak of severe Kawasaki-like disease at the Italian epicentre of the

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		SARS-CoV-2 epidemic: an observational cohort study			February 17, 2020. Group 2 included ten patients (7 boys, 3 girls; aged 7.5 years [SD 3.5]) diagnosed between February 18 and April 20, 2020; two of ten were SARS-CoV-2 positive on nasopharyngeal and oropharyngeal swab; eight of ten were positive for SARS-CoV-2 IgG or IgM, or both. The two groups differed in disease incidence (group 1 vs group 2, 0.3 vs 10 per month), mean age (3.0 vs 7.5 years), cardiac involvement (2/19 vs 6/10), Kawasaki Disease Shock Syndrome (0/19 vs 5/10), macrophage activation syndrome (0/19 vs 5/10), and need for adjunctive steroid treatment (3/19 vs 8/10; all $p<0{\cdot}01$).	outbreaks of Kawasaki-like disease are expected in other countries involved in the SARS-CoV-2 pandemic.	SARS-CoV-2 epidemic: an observational cohort study [published online 2020 May 13]. Lancet. doi:10.1016/S0140-6736(20)31103-X
Children, Kawasaki-like disease, inflammatory phenomenon, immune response	13-May-20	Kawasaki-like disease: emerging complication during the COVID-19 pandemic	The Lancet	Comment	Attention has recently shifted to the vulnerability of children to COVID-19 for two reasons. First, the degree to which children transmit COVID-19 is key to how countries reopen communities after lockdown. Second, new concerns about a novel severe Kawasaki-like disease in children related to COVID-19 have arisen, including the description by Verdoni et al. of an outbreak in Italy. Kawasaki disease is a rare acute pediatric vasculitis, with coronary artery aneurysms as its main complication. The diagnosis is based on the presence of persistent fever, exanthema, lymphadenopathy, conjunctival injection, and changes to the mucosa and extremities; there is no diagnostic test. Understanding this inflammatory phenomenon in children might provide vital information about immune responses to SARS-CoV-2 and possible correlates of immune protection with relevance for both adults and children.	This commentary responds to the article by Verdoni et al. on Kawasaki-like disease in children related to COVID-19; understanding this inflammatory phenomenon may provide useful information about immune responses to SARS-CoV-2.	Viner RM. Kawasaki-like disease: emerging complication during the COVID-19 pandemic [published online 2020 May 13]. Lancet. doi:10.1016/S0140-6736(20)31129-6
Children, immuno-suppressive therapy, clinical course, pediatric nephrology center	13-May-20	The severity of COVID-19 in children on immunosuppressive medication	The Lancet Child & Adolescent Health	Correspondence	The authors are currently managing an ongoing survey that includes children aged 0–19 years with kidney disease on immunosuppressive medication who are diagnosed with COVID-19. Within 6 weeks after March 15, 2020, 18 children (median age 11.5 years, range 6-14 years) from 16 pediatric nephrology centers across 11 countries (Spain, Switzerland, China, UK, Germany, France, Sweden, Colombia, USA, Iran, and Belgium) were recorded. Common symptoms included fever (13/18), cough (11/18), rhinitis (5/18), and diarrhea (3/18). 1 child (6%) received high-flow nasal cannula oxygen, and 2 (11%) received supplemental face mask oxygen. These data from a small number of children suggest that even children receiving immunosuppressive treatment for various indications appear to have a mild clinical course of COVID-19.	Data from a small cohort of pediatric patients at nephrology centers suggest that even children receiving immunosuppressive treatment for various indications appear to have a mild clinical course of COVID-19.	Marlais M, Wlodkowski T, Vivarelli M, et al. The severity of COVID-19 in children on immunosuppressive medication [published online 2020 May 13]. Lancet Child & Adol Health. doi:10.1016/S2352-4642(20)30145-0
Childhood vaccination, BCG, case positivity rate, Israel	13-May-20	SARS-CoV-2 Rates in BCG-Vaccinated and Unvaccinated Young Adults	JAMA	Research Letter	Confirmed cases of COVID-19 and case-fatality rates may vary between countries based on national policies regarding childhood BCG vaccination, with fewer confirmed cases and a lower death toll reported in countries with vs without universal BCG vaccine coverage. In Israel, of 72,060 test results reviewed at a medical center, 3,064 were from patients born between 1979 and 1981 (1.02% of birth cohort of that period; 49.2% male; mean age, 40 years) and 2,869 were among likely unvaccinated people born between 1983 and 1985 (0.96% of total birth cohort; 50.8% male; mean age, 35 years). There was no statistically significant difference in the proportion of positive test results for COVID-19 in the BCG-vaccinated group (361 [11.7%]) vs the unvaccinated group (299 [10.4%]; difference, 1.3%; 95% CI, -0.3% to 2.9%; P=.09). There was 1 case of severe COVID-19 in each group, and no deaths were reported.	In this cohort of Israeli adults, BCG vaccination in childhood was associated with a similar rate of positive test results for SARS-CoV-2 compared with no vaccination.	Hamiel U, Kozer E, Youngster I. SARS-CoV-2 Rates in BCG-Vaccinated and Unvaccinated Young Adults [published online 2020 May 13]. JAMA. doi:10.1001/jama.2020.8189

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Children, transmission, school closure, social distancing measures	13-May-20	School Closure During the Coronavirus Disease 2019 (COVID-19) Pandemic An Effective Intervention at the Global Level?	JAMA Pediatrics	Viewpoint	Most attempts to reduce SARS-CoV-2 transmission have been based on restrictive social distancing measures, like school closures. Modeling studies indicate that school closure can be effective for infection control only when outbreaks are due to viruses with low transmissibility and attack rates are higher in children than in adults, which applies to influenza but not corona-viruses. The poor relevance of this restrictive measure seems confirmed by evidence in countries, like Taiwan, where school closures did not contribute to control of the COVID-19 spread. While the efficacy of school closure is debatable, the potential negative consequences of this measure cannot be ignored and risk deepening social, economic, and health inequities.	The authors criticize the usefulness of school closure in reducing COVID-19 transmission and highlight the potential negative consequences of this measure.	Esposito S, Principi N. School Closure During the Coronavirus Disease 2019 (COVID-19) Pandemic: An Effective Intervention at the Global Level? [published online 2020 May 13]. JAMA Pediatr. doi:10.1001/jamapediatrics.2020.1892
Low-income children, poverty, school nutrition programs, United States legislation	13-May-20	Low-Income Children and Coronavirus Disease 2019 (COVID-19) in the US	JAMA Pediatrics	Viewpoint	Nearly 1 in 5 children in the US live in poverty, a substantially greater proportion than for adults. Childhood poverty is associated with injuries, chronic illness, and mental health difficulties, with consequences lasting well into adulthood. More than 30 million children rely on school nutrition programs. During the COVID-19 pandemic, emergency food assistance is reaching only a fraction of the children previously served, compounding the loss of educational time. Future COVID-19 legislation should target child health as well as educational, nutritional, and social support systems.	The authors argue that future COVID-19 legislation should target low-income children in the United States, to mitigate the long-term consequences of the pandemic on child health and wellbeing.	Dooley DG, Bandealy A, Tschudy MM. Low-Income Children and Coronavirus Disease 2019 (COVID-19) in the US [published online 2020 May 13]. JAMA Pediatr. doi:10.1001/jamapediatrics.2020.2065
Children, young adults, comorbidities, Washington DC	13-May-20	Severe COVID-19 in Children and Young Adults in the Washington, DC Metropolitan Region	The Journal of Pediatrics	Brief Report	This observational retrospective cohort study included 177 children and young adults (median age 9.6 years, range 0.1-34.2 years) with clinical symptoms and laboratory confirmed SARS-CoV-2 infection treated between March 15 and April 30, 2020 at the Children's National Hospital, in Washington DC. 44/177 patients (25%) required hospitalization, of which 35/44 (80%) were non-critically ill and 9/44 (20%) were critically ill. Although all age groups were infected with SARS-CoV-2, the youngest (<1 year) and oldest children/young adults (15-25 years of age) were more likely to be hospitalized, and the oldest were the most likely to require critical care. Underlying conditions were also present in 39% of patients with SARS-CoV-2 infection overall but overrepresented in hospitalized and critically ill patients. Co-infection was not detected in 94% of patients in this study.	In this cohort from Washington DC, all age groups were infected with SARS-CoV-2, but those <1 year and between 15-25 years were more likely to be hospitalized.	DeBiasi RL, Song X, Delaney M, et al. Severe COVID-19 in Children and Young Adults in the Washington, DC Metropolitan Region [published online 2020 May 13]. J Pediatr. doi:10.1016/j.jpeds.2020.05.007
Pregnancy, acute kidney injury, neonate, Iran	13-May-20	Acute Kidney Injury in Pregnant Women Following SARS-CoV-2 Infection: A Case Report From Iran	Respiratory Medicine Case Reports	Case Report	In this case report, a 33-year-old woman (34 weeks' gestation) was referred to a treatment clinic in Tabriz, Iran, where she tested positive for SARS-CoV-2 on nasopharyngeal RT-PCR test. The patient did not receive any nephrotoxic drugs before uremia, increased blood urea nitrogen, and increased creatinine levels were detected and diagnosed as acute kidney injury. In urine sedimentation, many granular casts and cellular debris were interpreted as acute tubular necrosis (ATN). A chest CT showed ground glass opacity with consolidation in the upper right lobe. After the patient's respiratory rate increased, she was intubated and underwent cesarean section, delivering a neonate who tested negative for SARS-CoV-2. The patient was weaned off mechanical ventilator support, and ATN resolved.	This case report presents a rare case of acute kidney injury in a pregnant woman with confirmed SARS-CoV-2 infection in Iran. The neonate was born without complications and tested negative for SARS-CoV-2.	Taghizadieh A, Mikaeili H, Ahmadi M, Valizadeh H. Acute kidney injury in pregnant women following SARS-CoV-2 infection: A case report from Iran [published online 2020 May 13]. Respir Med Case Rep. doi:10.1016/j.rmcr.2020.101090
Children, cancer, screening, New York City	13-May-20	COVID-19 in Children With Cancer in New York City	JAMA Oncology	Research Letter	Starting in mid-March 2020, the Memorial Sloan Kettering Cancer Center (MSK) instituted a screening plan to mitigate COVID-19 risk. Of the 178 pediatric patients (107 male, 71 female) tested (mean [SD] age 11.1 [8.5] years), 20 (11.2%) had positive test results (mean [SD] age 15.9 [6.6] years). Of patients specifically tested for positive screening or symptoms, the rate of	This report from New York City suggests that pediatric patients with cancer may not be more vulnerable than	Boulad F, Kamboj M, Bouvier N, Mauguen A, Kung AL. COVID-19 in Children With Cancer in New York City [published

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					positivity for SARS-CoV-2 was 29.3%. In the 120 asymptomatic patients without known exposure, the rate of SARS-CoV-2 positivity was only 2.5% (29.3%; 95% CI, 18.1%-42.7% versus 2.5%; 95% CI, 0.5%-7.1%; *P*<.001). Of the 20 patients who tested positive for SARS-CoV-2, only 3 were female, a significant sex skewing when compared with pediatric patients who tested negative (15%; 95% CI, 3%-38% vs 43%; 95% CI, 35%-51%; *P*=.02). Only 1 patient with COVID-19 required noncritical hospitalization.	other children to infection or morbidity from SARS-CoV-2.	online 2020 May 13]. JAMA Oncol. doi:10.1001/jamaoncol.2020.2028
Maternal health, non-communicable diseases, health economics	13-May-20	Maternal Health and Non-Communicable Disease Prevention: An Investment Case for the Post COVID-19 World and Need for Better Health Economic Data	International Journal of Gynecology & Obstetrics	Special Article	An integrated approach to population health, disease surveillance, and preventive care will dominate the health agenda in the post COVID-19 world. Maternal and child health are inextricably linked with non-communicable diseases (NCDs) and their risk factors, since gestational hyperglycemia and macrosomia can impact subsequent generations with obesity, type 2 diabetes, and cardiovascular diseases. The economic cost of poor maternal health and NCD-related pregnancy complications is likely very high but is not adequately researched or documented in the context of long-term population health. Identifying "at-risk" mothers and offspring opens up the opportunity for targeted early preventive action. In reassessing priorities in health after COVID-19, prevention and care of NCDs, especially in pregnant women and children, must be prioritized to improve population health.	Non-communicable diseases are linked with maternal and child health and must be prioritized in post-COVID-19 health agendas.	Kapur A, Hod M. Maternal health and non-communicable disease prevention: An investment case for the post COVID-19 world and need for better health economic data [published online 2020 May 13]. Int J Gynaecol Obstet. doi:10.1002/ijgo.13198
Children, adolescents, social distancing measures, psychophysical effects, PTSD, Italy	13-May-20	The Psycho-Physical Impact That COVID-19 Has on Children Must Not Be Underestimated	Acta Paediatrica	Brief Report	By April 16, 2020, 159,107 Italian residents had tested positive for COVID-19, including 1,123 children, up to nine years of age (0.7%) and 1,804 adolescents, between 10 and 19 years old (1.1%). Previous studies have shown that posttraumatic stress disorder scores were four times higher in pediatric patients who were quarantined during epidemics or pandemics, than those whose movements were not restricted. Interventions to avoid the risk of physical and psychological repercussions in the pediatric population should encourage parents to be role models of psychophysical health. Additionally, the role of psychologists to support families and teachers to promote motivational messaging are important.	The authors call for interventions to reduce the psychophysical repercussions of the COVID-19 pandemic on pediatric populations.	Pecoraro L, Dalle Carbonare L, De Franceschi L, Piacentini G, Pietrobelli A. The psycho-physical impact that COVID-19 has on children must not be underestimated [published online 2020 May 13]. Acta Paediatr. doi:10.1111/apa.15347
Neonates, serum antibodies, vertical transmission	13-May-20	Vertical Transmission of Severe Acute Respiratory Syndrome Coronavirus 2: A Systematic Review	American Journal of Perinatology	Short Communication	A total of 22 studies on 83 neonates born to mothers with COVID-19 were included in this systematic review. Among these neonates, three were confirmed with SARS-CoV-2 infection at 16, 36, and 72 hours after birth, respectively, by nasopharyngeal swab RT-PCR tests; another six had elevated virus-specific antibody levels in serum samples collected after birth, but negative RT-PCR test results. However, without positive RT-PCR tests of amniotic fluid, placenta, or cord blood, there is a lack of virologic evidence for intrauterine vertical transmission.	There is currently no direct evidence to support intrauterine vertical transmission of SARS-CoV-2. Further studies on amniotic fluid, placenta, and cord blood are needed.	Yang Z, Liu Y. Vertical Transmission of Severe Acute Respiratory Syndrome Coronavirus 2: A Systematic Review [published online 2020 May 13]. Am J Perinatol. doi:10.1055/s-0040-1712161
Neonates, NICU ventilators, triage decisions, ethics	13-May-20	Should Extremely Premature Babies Get Ventilators During the COVID-19 Crisis?	The American Journal of Bioethics	Target Article	Triage guidelines differ on whether limited resources should focus on maximizing lives or life-years. Choosing between these two approaches has implications for neonatology. In crisis situations, should neonatal unit guidelines for treating extremely premature newborns be altered to free-up ventilators for adults? Some adults who need ventilators will have a survival rate higher than some extremely premature newborns. However, newborns who survive will likely live longer, maximizing life-years. The authors argue that solidarity must acknowledge the differences between diseases and patient populations. While systematic ethical analyses demonstrate the	This article considers the ethical issue of triage decision-making around ventilator allocation to critically ill newborns and/or adults.	Haward MF, Janvier A, Moore GP, Laventhal N, Fry JT, Lantos J. Should Extremely Premature Babies Get Ventilators During the COVID-19 Crisis? [published online 2020 May 13]. Am J Bioeth.

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					advantage infants hold in triage, inherent biases place them at a disadvantage. The authors conclude that neonatologists must advocate for systematic and fair consideration of critically ill infants.		doi:10.1080/15265161.2020.1764134
COVID-19; kangaroo mother care; neonatal health	12-May-20	The COVID-19 pandemic and kangaroo mother care: What should we do?	European Journal of Midwifery	Editorial	This editorial briefly discusses the benefits of kangaroo mother care (KMC), and emphasizes its continued importance to neonatal health in the context of the COVID-19 pandemic. KMC is a model of care that offers an alternative to the incubator for preterm newborns, and is recommended by the WHO in both developed and developing countries as soon as the premature neonate is clinically stabilized. However, rates of KMC may have suffered as a result of the COVID-19 pandemic. Clinical evidence shows KMC can improve newborns' neurodevelopment outcomes, stabilize preterm newborn's physiological function, and decrease maternal distress following birth. KMC can also aid in the initiation of exclusive breastfeeding. The author highlights that human milk is a unique dynamic nutrition source for the newborn during the first 6 months of life, directly contributing to the newborn's innate immunity by shaping gut microbiota and milk oligosaccharides. The WHO recommends that mothers and newborns should not be separated, even in cases of maternal SARS-CoV-2 infection. Therefore, KMC should be supported even in cases of suspected or confirmed COVID-19, given the use of PPE and disinfection of used surfaces. The author concludes by urging clinicians, midwives and policy makers to prioritize neonatal care throughout this pandemic, and as such consider KMC in the neonatal wards with the use of all necessary precautions.	This editorial briefly discusses the benefits of kangaroo mother care (KMC), and emphasizes its continued importance to neonatal health in the context of the COVID-19 pandemic.	Hakimi S. The COVID-19 pandemic and kangaroo mother care: What should we do?. Eur J Midwifery. 2020;4:17. Published 2020 May 12. doi:10.18332/ejm/121095
Children, mental health, lockdown, India	12-May-20	Effect of the Pandemic and Lockdown on Mental Health of Children	The Indian Journal of Pediatrics	Scientific Letter	In this letter, received April 4, 2020, the authors assert that the initial 21-day COVID-19 lockdown started by the Indian government on March 25, 2020 would have detrimental impacts on students' mental health. They argue that children at home spend more time in front of the TV and on the internet than when at school, which has been shown to lead to psycho-social problems like lower self-esteem, internet addiction disorder, and cyberbullying. Further, they cite a study which suggests that children separated from their parents/caregivers due to familial infection are more susceptible to depression, stress, anxiety, and various other traumatic stresses. They argue that parents of children at home should reduce screen time and engage children in physical activities. Further, children separated from parents should receive special care such as nutritional services, mental health services, and increased communication via phone with family. The authors suggest that these measures are critical to combat psychological stress and maintain mental wellbeing for children during lockdown.	The authors are concerned that the initial 21-day COVID-19 lockdown imposed by the Indian government would adversely affect the mental health of school-age children. They assert that students should receive special care such as nutritional and mental health services to combat this.	Thakur, K., Kumar, N. & Sharma, N. Effect of the Pandemic and Lockdown on Mental Health of Children. Indian J Pediatr 87, 552 (2020). https://doi.org/10.1007/s12098-020-03308-w
School closure, conceptual framework, evidence synthesis, logic model, policy, ethics	12-May-20	School closure in response to epidemic outbreaks: Systems-based logic model of downstream impacts	F1000 Research	Research Article	Literature reviews of school closures to date have focused upon epidemiological effects, with less attention paid to other impacts. The authors reviewed 177 studies and policy documents related to school closures caused by epidemics from 1918 to today's COVID-19 pandemic to develop a systems-based logic model. The model organizes impacts of school closures in seven domains: children's health and well-being, education, parents and families, teachers and staff, school organization, public health, and broader economic impacts. Impacts on children's health and well-being included loss of school-based services and meals, disrupted vaccination	The authors reviewed 177 studies and policy documents related to school closures caused by epidemics from 1918-2020 to develop a systems-based logic model. This model can be used to frame future	Kneale D, O'Mara-Eves A, Rees R, et al. School closure in response to epidemic outbreaks: Systems-based logic model of downstream impacts [published online, 2020 May 12]. F1000Res. 2020;9:352.

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					programs, exacerbated inequities, impacts on mental health, and increased risk of abuse, neglect, and exploitation. The model also illustrates moderating factors, ethical considerations, and factors influencing the success of policy implementation.	research and aid decision-makers when considering the impact of school closures and possible mitigation strategies.	doi:10.12688/f1000research.23631.1
Acute pulmonary embolism; Postpartum; CTA; COVID-19	12-May-20	COVID-19 and Acute Pulmonary Embolism in Postpartum Patient	Emerging Infectious Diseases	Research Letter	Approximately half of venous embolism occur during pregnancy and half occur during the postpartum period, with the risk per day greatest in the weeks immediately preceding delivery. Authors in this letter report a 36-year-old woman in Iran who sought care for left shoulder pain and cough 5 days after an elective scheduled C-section. Because of the COVID-19 pandemic and the patient's report of cough, she was screened for SARS-CoV-2. Throat swab samples were positive for SARS-CoV-2 by real-time RT-PCR. Thoracic CT angiography (CTA) on the first day of hospitalization showed emboli in the right side interlobar artery, posterior basal segment, and the lingular branch. CTA further revealed left-sided pleural effusion associated with new mixed consolidation and ground glass opacifications. Authors conclude that CTA or ultrasonography for deep vein thrombosis may be important for COVID-19–positive pregnant or postpartum patients who have signs or symptoms of possible venous embolism, given their potentially heightened risk.	In a pregnant patient population with an already elevated risk for venous embolism, physicians should be aware of the potential for concurrent mild COVID-19 and acute pulmonary embolism.	Khodamoradi Z, Boogar S, Shirazi F, et al. COVID-19 and Acute Pulmonary Embolism in Postpartum Patient. Emerging Infectious Diseases. 2020;26(8):1937-1939. doi:10.3201/eid2608.201383.
Breastfeeding, transmission risk, WHO, maternal counselling	12-May-20	WHO Frequently Asked Questions: Breastfeeding and COVID-19 For health care workers	Journal of Human Lactation	Clinical Recommendations	The World Health Organization has published new responses to frequently asked questions regarding COVID-19 and breastfeeding to help providers counsel mothers and families. The key messages include the following: I. Breastfeeding and skin-to-skin contact significantly reduce the risk of death in newborns and young infants and provide immediate and lifelong health and development advantages. Breastfeeding also reduces the risk of breast and ovarian cancer for the mother. II. Newborns and infants are at low risk of COVID-19 infection. Among the few cases of confirmed COVID-19 infection in young children, most have experienced only mild or asymptomatic illness. III. The numerous benefits of breastfeeding substantially outweigh the potential risks of transmission and illness associated with COVID-19. IV. Active COVID-19 has not been detected in the breastmilk of any mother with confirmed/suspected COVID-19 and there is no evidence so far that the virus is transmitted through breastfeeding.	The WHO developed responses to frequently asked questions regarding breastfeeding and COVID-19 and concludes that the benefits of breastfeeding outweigh the potential risks of transmission to the newborn.	WHO Frequently Asked Questions : Breastfeeding and COVID-19 For health care workers. J Hum Lact. 2020;36(3):392-396. doi:10.1177/0890334420939556
Pregnancy, gestational hypertension, pre-eclampsia, management, USA	12-May-20	A Proposed Plan for Prenatal Care to Minimize Risks of COVID-19 to Patients and Providers: Focus on Hypertensive Disorders of Pregnancy	American Journal of Perinatology	Clinical opinion	To minimize unnecessary visits to health care facilities during the COVID-19 pandemic, the authors recommend women should be classified as low risk or high risk for hypertensive disorders of pregnancy and adjustments made accordingly in the frequency of maternal and fetal surveillance. Recommendations include self-monitoring of blood pressure and written instructions on the important signs and symptoms of hypertensive disease progression. As the clinical management of gestational hypertension and pre-eclampsia is the same, assessment of urinary protein necessitating an in-person visit is unnecessary once a diagnosis of a hypertensive disorder of pregnancy is made. Pregnant women with suspected hypertensive disorders of pregnancy and signs and symptoms associated with the severe end of the disease spectrum should have a clinical evaluation. If there is any evidence	The authors provide specific recommendations for providers managing hypertensive disorders of pregnancy to minimize in-person visits.	Barton JR, Saade GR, Sibai BM. A Proposed Plan for Prenatal Care to Minimize Risks of COVID-19 to Patients and Providers: Focus on Hypertensive Disorders of Pregnancy [published online 2020 May 7]. Am J Perinatol. 2020;37(8):837-844. doi:10.1055/s-0040-1710538

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					of disease progression or if acute severe hypertension develops, prompt hospitalization is suggested. Adjustments to the delivery algorithm in the setting of pre-eclampsia with severe features should be considered.		
Telehealth, prenatal care, pregnancy	12-May-20	Telehealth for High-Risk Pregnancies in the Setting of the COVID-19 Pandemic	American Journal of Perinatology	Original article	The goals of implementing telehealth were to consolidate in-person prenatal screening, surveillance, and examinations into fewer in-person visits while maintaining patient access to ongoing antenatal care and subspecialty consultations via telehealth virtual visits. The authors queried health workers at Columbia University in the US who were involved in this rapid transition to telehealth and reviewed surveillance and management algorithms to determine how telehealth use was applied to prenatal care. Based on the incorporation of telehealth into prenatal care for high-risk patients, specific recommendations are made for the following conditions, clinical scenarios, and services: (1) hypertensive disorders of pregnancy; (2) pregestational and gestational diabetes mellitus; (3) maternal cardiovascular disease; (4) maternal neurologic conditions; (5) history of preterm birth and poor obstetrical history including prior stillbirth; (6) fetal conditions; (7) genetic counseling; (8) mental health services; (9) obstetric anesthesia consultations; and (10) postpartum care. While telehealth virtual visits do not fully replace in-person encounters during prenatal care, they do offer a means of reducing potential patient and provider exposure to COVID-19 while providing consolidated in-person testing and services.	Telehealth for prenatal care is feasible and may reduce SARS-CoV-2 exposure during prenatal care. This article suggests that telehealth should be tailored for high-risk prenatal patients and provides specific recommendations various conditions, clinical scenarios, and services.	Aziz A, Zork N, Aubey JJ, et al. Telehealth for High-Risk Pregnancies in the Setting of the COVID-19 Pandemic. Am J Perinatol. 2020;37(8):800-808. doi:10.1055/s-0040-1712121
Children, clinical characteristics, non-respiratory symptoms, China	12-May-20	Clinical Characteristics of 5 COVID-19 Cases With Non-respiratory Symptoms as the First Manifestation in Children	Frontiers in Pediatrics	Case Report Article	Five patients with non-respiratory symptoms were hospitalized and were later confirmed to have COVID-19, between January 23 and February 20, 2020, at the Wuhan Children's Hospital (China). Their ages ranged from 2 months to 5.6 years. Primary reasons for admission or presentation to the Emergency Department included intussusception, acute suppurative appendicitis perforation, traumatic subdural hemorrhage with convulsion, and acute gastroenteritis (in two patients). During the course of disease, four patients had a fever. Two patients had leukopenia, and one also had lymphopenia. In the two cases of severe COVID-19, the levels of CRP, PCT, serum ferritin, IL-6, and IL-10 were significantly increased, whereas the numbers of CD3+, CD4+, CD8+ T lymphocytes, and CD16 + CD56 natural killer cells were decreased. There was also evidence for impaired liver, kidney, and myocardial functions.	Five cases of children who presented with non-respiratory symptoms and received later diagnoses of COVID-19 are presented.	Cai X, Ma Y, Li S, et al. Clinical Characteristics of 5 COVID-19 Cases With Non-respiratory Symptoms as the First Manifestation in Children [published online 2020 May 12]. Front Pediatr. doi:10.3389/fped.2020.00258
Children, clinical characteristics, inflammatory biomarkers, China	12-May-20	Clinical Analysis of 25 Novel Coronavirus Infections in Children	The Pediatric Infectious Disease Journal	Original Studies	In this study, 25 children (median: 11.0 years, range: 0.6-17.0 years) with COVID-19, confirmed by RT-PCR, were admitted to 4 designated treatment hospitals in Chongqing, China from January 19 to March 12, 2020. All children were related to a family cluster outbreak, and 7 children (28%) had a travel or residence history in Hubei Province. Clinical categories included 8 (32%) asymptomatic, 4 (16%) very mild cases and 13 (52%) common cases. No severe or critical cases were identified. The most common symptoms were cough (n=13, 52%) and fever (n=6, 24%). The duration time of clinical symptoms was 13.0 (8.0–25.0) days. There were no statistical differences in lab results between the groups of asymptomatic cases, mild cases and common cases. All patients were treated with interferon, 6 cases combined with Ribavirin, and 12 cases combined with lopinavir or ritonavir. The time from onset to RT-PCR turning negative was 15.20 ± 6.54 days. There was no	This study of 25 children with COVID-19 in China found low morbidity as well as non-specific and mild clinical manifestations and inflammatory biomarkers.	Bai K, Liu W, Liu C, et al. Clinical Analysis of 25 Novel Coronavirus Infections in Children [published online 2020 May 12]. Pediatr Infect Dis J. doi:10.1097/INF.0000000000002740

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					significant difference of RT-PCR turning negative between the groups of interferon, interferon plus ribavirin and interferon plus lopinavir or ritonavir treatment. All cases recovered and were discharged from hospital.		
Pregnancy, placental pathology, fetal malperfusion, thrombosis, villitis	12-May-20	Placental Pathology in Covid-19 Positive Mothers: Preliminary Findings	Pediatric and Developmental Pathology	Research Article	This study describes the pathology and clinical information on 20 placentas from mothers who tested positive for COVID-19 at Weill Cornell Medical Center. Four women were symptomatic on presentation. No women were admitted to the ICU or intubated, and all neonates were discharged home with negative SARS-CoV-2 RT-PCR tests. Ten of the 20 placental tissues showed some evidence of fetal vascular malperfusion or fetal vascular thrombosis. One case, in which the patient had pneumonia and acute hypoxia, showed evidence of ascending infection with acute chorioamnitis and acute funisitis. Four cases showed chronic villitis, which was high grade in 2 cases. The significance of these findings is unclear. Whether the fetal vascular malperfusion is related to hypercoagulability associated with COVID-19 and whether villitis of unknown etiology is related to an antiviral immune response need further study.	This study of placental pathology in 20 COVID-19 positive mothers found evidence of fetal vascular malperfusion or thrombosis. These findings warrant further study.	Baergen RN, Heller DS. Placental Pathology in Covid-19 Positive Mothers: Preliminary Findings. Pediatr Dev Pathol. 2020;23(3):177-180. doi:10.1177/1093526620925569
Children, general population, disease severity, Italy	12-May-20	COVID-19 in the Pediatric Population Admitted to a Tertiary Referral Hospital in Northern Italy: Preliminary Clinical Data	The Pediatric Infectious Disease Journal	Letter to the Editor	Data from pediatric patients (0-18 years) with COVID-19 admitted to the San Matteo Hospital of the Lombardy region, Italy were collected. As of April 11, 2020, 17 children (median: 4 years, range: 2-10 years) were diagnosed with COVID-19 based on RT-PCR analysis. Patients were stratified into 4 subgroups according to severity of disease: requiring home isolation (n=5), admission to low-intensity care (n=3), sub-intensive care unit (n=8) or ICU (n=1). Compared with the general Lombardy population, these data suggest mild-moderate disease in childhood. Consistently, no child has died so far in Italy.	The authors compare pediatric vs. general population data from the Lombardy region, Italy and conclude that children experience relatively mild-moderate disease.	Brambilla I, Castagnoli R, Caimmi S, Ciprandi G, Luigi Marseglia G. COVID-19 in the Pediatric Population Admitted to a Tertiary Referral Hospital in Northern Italy: Preliminary Clinical Data [published online 2020 May 12]. Pediatr Infect Dis J. doi:10.1097/INF.0000000000002730
Neonatal infection, encephalitic symptoms, double-peaked course, Germany	12-May-20	Neonatal Early-Onset Infection With SARS-CoV-2 in a Newborn Presenting With Encephalitic Symptoms	The Pediatric Infectious Disease Journal	Letter to the Editor	In this case report, a healthy female newborn of 40 weeks + 3 days of gestation was born by vacuum extraction; she appeared lethargic and developed therapy refractory fever at 24 hours after birth, progressing to encephalitic symptoms at 54 hours of life. Transferred to the tertiary center NICU, the newborn and her mother were isolated; the mother tested positive for SARS-CoV-2. A multiplex-PCR test of 14 meningitis/encephalitis agents was negative in the newborn, and bacterial cultures of cerebrospinal fluid and blood were sterile. Although the newborn's nasopharyngeal and rectal swabs tested positive for SARS-CoV-2, her cerebrospinal fluid tested negative. At 80 hours of life, the newborn developed respiratory distress and needed oxygen therapy until day 6 of life. At day 10, severe cough emerged, and a chest radiograph confirmed bilateral viral pneumonia. The patient's nasopharyngeal and rectal swabs remained positive until 14 days after birth, when she was discharged without symptoms.	To the authors' knowledge, this is the first report of encephalitic symptoms and a double-peaked course of pulmonary symptoms in a neonate with COVID-19.	Lorenz N, Treptow A, Schmidt S, et al. Neonatal Early-Onset Infection With SARS-CoV-2 in a Newborn Presenting With Encephalitic Symptoms [published online 2020 May 12]. Pediatr Infect Dis J. doi:10.1097/INF.0000000000002735

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Children, chest CT, screening tool, sensitivity, viral pneumonia	12-May-20	Value of Chest CT as COVID 19 Screening Tool in Children	European Respiratory Journal	Research Letter	It is unknown whether CT scanning, involving the introduction of ionizing radiation, has value as a screening tool to rule out COVID-19 infections in children with little or no respiratory symptoms or with negative or missing PCR test results. In this review of existing literature, 92 papers were identified that mostly focused on the use of CT scans in diagnosing and/or monitoring COVID-19 disease, rather than ruling it out, in all ages. Most studies did not include subjects with negative PCR, so the true negative rate or specificity could not be calculated. Depending on the study population, the sensitivity, or the ability of chest CT to detect abnormalities in proven COVID-19 patients, ranged between 44-97% (median 69%). In children specifically, the course of disease is generally milder than in adults. Studies show that chest CT may be normal in 35-50% of pediatric cases with minor upper airway symptoms. Depending on the study, the reported sensitivities of CT scanning to detect abnormalities in pediatric patients ranged between 50-74% (median 60%). This implies an unacceptable percentage of false negative cases. The authors conclude that chest CT, rarely performed in children with viral pneumonia and carrying harm from ionizing radiation, is not suitable for pediatric patients with little or no COVID-19 symptoms.	Based on a review of current literature, the authors conclude that chest CT is not a suitable screening tool to rule out COVID-19 in children with mild or no respiratory symptoms.	Merkus PJ, Klein WM. Value of Chest CT as COVID 19 screening tool in children [published online 2020 May 12]. Eur Respir J. doi:10.1183/13993003.01241-2020
Indirect mortality, maternal and child health, wasting, modelling study, LMICs	12-May-20	Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study	The Lancet Global Health	Original Article	This study estimates the additional maternal and under-5 child deaths in 118 low- and middle-income countries (LMICs) resulting from the potential disruption of health systems and decreased access to food during the COVID-19 pandemic. The least severe scenario (reductions in coverage of essential maternal and child health (MCH) interventions of 9.8–18.5% and wasting prevalence increase of 10%), over 6 months, would result in 253,500 additional child deaths and 12,200 additional maternal deaths. The most severe scenario (coverage reductions of 39.3–51.9% and wasting increase of 50%), over 6 months, would result in 1,157,000 additional child deaths and 56,700 additional maternal deaths. These additional deaths would represent an increase of 9.8–44.7% in under-5 child deaths per month, and an 8.3–38.6% increase in maternal deaths per month, across the 118 countries. Across the modelled scenarios, the reduced coverage of four childbirth interventions (parenteral administration of uterotonics, antibiotics, and anticonvulsants, and clean birth environments) would account for approximately 60% of additional maternal deaths. The increase in wasting prevalence would account for 18–23% of additional child deaths, and reduced coverage of antibiotics for pneumonia and neonatal sepsis and of oral rehydration solution for diarrhea would together account for around 41% of additional child deaths. These estimates are based on tentative assumptions and represent a wide range of outcomes. Nonetheless, they show that, if routine health care and access to food are disrupted, the increase in child and maternal deaths will be devastating.	In this modelling study, the authors estimate substantial indirect mortality from the COVID-19 pandemic in LMICs, due to disruptions in essential maternal and child health interventions and access to food, leading to increased, prevalence of wasting, among other conditions.	Roberton T, Carter ED, Chou VB, et al. Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study [published online 2020 May 12]. Lancet Glob Health. doi:10.1016/S2214-109X(20)30229-1

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Children, routine health services, social protection, LMICs, UNICEF	12-May-20	A wake-up call: COVID-19 and its impact on children's health and wellbeing	The Lancet Global Health	Comment	Roberton et al. present startling new evidence on the potential rise in maternal and child mortality in low- and middle-income countries if essential health services are disrupted as a result of COVID-19. Constrained access to clinics, schools, social workers, water, and sanitation is a particular threat to the most vulnerable populations, and the lack of child protection and broader social services is particularly harmful to women and children in need of safety. Looming above all of these concerns is the economic impact of both the pandemic control measures governments are taking and the predicted knock-on effects of the projected global recession. Representing the approach of UNICEF, the author outlines six key areas of action and investment to overcome the negative impacts of the pandemic. Broadly, these address child health and routine services; water, sanitation, and hygiene; digital infrastructure for education; social protection for families; gender-based violence; and refugee and migrant children.	In response to the modelling estimates proposed by Robertson et al., this commentary from UNICEF proposes key areas of focus to overcome the negative impacts of the COVID-19 pandemic on children's health.	Fore HH. A wake-up call: COVID-19 and its impact on children's health and wellbeing [published online 2020 May 12]. Lancet Glob Health. doi:10.1015/S2214-109X(20)30238-2
Maternal and child health, antenatal care, HIV service delivery, LMICs	12-May-20	Avoiding indirect effects of COVID-19 on maternal and child health	The Lancet Global Health	Comment	In many low-income and middle-income countries (LMICs), COVID-19 is rapidly spreading amid numerous endemic health problems such as HIV, tuberculosis, malaria, and malnutrition, in the context of weak health infrastructures. Roberton et al. report findings from a modelling study to estimate the indirect effects of the COVID-19 pandemic on maternal and child mortality in LMICs. Limitations of their work include applying the same assumptions for the 118 included in the analysis. HIV infection is also excluded from their analysis due to the complexity of service delivery, however as a leading cause of death in women of reproductive age, it should be considered when estimating HIV effects on maternal mortality. Another example of potential indirect effects of the pandemic include changing guidelines, in some African countries, to space out antenatal care (ANC) visits every 3 months instead of monthly. With an average gestational age at first ANC visit of 24 weeks, this recommendation implies that many pregnant women will attend an essential preventive health service only once during their pregnancy.	This commentary highlights limitations of the Roberton et al. modelling study on indirect effects of the COVID-19 pandemic on maternal and child health, while highlighting an additional example of disruptions in antenatal care in some African countries.	Menendez C, Gonzalez R, Donnay F, Leke RGF. Avoiding indirect effects of COVID-19 on maternal and child health [published online 2020 May 12]. Lancet Glob Health. doi:10.1016/S2214-109X(20)30239-4
Pregnancy, hospitalization, Black or minority ethnicity, maternal age, obesity, vertical transmission, UK	12-May-20	Characteristics and outcomes of pregnant women hospitalised with confirmed SARS-CoV-2 infection in the UK: a national cohort study using the UK Obstetric Surveillance System (UKOSS)	medRxiv	Preprint (not peer reviewed)	This population-based cohort study uses data from the UK Obstetric Surveillance System (UKOSS) on 427 pregnant women admitted to 194 obstetric units with confirmed SARS-CoV-2 infection between March 1 and April 14, 2020. Estimated incidence of hospitalization with COVID-19 in pregnancy was 4.9 per 1000 maternities (95%CI 4.5-5.4 per 1000). The median gestation at symptom onset was 34 weeks (IQR 29-38 weeks). Black or other minority ethnicity (adjusted OR 4.49, 95%CI 3.37-6.00), older maternal age (aOR 1.35, 95%CI 1.01-1.81 comparing women aged 35+ with those aged 30-34 years), overweight and obesity (aORs 1.91, 95%CI 1.37-2.68 and 2.20, 95%CI 1.56-3.10 respectively compared to women with a BMI<25kg/m2) and pre-existing comorbidities (aOR 1.52, 95%CI 1.12-2.06) were associated with admission with SARS-CoV-2 during pregnancy. 247 women (58%) gave birth or had a pregnancy loss; 180 (73%) gave birth at term. 40 (9%) hospitalized women required respiratory support. Twelve infants (5%) tested positive for SARS-CoV-2 RNA, six of these infants within the first 12 hours after birth.	In this UK study, most pregnant women hospitalized with COVID-19 were in the late second or third trimester. Black or minority ethnicity, overweight or obese BMI, older maternal age, and comorbidities were associated with hospitalization. Most had good outcomes and vertical transmission was uncommon.	Knight M, Bunch K, Vousden N, et al. Characteristics and outcomes of pregnant women hospitalised with confirmed SARS-CoV-2 infection in the UK: a national cohort study using the UK Obstetric Surveillance System (UKOSS) [published online 2020 May 12]. medRxiv. doi:10.1101/2020.05.08.20099268

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COVID-19; pregnancy; unintended pregnancy; public health	11-May-20	The novel coronavirus (COVID-19) and unintended pregnancy during the quarantine period	Pan African Medical Journal	Letter to the Editor	The author discusses the importance of interventions to reduce unintended pregnancies during the COVID-19 quarantine period in Iran. Measures such as traffic restrictions reduce access to family planning tools, with the increase in unintended pregnancies, which is expected to increase during the pandemic challenging the healthcare system and a considerable socioeconomic impact on society. Additionally, the author suggests that SARS-CoV-2 infection may lead to high-risk infections, highlighting studies indicating events of spontaneous miscarriage, preterm labor, intrauterine growth restriction, endotracheal intubation, admission to ICUs, and disseminated intravascular coagulopathy. The author also notes the adverse effects of unintended pregnancies on children's health, impacting their ability to learn and acquire knowledge. Unintended pregnancies could affect the labor force volume, absence from work, and workers' efficiency by affecting adults' health status. The author also discusses the possibility of an increase in unsafe abortions due to the inaccessibility of appropriate services during the quarantine period (especially in developing countries), leading to negative mental consequences, disability, and maternal mortality. These can affect the human workforce and impose significant burdens on the health sector. The author recommends the free provision of contraceptives and online and offline educational applications on reproduction and sexual health.	The author highlighted the short- and long-term economic and psychosocial impacts of unintended pregnancies during the COVID-19 pandemic in Iran, including a reduction in the labor force, adverse effects on children, as well as worse maternal outcomes. The author suggests the free provision of contraceptives and educational resources to further reduce unintentional pregnancies and the impact on overburdened healthcare systems.	Yazdkhasti M. The novel coronavirus (COVID-19) and unintended pregnancy during the quarantine period. Pan Afr Med J. 2020 May 11;35(Suppl 2):29. doi: 10.11604/pamj.supp.2020.35.2.23313. PMID: 33623554; PMCID: PMC7875721.
Children, food allergy, nutrition, food security	11-May-20	COVID-19 and food allergy in children	Acta Biomedica	Review Article	In this review article, the authors discuss the effects of the COVID-19 pandemic on pediatric patients with food allergies. They provide recommendations for the clinical management of known and new patients with food allergies. The mainstay treatment of this condition is avoidance of the culprit food and selection of "safe" foods. The authors note that accessing specialty allergy products may be more challenging during the current pandemic, which increases the potential risk of exposure to the allergen. They recommend that patients always carry auto-injectable adrenaline and have an updated action plan for prompt recognition and treatment of anaphylaxis. Additionally, they describe the potential impact of the pandemic on the diet and nutritional intake of patients with food allergies. To address this issue, they suggest that pediatric allergy patients should be regularly re-evaluated and have a diet tailored to a the specific individual's nutritional needs.	The authors describe the challenges presented by the COVID-19 pandemic in the care of pediatric food allergy patients. This crisis may have also impacted access to appropriate nutrition in this population.	D'Auria E, Anania C, Cuomo B, et al. COVID-19 and food allergy in children. [published online, 2020 May 11]. Acta Biomed. doi:10.23750/abm.v91i2.9614
Obstetric, anesthesia, precautions	11-May-20	COVID-19: Obstetric anesthesia care considerations	Journal of Clinical Anesthesia	Original Article	The authors provide valuable information regarding obstetric anesthesia care considerations including: Pre-hospital COVID-19 screening should be implemented for all pregnant patients, limit the number of staff in a delivery room or operating room when feasible, encourage the use of video messaging with other members of the patient's support system, and an experienced provider should perform neuraxial procedures and intubations whenever possible. The authors provide an infographic detailing various considerations for the following categories: staff and equipment, elective procedure pre-administration, labor and delivery, neuraxial, C-section, and general anesthesia precautions.	This article provides various important considerations when using anesthesia in obstetric patient care. It is crucial to take extra care with the obstetric population when administering anesthesia, and even	Herman JA, Urits I, Kaye AD, Urman RD, Viswanath O. COVID-19: Obstetric anesthesia care considerations. J Clin Anesth. 2020;65:109860. doi:10.1016/j.jclinane.2020.109860

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						more so with the COVID-19 pandemic.	
Pediatric, adolescents, clinical characteristics, USA	11-May-20	Clinical Characteristics and Outcomes of Hospitalized and Critically Ill Children and Adolescents with Coronavirus Disease 2019 at a Tertiary Care Medical Center in New York City	The Journal of Pediatrics	Original Article	The authors conducted a retrospective review of children and adolescents hospitalized in New York's Children's Hospital at Montefiore, USA. Between March 15 and April 13, 2020, 67 children were tested positive for COVID-19, among whom 72% (n=33) were hospitalized in the general pediatric unit (age 3.6 (range 0.1-17.2) years) and 28% (n=13) to the pediatric intensive care unit (PICU)(age 14.8 (range 11.6-15.9) years). Among PICU admissions, the majority (84.6%) was 11 years and older. Among the reported comorbidities, obesity and asthma were present in 30.4% (n=14) and 24.4% (n=11) of admitted patients but were not significantly associated with need for PICU admission (p <0.99). High levels of C-reactive protein, procalcitonin, and pro-B type natriuretic peptide levels and platelet counts showed a significant association with PICU admissions. 53.8% (n=7) patients experienced sepsis in PICU, and 77% (n=10) suffered acute respiratory distress syndrome that warranted invasive mechanical ventilation for 46.2% (n=6) of patients for a median duration of 9 days. 61.5% (n=8) of the 13 patients in the PICU were discharged and 30.7% (n=4) remained on ventilatory support.	The authors describe a higher than previously recognized rate of severe disease requiring PICU admission in pediatric patients admitted to the hospital with COVID-19 that was studied. This was suggested to relate to the wider social determinants of health, especially in a dense, urban setting such as New York.	Chao JY, Derespina KR, Herold BC, et al. Clinical Characteristics and Outcomes of Hospitalized and Critically Ill Children and Adolescents with Coronavirus Disease 2019 at a Tertiary Care Medical Center in New York City. J Pediatr. 2020;223:14-19.e2. doi:10.1016/j.jpeds.2020.05.006
Midwifery, response, telehealth	11-May-20	Midwifery in the Time of COVID-19	Journal of Midwifery & Women's Health	Editorial	The author reflects on her experience in the 1980s HIV-AIDS crisis and how midwifery care has evolved since. For this COVID-19 pandemic, midwives are also looking for ways to respond. Online midwifery forums and webinars are replete with discussions that are thinking ahead to how the emerging science around COVID-19 can be merged with midwifery care. They are communicating innovative ideas for homemade disposable equipment and redesigned guidelines for call schedules, birth centers, and water births. They also have moved to internet connections that allow for virtual visits; some midwives had already been exploring virtual support in early labor. Confront with concerns and fear, the author states that midwives will always find ways to continue to work because of their resilience and professional philosophy.	The author described several ways of how midwives respond to the current COVID-19 through telehealth.	Murphy PA. Midwifery in the Time of COVID-19. J Midwifery Womens Health. 2020;65(3):299-300. doi:10.1111/jmwh.13121
Children, neonates, pregnancy, epidemiology, clinical characteristics	11-May-20	COVID-19 in Children, Pregnancy and Neonates: A Review of Epidemiologic and Clinical Features	The Pediatric Infectious Diseases Journal	Special Article	In 11 case series including a total of 333 infants and children, 83% of the children had a positive contact history, mostly with family members. The incubation period varied between 2 and 25 days with a mean of 7 days. The virus could be isolated from nasopharyngeal secretions for up to 22 days and from stool for more than 30 days. Co-infections were reported in up to 79% of children (mainly mycoplasma and influenza). Up to 35% of children were asymptomatic. The most common symptoms were cough (48%; range 19%–100%), fever (42%; 11%–100%) and pharyngitis (30%; 11%–100%). Laboratory test parameters were only minimally altered, and radiologic findings were unspecific. Children rarely needed admission to intensive care units (3%), and to date, only a small number of deaths have been reported in children globally. In addition, nine case series and 2 case reports described outcomes of maternal SARS-CoV-2 infection during pregnancy in 65 women and 67 neonates. Two mothers (3%) were admitted to intensive care. Fetal distress was reported in 30% of pregnancies. Thirty-seven percent of women delivered preterm. Neonatal complications included respiratory distress or	In this review, the epidemiologic and clinical features of children infected with SARS-CoV-2, as well as the potential outcomes of neonates born to women infected with SARS-Cov-2 in pregnancy, are summarized to date.	Zimmermann P, Curtis N. COVID-19 in Children, Pregnancy and Neonates: A Review of Epidemiologic and Clinical Features. Pediatr Infect Dis J. 2020;39(6):469-477. doi:10.1097/INF.0000000000002700

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					pneumonia (18%), disseminated intravascular coagulation (3%), asphyxia (2%) and 2 perinatal deaths. Four neonates (3 with pneumonia) have been reported to be SARS-CoV-2 positive despite strict infection control and prevention procedures during delivery and separation of mother and neonates, meaning vertical transmission could not be excluded.		
Child, myocarditis, cytokine storm, heart failure, immuno-modulatory treatment, Belgium	11-May-20	Pediatric Life-Threatening Coronavirus Disease 2019 With Myocarditis	The Pediatric Infectious Diseases Journal	Brief Report	A healthy 8-year-old boy of African origin presented with a 4-day history of fever, coughing, weight loss, and severe fatigue. On physical examination, he was febrile and presented a warm, painful, swollen erythema; he was diagnosed with cellulitis, which was confirmed by echography. Within a few hours of hospitalization for IV antibiotics, he developed tachycardia and low blood pressure. Blood tests showed increased C-reactive protein, leukopenia with lymphopenia, thrombocytopenia, and myocardial necrosis as well as elevated D-dimers and IL-6. Echocardiography revealed impaired left ventricular function and trace mitral insufficiency as well as a small pericardial effusion. The patient was admitted to the ICU and received oxygen to support heart function. Follow-up blood tests showed progression of hepatic cytolysis and kidney failure, while chest scan showed bilateral pneumopathies and a nasopharyngeal swab (taken on admission) came back positive for SARS-CoV-2 on day 3. PCR on the stools, collected on day 6, was also positive. The child had high titers of both IgA and IgG on serum sample at day 6. He responded to IV immunoglobulin and tocilizumab to treat the inflammatory storm. The cellulitis was most likely a dermatologic feature of COVID-19.	A pediatric case of life-threatening COVID-19 leading to myocarditis, cytokine storm, and heart failure is described.	Oberweis ML, Codreanu A, Boehm W, et al. Pediatric Life-Threatening Coronavirus Disease 2019 With Myocarditis [published online 2020 May 11]. Pediatr Infect Dis J. doi:10.1097/INF.0000000000002744
Pregnancy, obstetric anesthesia, pre-hospital screening, interim guidance	11-May-20	COVID-19: Obstetric Anesthesia Care Considerations	Journal of Clinical Anesthesia	Brief Communication	This article presents considerations for obstetric anesthesia care, including an infographic using several sources of information. Major suggestions include the implementation of pre-hospital COVID-19 screening for all pregnant patients; limiting the number of staff in a delivery room or operating room when feasible; encouraging the use of video messaging with other members of the patient's support system; and performance of neuraxial procedures and intubations by an experienced provider, whenever possible.	Interim guidance for the obstetric anesthesia care of women with suspected or confirmed COVID-19 is provided.	Herman JA, Urits I, Kaye AD, Urman RD, Viswanath O. COVID-19: Obstetric anesthesia care considerations [published online 2020 May 11]. J Clin Anesth. doi:10.1016/j.jclinane.2020.109860
Pregnancy, neuro-developmental disorders, cytokine storm, hyper-inflammation, IL-6	11-May-20	COVID-19 During Pregnancy: Potential Risk for Neurodevelopmental Disorders in Neonates?	European Journal of Obstetrics & Gynecology and Reproductive Biology	Correspondence	There is growing evidence that prenatal infection and enhanced expression of cytokines are associated with an increased risk of autism spectrum disorder and schizophrenia in the offspring. Maternal immune activation appears to act as a "neurodevelopmental disease primer" increasing the susceptibility of individuals to the epigenetic alterations and environmental exposures that can interact in triggering disease-related symptoms later in life. IL-6 has been treated as an indicator of maternal systemic inflammation with potential to influence placental-fetal interactions and subsequently fetal brain development and increased risk of offspring psychiatric disorders. In addition, it has been found that maternal IL-6 is inversely associated with offspring cognition at 12-months age. Therefore, it is reasonable to hypothesize that the cytokine storm and hyperinflammation found in pregnant women with SARS-CoV-2 infection may increase the risk for neurodevelopmental disorders in the neonates.	Maternal systemic inflammation and cytokines like IL-6, which play a prominent role in the cytokine storm of SARS-CoV-2 infection, have been associated with increased risk of neurodevelopmental disorders in offspring.	Martins-Filho PR, Tanajura DM, Santos HP Jr, Santos VS. COVID-19 during pregnancy: Potential risk for neurodevelopmental disorders in neonates? [published online 2020 May 11]. Eur J Obstet Gynecol Reprod Biol. doi:10.1016/j.ejogrb.2020.05.015

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Pregnancy, neonate, vaginal delivery, fetal monitoring, mechanical breast stimulation, Portugal	11-May-20	Vaginal Delivery in a Woman Infected With SARS-CoV-2 - The First Case Reported in Portugal	European Journal of Obstetrics & Gynecology and Reproductive Biology	Correspondence	On March 17, 2020, a Caucasian 31-year-old woman with 38 weeks' gestation was admitted to hospital in Porto, Portugal, complaining of mild painful uterine contractions for a few hours. Since her husband had been diagnosed with COVID-19 and hospitalized on March 12, she was treated as a suspected case upon admission. SARS-CoV-2 was detected by RT-PCR analysis on nasal and oropharyngeal swabs. Following an operative vaginal delivery, with fetal vacuum extraction, the umbilical cord was immediately clamped without neonate-maternal contact. The newborn was separated from the mother immediately after birth, and repeated newborn nasal and oropharyngeal RT-PCR tests were negative for SARS-CoV-2. Symptomless, the mother was discharged first and began mechanical breast stimulation, in order to breastfeed soon after her COVID-19 recovery.	This case describes an uncomplicated vaginal delivery, with continuous electronic fetal monitoring, in a woman with COVID-19 without severe disease; the neonate tested negative for SARS-CoV-2.	Polónia-Valente R, Moucho M, Tavares M, Vilan A, Montenegro N, Rodrigues T. Vaginal delivery in a woman infected with SARS-CoV-2 - The first case reported in Portugal [published online 2020 May 11]. Eur J Obstet Gynecol Reprod Biol. doi:10.1016/j.ejogrb.2020.05.007
Late pregnancy, neonates, convalescent mothers, Italy	11-May-20	Report of a Series of Healthy Term Newborns From Convalescent Mothers With COVID-19 (only abstract available when posted on May 22, 2020)	Acta Biomedica	Correspondence/ Case Reports	This case series reports four neonates whose mothers had recovered from COVID-19 (RT-PCR assays on nasopharyngeal swabs turned negative). All four women were diagnosed in the third trimester of pregnancy at Parma Hospital, Italy in March and April 2020. All neonates were delivered (3 vaginal delivery, 1 elective cesarean section) at term in good conditions without evidence of congenital COVID-19 infection on nasopharyngeal swabs, and all were breastfed.	Findings from this series indicate that adverse effects on fetuses from pregnancies complicated by COVID-19; four healthy neonates were born to mothers recovering from SARS-CoV-2 infection in the third trimester of pregnancy.	Perrone S, Deolmi M, Giordano M, et al. Report of a series of healthy term newborns from convalescent mothers with COVID-19. Acta Biomed. 2020;91(2):251-255. Published 2020 May 11. doi:10.23750/abm.v91i2.9743
Children, screening, case definition criteria, clinical presentation, Italy	11-May-20	Screening of COVID-19 in Children Admitted to the Hospital for Acute Problems: Preliminary Data	Acta Biomedica	Original Investigation	Of 42 children (median 6.2 years, range 1 month-17.8 years) referred for COVID-19 testing based on suspected case definition criteria, none tested positive for SARS-CoV-2 on nasopharyngeal swab RT-PCR. At first presentation, the most frequent signs and symptoms were: fever (71.4%), fatigue (35.7%) and cough (30.9%). Elevated C-reactive protein levels and chest X-ray abnormalities (bronchial wall thickening) were detected in 26.2% and 19% of patients, respectively. Almost half of patients (45.2%) required hospitalization in the Pediatric Unit and one patient in Intensive Care Unit.	Children of all ages are susceptible to COVID-19, although they appear to be affected less frequently than adults, as reported in this preliminary survey.	Nicoletti A, Talarico V, Sabetta L, et al. Screening of COVID-19 in children admitted to the hospital for acute problems: preliminary data. Acta Biomed. 2020;91(2):75-79. Published 2020 May 11. doi:10.23750/abm.v91i2.9607
Children, clinical characteristics, pathogenesis, diagnosis, management	11-May-20	Novel Coronavirus Infection and Children	Acta Biomedica	Review	The aim of this review is to underline the epidemiological, clinical and management characteristics in children affected by COVID-19. The authors searched PubMed, from January to April 2020, for the following search terms: "COVID-19", "children", "SARS-COV2", "complications", "epidemiology", "clinical features", focusing attention on epidemiology and symptoms of COVID-19 in children. Findings showed that infants and children typically present milder symptoms of COVID-19 disease with better outcomes than adults. Consequently, children may be considered an infection reservoir that play a role as spreaders of infection in communities.	The authors summarize literature on the pathogenesis, clinical manifestations, diagnosis, severity, management and treatment of COVID-19 in children.	Cavallo F, Rossi N, Chiarelli F. Novel coronavirus infection and children. Acta Biomed. 2020;91(2):172-176. Published 2020 May 11. doi:10.23750/abm.v91i2.9586
Children, cardiovascular risk, myocardial injury, Kawasaki	11-May-20	COVID19: Potential Cardiovascular Issues in	Acta Biomedica	Review	Cardiovascular involvement is emerging as a life-threatening complication of COVID-19 in adults with underlying cardiovascular disease. Although children experience less severe course of disease than adults, infants and toddlers are at risk of developing critical COVID-19. Further investigation of myocardial injury and cardiovascular issues, as well as overlapping Kawasaki	This review presents initial considerations for potential cardiovascular issues in pediatric patients with COVID-19,	Bertoncelli D, Guidarini M, Della Greca A, et al. COVID19: potential cardiovascular issues in pediatric patients. Acta

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disease, congenital heart disease		Pediatric Patients			disease, in children with severe COVID-19 is needed. In this article, the authors summarize initial considerations and potential cardiovascular implications of COVID-19 for children with congenital heart disease.	particularly those with congenital heart diseases.	Biomed. 2020;91(2). doi:10.23750/abmv91i2.9655
Children, clinical characteristics, preliminary findings, Calabria Region, Italy	11-May-20	Preliminary Epidemiological Analysis on Children and Adolescents With Novel Coronavirus Disease (2019-nCoV) in a Central Area of Calabria Region	Acta Biomedica	Correspondence	From March 1 to April 9, 2020, a total of 173 children (86 male) met the screening criteria for suspected 2019-nCoV infection, across three provinces of the Calabria Region, Italy (Catanzaro, Vibo Valentia and Crotone). All tests on nasal and pharyngeal swab specimens were performed using RT-PCR assays. Ten children (5.8%) were confirmed to have COVID-19 infection. The median age of infected children was 11.9 years (range: 2.5-17.9 years) with greater prevalence of the age group between 10-15 years (40%) in accordance with national Italian data. The most important finding from the present preliminary report is the confirmed evidence that children are susceptible to SARS-CoV-2 infection but frequently do not have notable disease, raising the possibility that they may act as facilitators of viral transmission.	Preliminary demographic and clinical data from the Calabria Region of Italy show children are susceptible to SARS-CoV-2 infection but often have mild disease.	Talarico V, Nicoletti A, Sabetta L, Minchella P, Raiola G. Preliminary epidemiological analysis on children and adolescents with novel coronavirus disease (2019-nCoV) in a central area of Calabria region. Acta Biomed. 2020;91(2):232-233. Published 2020 May 11. doi:10.23750/abm.v91i2.9550
Children, clinical characteristics, Parma, Italy	11-May-20	SARS-CoV-2 Infection in Children in Parma	Acta Biomedica	Correspondence	Symptomatic and asymptomatic children, with known contact with confirmed or suspected SARS-CoV-2 cases, were evaluated at the Barilla Children's Hospital of Parma, Italy. Of 61 children tested between February 26 and April 14, 2020, 14 (23%) were confirmed to have SARS-CoV-2 infection. The median age of infected children was 22 months. Fever was present in 100% of the children with median duration of 17 hours. Other common symptoms included cough (35%) and pharyngeal erythema (50%). None had pneumonia or needed oxygen therapy. One patient has febrile seizures. Another patient had anemia and lymphopenia.	Descriptive data on 14 children, with SARS-CoV-2 infection and relatively mild clinical course of disease, from Parma, Italy are described in this study.	Dodi I, Castellone E, Pappalardo M, et al. SARS-CoV-2 infection in children in Parma. Acta Biomed. 2020;91(2):214-215. Published 2020 May 11. doi:10.23750/abm.v91i2.9563
Adolescents, children, clinical characteristics, epidemiology, Italy	11-May-20	Coronavirus Disease 2019 (COVID-19) in Adolescents: An Update on Current Clinical and Diagnostic Characteristics	Acta Biomedica	Review	This paper summarizes current findings (as of April 3, 2020) from a systematic literature review on COVID-19 in adolescents (10-19 years according to the WHO definition) and reports preliminary epidemiological data from the Italian National Institute of Health. In terms of epidemiological characteristics, the reported prevalence of infection in China, Korea, USA, and Italy was equal to 1%, 4%, 1.7%, and 0.87% respectively. Compared with elderly patients, adolescent and young adults with COVID-19 have longer incubation period, shorter serial interval, higher odds of being asymptomatic, and lower mortality rate.	This article reviews existing literature on COVID-19 in adolescents, who are more likely to be asymptomatic and have lower mortality rates compared to elderly patients.	De Sanctis V, Ruggiero L, Soliman AT, et al. Coronavirus Disease 2019 (COVID-19) in adolescents: An update on current clinical and diagnostic characteristics. Acta Biomed. 2020;91(2):184-194. doi:10.23750/abm.v91i2.9543
Children, neonates, vertical transmission, clinical characteristics, epidemiology	11-May-20	Managing COVID-19 Infection in Pediatric Patients	Cleveland Clinic Journal of Medicine	COVID-19 Curbside Consults	Children are less likely to be infected with SARS-CoV-2 than adults and often have a milder course of illness and a lower case fatality rate. Children account for an estimated 1% to 5% of those diagnosed with COVID-19. Even so, pre-school–aged children, infants, and children with underlying health conditions may still be at risk for severe disease and complications. Unique aspects of COVID-19 presentation and course in children and possible vertical transmission to newborns from COVID-19 positive mothers are discussed in this report.	This report summarizes unique aspects of COVID-19 in children and evidence around risk of vertical transmission.	Mon EY, Mandelia Y. Managing COVID-19 infection in pediatric patients [published online 2020 May 11]. Cleve Clin J Med. doi:10.3949/ccjm.87a.ccc022

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Pregnancy, delivery, universal screening, Italy	11-May-20	Universal SARS-CoV-2 Testing of Pregnant Women Admitted for Delivery in Two Italian Regions	American Journal of Obstetrics and Gynecology	Research Letter	Between March 26 and April 1, 2020, hospitals in 2 neighboring Italian regions, Tuscany and Liguria, implemented universal SARS-CoV-2 screening by nasopharyngeal swab for all women admitted for delivery. Up to April 19, 533 women were admitted for delivery across all hospitals. Of these, 3 women from Tuscany tested positive (2 asymptomatic, 1 had anosmia only). All gave birth without maternal or neonatal complications. The estimated prevalence in this sample was 3/533 = 0.56% (95% CI: 0.19-1.64). During the studied period, the overall prevalence of positive cases reported by the Italian COVID-19 Surveillance System in women of 20 to 39 years of age in Tuscany was 0.094%. From these data, the authors estimate that 83% (95% CI: 51-94%) of infections were unreported i.e. the real prevalence risk of the general population of women of this age is 6 (95% CI: 2-11) times the rate found in women tested for clinical reasons.	Universal SARS-CoV-2 screening of pregnant women in two regions of Italy was an effective strategy to detect infections.	Gagliardi L, Danieli R, Suriano G, et al. Universal SARS-CoV-2 testing of pregnant women admitted for delivery in two Italian regions [published online 2020 May 11]. Am J Obstet Gynecol. doi:10.1016/j.ajog.2020.05.017
Postnatal care, neonates, lockdown, breastfeeding, France	11-May-20	Post-natal Follow-Up for Women and Neonates During the COVID-19 Pandemic: French National Authority for Health Recommen-dations	Journal of Gynecology Obstetrics and Human Reproduction	Guidelines	The French National Authority for Health (HAS) sets forward general recommendations designed to ensure continuity of care for pregnant women during lockdown. Rapid responses were developed based on interviews with expert organizations and available knowledge at the time of their publication. Topics discussed include discharge after childbirth, anticipating possible infection of the newborn, adapting postnatal follow-up at home, maternal and child monitoring parameters, surveillance in the case of early discharge (before 48h after childbirth), neonatal screening tests, support for private practice care, and specific considerations for COVID positive mothers and newborns. The HAS supports breastfeeding in the case of COVID positive mothers, with proper hygiene precautions.	The French National Authority for Health sets recommendations for follow-up postnatal care for mothers and newborns during lockdown, with specific considerations for COVID positive dyads.	Vivanti AJ, Deruelle P, Picone O, et al. Post-natal follow-up for women and neonates during the COVID-19 pandemic: French National Authority for Health recommendations [published online 2020 May 11]. J Gynecol Obstet Hum Reprod. doi:10.1016/j.jogoh.2020.101805
Children, neonates, clinical presentation and course, vertical transmission	11-May-20	Managing COVID-19 Infection in Pediatric Patients	Cleveland Clinic Journal of Medicine	COVID-19 Curbside Consults	Children are less likely to be infected with SARS-CoV-2 than adults and often have a milder course of illness and a lower case fatality rate. Children account for an estimated 1% to 5% of those diagnosed with COVID-19. Even so, pre-school-aged children, infants, and children with underlying health conditions may still be at risk for severe disease and complications. Unique aspects of COVID-19 presentation and course in children and possible vertical transmission to newborns from COVID-19-positive mothers are discussed in this report. To date, there is no clear evidence of intrauterine transmission, but there is a plausible risk of infection during and after delivery. The US Centers for Disease Control and Prevention and American Academy of Pediatrics recommend that newborns born to COVID-19 positive mothers should be considered persons under investigation and tested using nasal and throat swabs via molecular assays at 24 hours and 48 hours of age.	This report summarizes unique aspects of COVID-19 presentation and course in children as well as current evidence on vertical transmission to newborns.	Mon EY, Mandelia Y. Managing COVID-19 Iinfection in pediatric patients [published online 2020 May 11]. Cleve Clin J Med. doi:10.3949/ccjm.87a.ccc022
Pregnancy, maternal outcomes, non-pregnant women, preterm delivery	11-May-20	The Effects of Pregnancy on Women With COVID-19: Maternal and Infant Outcomes	Clinical Infectious Diseases	Editorial Commentary	There have been numerous publications addressing the adverse effects of COVID-19 on pregnant women, as well as their newborn infants. However, limited data are available to determine whether pregnancy itself has any consequences on the health of reproductive aged women with COVID-19. Using a case-control experimental design at a hospital in Hubei province, China, Li et al. found that pregnant women with COVID-19 generally had milder respiratory symptoms, compared to non-pregnant women with COVID-19. A higher incidence of premature delivery in pregnant women with COVID-19 was also reported but was not the result of severe maternal	This review summarizes the results of a case-control study in China that found milder respiratory symptoms in pregnant vs. non-pregnant women with COVID-19. The authors also review recent	Schwartz DA. The Effects of Pregnancy on Women with COVID-19: Maternal and Infant Outcomes [published online 2020 May 11]. Clin Infect Dis. doi:10.1093/cid/ciaa559

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					respiratory disease. Despite these favorable clinical outcomes, there are increasing reports of poor clinical outcomes arising from COVID-19 among pregnant women outside of China.	reports on severe COVID-19 disease in pregnant women.	
Child, cystic fibrosis, hemoptysis, poor nutritional status, antibiotherapy, Switzerland	11-May-20	COVID-19: A Message of Hope From a Young Girl With Severe Cystic Fibrosis	Pediatric Pulmonology	Letter to the Editor	This case report describes a 9-year-old girl with severe complicated cystic fibrosis (CF) lung disease, characterized by a need for nighttime ventilatory support, regular intravenous antibiotics, and gastrostomy feeds due to poor nutritional status. She was admitted for new onset of mild hemoptysis after 2 weeks of elective intravenous antibiotherapy. Concomitantly, the patient's father was hospitalized for confirmed SARS-CoV-2 pneumonia. Initially the RT-PCR performed on the patient's nasopharyngeal secretions was negative, but a repeated RT-PCR on a sputum sample was positive 4 days later. Clinically she remained stable without any new symptoms suggestive of COVID-19 or exacerbation of her chronic mild inflammatory syndrome. Her chest X-ray did not worsen from baseline. Her hemoptysis resolved after suspending nebulized antibiotics and mucolytic agents. The unexpected uneventful clinical course in this report is encouraging for other CF patients.	In this case, a 9-year-old girl with severe cystic fibrosis lung disease had an uneventful clinical course of COVID-19.	Blanchon S, Fernandez C, Guerin S, Crisinel PA, Rochat I. COVID-19: A message of hope from a young girl with severe cystic fibrosis [published online 2020 May 11]. Pediatr Pulmonol. doi:10.1002/ppul.24812
Infant, co-infection, RSV, Germany	11-May-20	Co-infection of SARS CoV-2 and Influenza A in a Pediatric Patient in Germany	Klinische Pädiatrie	Short Communication	A 4-month-old infant presented to the outpatient department with 1-day history of fever and cough. The infant's grandmother had tested positive for SARS-CoV-2 the previous day and had last contacted the infant 8 days prior to the described presentation. On examination, the infant showed no clinical signs of pneumonia. A nasopharyngeal swab for RSV and influenza rapid immunochromatographic assay testing was obtained, turning positive for influenza A and negative for RSV. Due to the significant family history for COVID-19, a pharyngeal swab for SARS-CoV-2 RT-PCR testing was also performed and showed a positive result some days later. The patient was sent home, instructed to take Oseltamivir for 5 days, and advised to present to the hospital in case of decreasing fluid intake or continuing fever.	In this case, a 4-month-old infant with co-infection of SARS CoV-2 and influenza A virus developed a mild course of disease.	Wehl G, Laible M, Rauchenzauner M. Co-infection of SARS CoV-2 and influenza A in a Pediatric Patient in Germany [published online 2020 May 11]. Klin Padiatr. doi:10.1055/a-1163-7385
Children, routine vaccinations, MMR, England	11-May-20	Early impact of the COVID-19 pandemic and social distancing measures on routine childhood vaccinations in England, January to April 2020	medRxiv	Preprint (not peer reviewed)	Electronic health records were used to assess the early impact of COVID-19 on routine childhood vaccination in England, through April 26, 2020. Measles, mumps, and rubella (MMR) vaccination counts fell in February 2020 and, in the three weeks after the introduction of social distancing measures, were 19.8% lower (95% CI -20.7% to -18.9%) than the same period in 2019, before improving in mid-April. A gradual decline in hexavalent (protecting against six diseases: diphtheria, tetanus, pertussis [DTaP], poliovirus, hepatitis B virus, and *Haemophilus influenzae* type b) vaccination counts throughout 2020 was not accentuated upon introduction of social distancing measures.	After the introduction of social distancing measures in England, MMR vaccination counts were 19.8% lower than the same period in 2019.	McDonald HI, Tessier E, White JM, et al. Early impact of the COVID-19 pandemic and social distancing measures on routine childhood vaccinations in England, January to April 2020 [published online 2020 May 11]. medRxiv. doi:10.1101/2020.05.07.20094557
Children, clinical characteristics, epidemiology, observed case rate, susceptibility,	11-May-20	SARS-CoV-2 (COVID-19): What Do We Know About Children? A Systematic Review	Clinical Infectious Diseases	Major Article	This rapid systematic review and narrative synthesis of all literature relating to SARS-CoV-2 in pediatric populations identified 24 related studies. English abstracts of Chinese articles were included. Children appear to be less affected by COVID-19 than adults by observed rate of cases in large epidemiological studies, but limited data on attack rate indicate that children are just as susceptible to infection. This discrepancy may be because children are asymptomatic or too mildly infected to draw medical attention, be tested and counted in observed cases of COVID-19. Data on	In this systematic review of literature on COVID-19 in pediatric populations, children appear to have a low observed case rate of COVID-19 but similar	Mehta NS, Mytton OT, Mullins EWS, et al. SARS-CoV-2 (COVID-19): What do we know about children? A systematic review [published online 2020 May 11]. Clin Infect Dis. doi:10.1093/cid/ciaa556

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systematic review					clinical outcomes are scarce but include several reports of asymptomatic infection and a milder course of disease in young children. Severe cases are not reported in detail and there are little data relating to transmission.	susceptibility to infection as adults.	
Children, PICU, child deaths, comorbidities, North America	11-May-20	Characteristics and Outcomes of Children With Coronavirus Disease 2019 (COVID-19) Infection Admitted to US and Canadian Pediatric Intensive Care Units	JAMA Pediatrics	Original Investigation	In this cross-sectional study of 46 North American pediatric intensive care units (PICUs), between March 14 and April 3, 2020, 48 children (median: 13 years, range: 4.2-16.6 years) with COVID-19 were admitted. 40 children (83%) had preexisting underlying medical conditions. Of 48 total children, 35 (73%) presented with respiratory symptoms, and 18 (38%) required invasive ventilation. Eleven patients (23%) had failure of 2 or more organ systems. Extracorporeal membrane oxygenation (ECMO) was required for 1 patient (2%). Targeted therapies were used in 28 patients (61%), with hydroxychloroquine being the most commonly used agent either alone (11 patients) or in combination (10 patients). At the completion of the follow-up period, 2 patients (4%) had died, and 15 (31%) were still hospitalized, with 3 still requiring ventilatory support and 1 receiving ECMO. The median (range) PICU and hospital lengths of stay for those who had been discharged were 5 (3-9) days and 7 (4-13) days, respectively.	This early study, from North American PICUs, shows that COVID-19 can result in significant disease burden in children but confirms that severe illness is less frequent than in adults. Prehospital comorbidities appear to be an important factor in children.	Shekerdemian LS, Mahmood NR, Wolfe KK, et al. Characteristics and Outcomes of Children With Coronavirus Disease 2019 (COVID-19) Infection Admitted to US and Canadian Pediatric Intensive Care Units [published online 2020 May 11]. JAMA Pediatrics. doi:10.1001/jamapediatrics.2020.1948
Infant, Kawasaki Disease, CRP, IVIG, India	10-May-20	Novel Coronavirus Mimicking Kawasaki Disease in an Infant	Indian Pediatrics	Clinical Case Letter	A 4-month-old infant presented with a 4-day history of high-grade fever and developed an erythematous macular rash over the trunk, palm and sole on the second day. On admission, the child was hemodynamically stable and breastfeeding normally but had red lips, congested throat, and small cervical lymphadenopathy. Antibiotic therapy was initiated, but fever continued until the third day when he developed non-purulent conjunctivitis with left subconjunctival hemorrhage. Fever subsided 24 hours after IV immunoglobulin therapy was started, following when his SARS-CoV-2 RT-PCR test revealed a positive result. Over the course of hospitalization, a rise of C-reactive protein was observed without any neutrophilia, lymphopenia, or organ dysfunction.	This case of Kawasaki-like disease is a novel presentation among young children in India, still in the early stage of the pandemic.	Acharyya BC, Acharyya S, Das D. Novel Coronavirus Mimicking Kawasaki Disease in an Infant [published online 2020 May 22]. Indian Pediatr. S097475591600184.
Pregnancy, neonates, maternal outcomes, delivery, vertical transmission, breastfeeding	10-May-20	COVID-19 and Pregnancy - Where Are We Now? A Review	Journal of Perinatal Medicine	Review	Currently, there is no evidence that pregnant women are more susceptible to SARS-CoV-2 infection than the general population. Premature rupture of membranes, premature labor and fetal distress have been observed in women with COVID-19 in their third trimester. There are no data on complications of SARS-CoV-2 infection before the third trimester. COVID-19 infection should not be the only indication for delivery but can indicate surgical delivery if necessary to improve maternal oxygenation; decision on delivery mode should be individualized. Vertical transmission of SARS-CoV-2 from the pregnant woman to the fetus has not been proven. As the virus is absent in breast milk, the experts encourage breastfeeding for neonatal acquisition of protective antibodies.	Current evidence on COVID-19 in pregnancy, neonatal outcomes, and breastfeeding are reviewed.	Rajewska A, Mikołajek-Bedner W, Lebdowicz-Knul J, Sokołowska M, Kwiatkowski S, Torbé A. COVID-19 and pregnancy - where are we now? A review [published online 2020 May 10]. J Perinat Med. doi:10.1515/jpm-2020-0132
Pregnancy, perinatal depression, anxiety, self-harm, pandemic announcement, China	10-May-20	Perinatal depressive and anxiety symptoms of pregnant women along with COVID-19	American Journal of Obstetrics & Gynecology	Original Research	A multi-center cross-sectional study was initiated in early December 2019 to identify mental health concerns in pregnancy using the Edinburgh Postnatal Depression Scale (EPDS). This study provided a unique opportunity to compare the mental status of pregnant women before and after the announcement of the COVID-19 epidemic. A total of 4124 pregnant women during their third trimester from 25 hospitals in 10 provinces across China were evaluated. Of these, 1285 pregnant women, who were assessed after the public declaration of the COVID-19 epidemic, had significantly higher	This study found higher rates of depressive symptoms and thoughts of self-harm among pregnant women after the announcement of the COVID-19 pandemic, compared to	Wu Y, Zhang C, Liu H, et al. Perinatal depressive and anxiety symptoms of pregnant women along with COVID-19 outbreak in China [published online 2020 May 10]. Am J Obstet Gynecol.

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		outbreak in China			rates of depressive symptoms (26.0% vs 29.6%, *P*=0.02) than 2839 women assessed pre-epidemic announcement. These women were also more likely to endorse thoughts of self-harm (*P*=0.005). The depressive rates were positively associated with the number of newly confirmed COVID-19 cases (*P*=0.003), suspected infections (*P*=0.004), and death cases per day (*P*=0.001). Pregnant women who were underweight pre-pregnancy, primiparous, <35 years old, employed full-time, middle income, and had appropriate living space were at increased risk of developing depressive and anxiety symptoms during the outbreak.	pregnant women evaluated pre-announcement in China.	doi:10.1016/j.ajog.2020.05.009
Pregnancy, hyper-coagulability, fibrinolysis, regional anesthesia, France	10-May-20	Coagulation changes and thromboembolic risk in COVID-19 pregnant patients	Anaesthesia Critical Care & Pain Medicine	Review	Appearing as a result of the inflammatory state induced by COVID-19, defects in coagulation may play a direct pathogenic role by causing thrombi in various organs, reducing blood flow in capillaries and aggravating local injury. These phenomena are likely to occur in the lungs and other major organs, leading to multi-organ failure and even death. In pregnant women, the interpretation of coagulation changes may be more challenging as they are superimposed on the physiological changes induced by pregnancy. In normal pregnancy, fibrinogen concentration and D-dimer values are increased, the platelet count often falls, and the plasma concentration of most coagulation factors increases. In COVID-19 illness, additional coagulation changes may occur and may increase the thrombo-embolic risk especially in the postpartum period. In light of these risks, the report presents considerations for obstetric anesthesia.	Hypercoagulability related to COVID-19 may increase thromboembolic risk in pregnant patients with disease.	Benhamou D, Keita H, Bouthors AS; CARO working group. Coagulation changes and thromboembolic risk in COVID-19 pregnant patients [published online 2020 May 10]. Anaesth Crit Care Pain Med. doi:10.1016/j.accpm.2020.05.003
Breastfeeding, breast milk, immune system development, WHO	10-May-20	The Importance of Continuing Breastfeeding During COVID-19: In Support to the WHO Statement on Breastfeeding During the Pandemic	The Journal of Pediatrics	Editorial	This commentary draws upon a statement and recommendations recently issued by the Regional Office for Europe of the WHO with the contribution of main European pediatric organizations. According to the WHO, mothers with suspected or confirmed COVID-19 can breastfeed their newborns as long as they take appropriate precautions. Breast milk encloses various antimicrobial substances, anti-inflammatory components and factors that promote the development of the immune system and reduce the occurrence of respiratory tract infections. There is no evidence to date to suggest the novel coronavirus can pass to infants through breast milk, although the possibility cannot be ruled out.	This editorial draws upon WHO recommendations to provide guidance in support of breastfeeding and related safety measures during the COVID-19 pandemic	Williams J, Namazova-Baranova L, Weber M, et al. The importance of continuing breastfeeding during COVID-19: in support to the WHO statement on breastfeeding during the pandemic [published online 2020 May 10]. J Pediatr. doi:10.1016/j.jpeds.2020.05.009
Neonates, third trimester pregnancy, lymphocyte subsets, cytokines, immunologic status, China	10-May-20	The Immunologic Status of Newborns Born to SARS-CoV2-infected Mothers in Wuhan, China	Journal of Allergy and Clinical Immunology	Original Article	Immunologic dysfunction due to COVID-19 is closely related to clinical prognosis, and the inflammatory response of pregnant women may affect the directional differentiation and function of fetal immune cells. Of 51 newborns from mothers with COVID-19 in the third trimester, none showed fever or respiratory distress during hospitalization. Detection of SARS-CoV-2 nucleic acid in pharyngeal swabs was negative. Except for the low level of CD16-CD56 cells, the count and proportion of lymphocytes, CD3, CD4, CD8, and CD19 were all in the normal range. Moreover, the serum IgG and IgM levels were within the normal range, while IL-6 showed increased levels. There was no correlation between maternal COVID-19 duration and the lymphocyte subsets or cytokine levels (IFN-γ, IL-2, IL-4, IL-6, IL-10 and TNF-α) in newborns. There was a positive correlation between IL-6 and IL-10 levels and CD16-CD56 cells. One (1.96%) infant with an extremely elevated IL-6 concentration developed necrotizing enterocolitis in the third week after	In this study, COVID-19 in the third trimester did not significantly affect the cellular and humoral immunity of the fetus, and there was no evidence that the differentiation of lymphocyte subsets was seriously unbalanced.	Liu P, Zheng J, Yang P, et al. The immunologic status of newborns born to SARS-CoV2-infected mothers in Wuhan, China [published online 2020 May 10]. J Allergy Clin Immunol. doi:10.1016/j.jaci.2020.04.038

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					birth, and the remaining 50 infants did not show abnormal symptoms through the end of the follow-up period.		
Child, multi-system inflammatory syndrome, Kawasaki Disease, IVIG, tocilizumab, India	10-May-20	Hyper-inflammatory Syndrome in a Child With COVID-19 Treated Successfully With Intravenous Immunoglobulin and Tocilizumab	Indian Pediatrics	Clinical Case Letter	In this case report, an 8-year-old boy was admitted to a local hospital with a 4-day history of fever, cough, and throat pain. On admission, RT-PCR for SARS-CoV-2 was negative. The patient's fever and respiratory symptoms worsened, despite empirical antibiotic therapy, so he was admitted to a referral hospital. Examination showed fever, hypotension, generalized skin rash, bulbar conjunctivitis, cracked lips, strawberry tongue, edema of limbs, tender hepatomegaly and abdominal distention. Investigations showed low hemoglobin, neutrophil predominant leukocytosis, elevated platelet count and erythrocyte sedimentation rates, hyper-ferritinemia, hypoalbuminemia, hyponatremia, and 2+ proteinuria. Repeat nasopharyngeal RT-PCR was positive, and multiplex PCR of nasopharyngeal aspirate detected Coronavirus OC43 and Human Rhino/Enterovirus. Initial differential diagnoses included pneumonia with septic shock, COVID-19 pneumonitis, Kawasaki Disease, and toxic shock syndrome. Following treatment with IVIG and tocilizumab, the patient's fever spikes settled, and inflammatory parameters decreased to baseline. He recovered completely after two weeks of illness. A recent case definition for "Pediatric multisystem inflammatory syndrome temporally associated with COVID-19" has been suggested and is described in this report. The immunopathology behind this phenomenon remains unknown.	This case report adds to growing recognition of a small number of children presenting with a multisystem inflammatory syndrome, sharing features with Kawasaki Disease, that may be associated with COVID-19. Tocilizumab may prove to be an effective second line agent in IVIG refractory children with this hyper-inflammatory syndrome.	Balasubramanian S, Nagendran TM, Ramachandran B, Ramanan AV. Hyper-inflammatory Syndrome in a Child With COVID-19 Treated Successfully With Intravenous Immunoglobulin and Tocilizumab [published online 2020 May 10]. Indian Pediatr. 2020;S097475591600180.
Nutritional status, food insecurity, routine nutrition services, micronutrient supplementa-tion, vulnerable populations	10-May-20	COVID-19 Pandemic - Are We Heading From Health Crisis Towards An Unprecedented Nutrition Crisis?	Current Topics in Medicinal Chemistry	Editorial	The persisting COVID-19 pandemic will have long-lasting effects on the masses i.e. on nutritional status, health, economies and the global food chain. Necessary steps to maintain and promote healthy nutritional status include effective integration of nutrition-supportive measures into COVID-19 action plans, while safeguarding prevailing nutrition programs, particularly for vulnerable populations (children, pregnant women, and the elderly). In addition, awareness must be generated through mobile phone surveys and nutrition counselling through media, regarding the importance of high-quality diets, appropriate infant and young child feeding practices, optimal breastfeeding techniques, and dietary diversity. Keeping in mind the predictable upsurge in malnutrition, due to food insecurity and diversion of healthcare resources away from nutrition programs and towards COVID-19, it is important to provide timely screening, referral services, and micronutrient supplements to vulnerable populations.	This editorial highlights concerns related to and potential strategies to mitigate the growing nutritional crisis due to the food insecurity and disruptions in routine service delivery caused by the COVID-19 pandemic, particularly for vulnerable populations.	Kumar Y, Jain A. COVID-19 Pandemic - Are We Heading From Health Crisis Towards An Unprecedented Nutrition Crisis? [published online 2020 May 10]. Curr Top Med Chem. doi:10.2174/1568026620999200511092629
Children, emergency department, respiratory infection clinic, asthma, Melbourne, Australia	10-May-20	SARS-CoV-2 Testing and Outcomes in the First 30 Days After the First Case of COVID-19 at an Australian Children's Hospital	Emergency Medicine Australia	Original Research	In this retrospective cohort study at a tertiary children's hospital in Melbourne, Australia, early data were collected on 433 pediatric patients (0-18 years) who presented to the Emergency Department (331, 65%) or Respiratory Infection Clinic (102, 24%) and were tested for SARS-CoV-2, between March 21 and April 19, 2020. SARS-CoV-2 was detected in 4 (0.9%) patients, none of whom were admitted to the hospital or developed severe disease. Of these SARS-CoV-2 positive patients, 1/4 (25%) had a comorbidity, which was asthma. Of the SARS-CoV-2 negative patients, 196/429 (46%) had comorbidities. Risk factors (e.g. contact history with confirmed cases or overseas travel) for COVID-19 were identified in 4/4 SARS-CoV-2 positive patients and 47/429 (11%) SARS-CoV-2 negative patients.	At a tertiary children's hospital in Australia, early data show very low rates of SARS-CoV-2 positive cases in children, none of whom developed severe disease.	Ibrahim LF, Tosif S, McNab S, et al. SARS-CoV-2 Testing and Outcomes in the First 30 Days after the First Case of COVID-19 at an Australian Children's Hospital [published online 2020 May 10]. Emerg Med Australas. doi:10.1111/1742-6723.13550

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Child, Kawasaki disease shock syndrome, hypotension, inflammatory markers, USA	9-May-20	Incomplete Kawasaki Disease in a Child With Covid-19	Indian Pediatrics	Clinical Case Letter	This case report describes a 5-year-old previously healthy African American male admitted to the pediatric inpatient floor with daily fever for 8 days. He had a history of rash, swelling, conjunctivitis, decreased appetite, diarrhea, dysuria, and abdominal pain. He had been treated with cefdinir for positive rapid streptococcal antigen test 4 days prior, without clinical improvement. Physical examination showed dry, cracked, erythematous lips, non-exudative conjunctivitis, and bilateral cervical lymphadenopathy but no rash. Clinically, he met criteria for incomplete Kawasaki disease (KD). Initial laboratory workup was significant for leukocytosis, thrombocytopenia, elevated inflammatory markers, hyponatremia, pyuria, hypoalbuminemia, elevated liver enzymes, elevated troponins, and negative rapid influenza A/B antigens. SARS-CoV-2 RNA was detected on RT-PCR from his nasopharyngeal swab. Echocardiogram showed a small global pericardial effusion. He was transferred to the PICU due to hypotension and received fluid boluses and IV immunoglobulin. He was briefly supported with high flow nasal cannula for tachypnea. The patient recovered with supportive therapy for COVID-19 and was discharged after 6 days. Association between COVID-19 and KD shock syndrome has been speculated but warrants further investigation.	In this case report, a 5-year-old child with SARS-CoV-2 infection developed hypotension with elevated inflammatory markers, indicating Kawasaki Disease shock syndrome (KDSS). The association between COVID-19 and KDSS warrants further investigation.	Rivera-Figueroa EI, Santos R, Simpson S, Garg P. Incomplete Kawasaki Disease in a Child with Covid-19 [published online 2020 May 9]. Indian Pediatr. 2020;S097475591600179.
Pregnancy, early postpartum, intensive care, mechanical ventilation, maternal morbidity, non-pregnant women, Sweden	9-May-20	Severe Maternal Morbidity and Mortality Associated With COVID-19: The Risk Should Not Be Down-Played	Acta Obstetricia et Gynecologica Scandinavica	Special Editorial	In a recent report released by the Public Health Agency of Sweden, between Match 19 and April 10, 2020, a total of 53 women with COVID-19 (range: 20-45 years) received intensive care; of these, 13 were or had recently been pregnant. 6/13 pregnant and early postpartum women required invasive mechanical ventilation. An analysis based on an estimate of the total number of pregnant and non-pregnant women in the population of Sweden revealed that the relative risk (RR) for pregnant and early postpartum women (<1 week) with COVID-19 to receive intensive care was 5.4 (95% CI 2.89-10.08) and to require invasive mechanical ventilation was 4.0 (95% CI 1.75-9.14), compared to non-pregnant women of similar age. This risk remained higher (RR 3.5; 95% CI 1.86-6.52) even after accounting for 50% more pregnancies in the denominator to include possible miscarriages and intrauterine deaths. Although the results are based on a relatively small number of cases, the potential elevated risk of maternal morbidity and mortality is significant and should not be ignored.	The authors estimate relative risks of pregnant and early postpartum women with COVID-19 to require intensive care and mechanical ventilation, compared to their non-pregnant counterparts in Sweden.	Westgren M, Pettersson K, Hagberg H, Acharya G. Severe maternal morbidity and mortality associated with COVID-19: The risk should not be down-played [published online, 2020 May 9]. Acta Obstet Gynecol Scand. 2020. doi:10.1111/aogs.13900
Children, hygiene, asymptomatic transmission, face masks	9-May-20	To mask or not to mask children to overcome COVID-19.	European Journal of Pediatrics	Original Article	To reduce the role of asymptomatic or poorly symptomatic people in COVID-19 transmission, universal use of face masks in addition to hand hygiene and safety distance seems extremely useful. Consequently, preparing the healthy child to use face masks is strongly needed. In addition to the need for masks available in different sizes, the use of masks in children must be preceded by parental and school-based guidance on issues of hygiene, with the aim of ensuring cooperation of children.	Children must be appropriately guided to learn how to use face masks, in order to help reduce asymptomatic COVID-19 transmission.	Esposito S, Principi N. To mask or not to mask children to overcome COVID-19 [published online 2020 May 9]. Eur J Pediatr. doi:10.1007/s00431-020-0367-9
Children, chilblain-like lesions, peak incidence, Spain	9-May-20	Chilblains in Children in the Setting of COVID-19 Pandemic	Pediatric Dermatology	Original Article	Acral lesions on the hands and feet, closely resembling chilblains, have been observed during the peak incidence of the COVID-19 pandemic. In this retrospective review of 22 children and adolescents with chilblain-like lesions in Madrid, Spain, all had lesions of the toes or feet, with 3 also having lesions of the fingers. Pruritus and mild pain were the only skin symptoms elicited, and only 10 had mild respiratory and/or GI symptoms. None had fever. Coagulation tests, hemogram, serum chemistry and lupus	Acute chilblain-like lesions in children and adolescents are reported during a period of peak COVID-19 incidence in Madrid, Spain. These lesions are	Andina D, Noguera-Morel L, Bascuas-Arribas M, et al. Chilblains in children in the setting of COVID-19 pandemic [published online, 2020 May 9]. Pediatr

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					anticoagulant were normal in all patients tested. One out of 16 tested cases had elevated D-dimer results, but without systemic symptoms or other lab anomalies. SARS-CoV-2 detection by PCR was positive in 1 out of 19 cases tested. Skin biopsies obtained in 6 patients were consistent with chilblains. On follow-up, all cases showed spontaneous marked improvement or complete healing.	mildly symptomatic, often requiring no therapy.	Dermatol. 2020. doi:10.1111/pde.14215
Pediatrics, oncology, cancer, immunosuppression, ICU	8-May-20	COVID-19 in pediatric oncology from French pediatric oncology and hematology centers: High risk of severe forms?	Pediatric Blood and Cancer	Letter to the Editor	In this letter, the authors address potential risks for pediatric oncology patients with COVID-19 as a result of treatment-induced immune suppression. An initial report from pediatric oncology centers in France identified 33 confirmed cases of COVID-19 in oncology patients (as of April 16, 2020). The authors describe 5 of the children who required ICU care. 3 patients (two boys aged 4 and 13 years, and a 19- year-old girl) were diagnosed with relapsed B-cell acute lymphoblastic leukemia and were immunocompromised by chemotherapeutic or immuno-suppressive drugs. Among them, the 13- year-old boy had recently received an allogenic hematopoietic stem cell transplantation (HSCT). The 4th patient was a 5-year-old girl and also recently underwent an allogeneic HSCT for sickle cell disease. The last patient was a 7-year-old girl diagnosed with a progressive high-grade glioma. All patients were transferred to the ICU for rapid respiratory decompensation. At the time of writing, there were no deaths to report. One patient recovered and was discharged from ICU. The authors conclude that while it is too early to give definitive outcomes for these patients, all stakeholders should be aware of a potentially higher risk of severe forms of COVID-19 in oncology patients compared to immuno-competent children.	In this letter, the authors describe 5 pediatric oncology patients in France who required ICU care for COVID-19. The authors conclude that stakeholders should be aware of a potentially higher risk of severe forms of COVID-19 in oncology patients compared to immuno-competent children.	André N, Rouger-Gaudichon J, Brethon B, et al. COVID-19 in pediatric oncology from French pediatric oncology and hematology centers: High risk of severe forms?. Pediatr Blood Cancer. 2020;67(7): doi:10.1002/pbc.28392
Children, foreign body, asymptomatic infection, Personal protective equipment, United States	8-May-20	Asymptomatic COVID-19 infection in a child with nasal foreign body	International Journal of Pediatric Otorhinolaryngology	Case report	The authors report the case of a 4-year-old child of a healthcare worker presenting to a tertiary care otolaryngology practice in Boston, United States. The patient had a one-week history of unilateral nasal obstruction due to foreign body insertion. Before bringing the patient to the operating room, COVID-19 testing was pursued, given concerns about the potential for asymptomatic infection in the pediatric population. The patient underwent RT-PCR testing, and SARS-CoV-2 RNA was detected. Due to concerns for potential infection and risk of aspiration, the decision was made to proceed with foreign body removal even though the patient tested positive for COVID-19. Upon arrival at the hospital, the patient and her mother wore face masks and were immediately placed in a negative pressure isolation room. Operating room personnel was minimized, and all wore battery-powered air-purifying respirators (PAPR) in addition to standard precaution attire. The patient was not premedicated prior to induction of general anesthesia for earlier discharge. Nasal endoscopy was carefully performed, taking care to minimize the disruption of the nasal mucosa or secretions During extubation, staff remained greater than six feet away from the patient. A mask was then immediately placed once respirations were deemed adequate. One week after foreign body removal, both the patient and her mother remain asymptomatic	The authors present the case of an asymptomatic child with a nasal foreign body who was found to be infected with SARS-CoV-2. They discuss the importance of preprocedural testing and considerations of personal protective equipment, particularly while caring for children, in the COVID-19 era.	Diercks GR, Park BJ, Myers LB, Kwolek CJ. Asymptomatic COVID-19 infection in a child with nasal foreign body. Int J Pediatr Otorhinolaryngol. 2020 Aug;135:110092. doi: 10.1016/j.ijporl.2020.110092. Epub 2020 May 8. PMID: 32480136; PMCID: PMC7205643.
Family planning,	8-May-20	Family planning: an essential	The European Journal of	Brief Report	The authors discuss the impact of COVID-19 on sexual reproductive health (SRH) worldwide and stress the importance of ensuring that women and	Many contraceptive provision and abortion	Luis Bahamondes & Maria Y. Makuch (2020) Family

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contraception, sexual reproductive health		health activity in the pandemic of SARS-CoV-2	Contraception & Reproductive Healthcare		men maintain access to contraceptive services during the pandemic. Contraceptive provision is considered by many policy makers and directors of medical institutions as a non-essential activity and as such, many contraceptive provision and abortion services have closed to reduce risk of contamination both to health providers and patients. Authors suggest creative ways to offer services that do not require personal contacts, including the limitation of face-to-face appointments and the implementation of consultation strategies that reduce physical contact. Furthermore, authors highlight the opportunity to counsel pregnant women on family planning options and to deliver postplacental and postpartum contraception methods prior to hospital discharge.	services are considered "non-essential" and have closed during the COVID-19 pandemic. Authors stress the need for consistent guidance on family planning and offer safe ways for healthcare workers to provide contraceptive methods.	planning: an essential health activity in the pandemic of SARS-CoV-2, The European Journal of Contraception & Reproductive Health Care, 25:4, 319-320, DOI: 10.1080/13625187.2020.1768368
COVID-19, clinical embryology, fertility	8-May-20	COVID-19 and fertility: a virtual reality	Reproductive Biomedicine Online	Original Article	Although there is no evidence yet that the virus causing COVID-19 might have negative effects on IVF outcomes, fertility treatments have been postponed helping diminish and eliminate the spread of the virus. The authors aim to provide information about possible effects of the virus on gametes and embryos and the normal functioning of the embryology laboratory. Considering previous data, the authors suggest that SARS-CoV-2, through an activation of pathogenic pathways, may increase sperm DNA fragmentation, and may affect oocyte performance through mechanisms that increase oxidative stress. In addition, SARS-CoV-2 may have a direct effect on spermatozoa or follicles/oocytes due to the ACE2 receptor and its role in development and reproduction. With known scientific knowledge and understanding of SARS-CoV-2, the authors make note of a number of changes needed to resume embryology laboratory functioning. The authors conclude that the SARS-CoV-2 pandemic has brought challenges to the global reproductive community, with possible detrimental consequences for couples seeking infertility treatment.	The authors provide a number of different possible effects of SARS-CoV-2 on gametes and embryos, despite there being no clear evidence yet that the virus has negative effects on IVF outcomes, and note the changes needed to continue normal function of the embryology laboratory.	Anifandis G, Messini CI, Daponte A, Messinis IE. COVID-19 and fertility: a virtual reality. Reprod Biomed Online. 2020;41(2):157-159. doi:10.1016/j.rbmo.2020.05.001
Trained immunity, immunity, BCG vaccination	8-May-20	Could BCG Vaccination Induce Protective Trained Immunity for SARS-CoV-2?	Frontiers in Immunology	Perspective Article	This article analyzed the number of positive cases and deaths in different countries and correlated them with the inclusion of Bacillus Calmette-Guérin (BCG) vaccination at birth in their national vaccination programs. Results indicated that those countries where BCG vaccination is given at birth have shown a lower contagion rate and fewer COVID-19-related deaths, suggesting that this vaccine may induce trained immunity that could confer some protection for SARS-CoV-2. These data suggest that the BCG vaccination prevents not only SARS-CoV-2 infection but also reduces the probability of developing a severe case of the disease, improving survival rates. Since BCG is a specific vaccine against *M. tuberculosis* infection and it has been shown to induce the development of trained immunity, these data suggest a crucial role for this vaccine in the development of unspecific memory against respiratory viruses, like SARS-CoV-2.	BCG revaccination could be considered for its broad availability and low cost as a good strategy for the activation of trained immunity in the case of COVID-19.	Covián C, Retamal-Díaz A, Bueno SM, Kalergis AM. Could BCG Vaccination Induce Protective Trained Immunity for SARS-CoV-2?. Front Immunol. 2020;11:970. doi:10.3389/fimmu.2020.00970
General pediatrics, new onset type 1 diabetes, diabetic keto-acidosis, Italy	8-May-20	Unintended Consequences of COVID-19: Remember General Pediatrics	The Journal of Pediatrics	Brief Report	COVID-19 has unintended consequences on standard pediatric care. This report describes cases of delayed diagnosis of new onset type 1 diabetes, leading to presentation in severe diabetic ketoacidosis, with the aim of highlighting the need to remember basic pediatric principles to provide optimal care.	The authors of this report draw attention to cases of delayed type 1 diabetes diagnosis in children, as unintended consequences of the COVID-19 pandemic.	Cherubini V, Gohil A, Addala A, et al. Unintended Consequences of COVID-19: Remember General Pediatrics [published online 2020 May 8]. J Pediatr.

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							doi:10.1016/j.jpeds.2020.05.004
Pregnancy, breastfeeding, breast milk samples, viral clearance, China	8-May-20	Can SARS-CoV-2-infected women breastfeed after viral clearance?	Journal of Zhejiang University-SCIENCE B	Correspondence	It is unclear whether breastfeeding transmits SARS-CoV-2 virus from previously infected and recovered mothers to their newborns. This report presents the clinical course of a pregnant woman (35 weeks and 2 days of gestation at admission) with COVID-19 and viral RNA measurements in the patient's breastmilk samples at different time points after delivery. At delivery, RT-PCR tests of maternal serum, urine, stool, cord blood, amniotic fluid, and placenta were negative for SARS-CoV-2. An oropharyngeal swab from the newborn was obtained immediately after birth and was negative. The newborn was isolated and subsequent oropharyngeal swabs, blood, stool, and urine remained negative. Beginning on day 4 of hospitalization, repeated RT-PCR analyses of the mother's sputum and breastmilk were consistently negative for SARS-CoV-2 viral RNA. The authors conclude that breastfeeding can be practiced after an isolation period is completed and repeat testing is normal. In the meantime, breast pumping is recommended to preserve benefits of human milk for newborns and mothers.	Repeated RT-PCR analyses of breast milk samples in a postpartum mother with COVID-19 were consistently negative, contributing to growing evidence that SARS-CoV-2 is not transmitted through breast milk.	Lang GJ, Zhao H. Can SARS-CoV-2-infected women breastfeed after viral clearance?. J Zhejiang Univ Sci B. 2020;21(5):405-407. doi:10.1631/jzus.B2000095
Children, neonatal infection, clinical characteristics, vertical transmission, systematic review	8-May-20	Characterisation of COVID-19 Pandemic in Paediatric Age Group: A Systematic Review and Meta-Analysis	Journal of Clinical Virology	Review Article	This systematic review and meta-analysis analyze articles on pediatric cases of COVID-19, published up to April 2, 2020 in PubMed and Google Scholar. Of 251 children (median age: 6.5 years, range: 0-12 years) reported in 11 studies, the most frequently reported symptoms were cough (49%, 95% CI: 42 - 55%) and fever (47%, 95% CI: 41- 53%). Lymphopenia and elevated Procalcitonin levels were recorded in 17 cases (21%, 95% CI: 12 - 30%) and 22 cases (28%, 95% CI: 18 - 37%) respectively. The case fatality rate was 0%. In addition, from 6 studies reviewed to determine vertical transmission risk, 4/58 neonates (6.8%) born to COVID-19 confirmed mothers tested positive on various samples for the disease. The affected neonates were all males and delivered by cesarean section. One neonate, who tested negative for SARS-CoV-2, died from multiorgan failure and disseminated intravascular coagulation. All samples of breast milk, amniotic fluid, cord blood, placenta, and vaginal swab in this review tested negative for SARS-CoV-2.	This systematic review evaluates literature on COVID-19 in children and reports of neonatal outcomes to analyze disease characterization in the pediatric age group including the possibility of vertical transmission.	Mustafa NM, A Selim L. Characterisation of COVID-19 Pandemic in Paediatric Age Group: A Systematic Review and Meta-Analysis [published online 2020 May 8]. J Clin Virol. doi:10.1016/j.jcv.2020.104395
Pregnancy, neonates, temporary separation, skin-to-skin contact, breastfeeding	8-May-20	Should Infants Be Separated from Mothers with COVID-19? First, Do No Harm	Breastfeeding Medicine	President's Corner	The World Health Organization (WHO) recommends that infants and mothers with suspected or confirmed COVID-19 “should be enabled to remain together and practice skin-to-skin contact...” Breastfeeding is strongly recommended. In contrast, the U.S. Centers for Disease Control and Prevention (CDC) advises that facilities “consider temporarily separating the mother from her infant” until the mother is no longer considered contagious. During separation, women may express breast milk to be fed to the newborn by a healthy caregiver. This article considers the following risks of temporary separation. 1) Separation may not prevent infection. 2) Interruption of skin-to-skin care disrupts newborn physiology. 3) Separation stresses mothers.4) Separation interferes with provision of maternal milk to the infant, disrupting immune protection. 5) Disruptions in breastfeeding increase the risk of infant hospitalization for pneumonia. 6) Separate isolation doubles the burden on the health system.	This article presents potential risks of temporary separation of infants and mothers with COVID-19, as advised by the U.S. CDC.	Stuebe A. Should Infants Be Separated from Mothers with COVID-19? First, Do No Harm. Breastfeed Med. 2020;15(5):351-352. doi:10.1089/bfm.2020.29153.ams

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Vitamin C, ascorbic acid, systematic review	8-May-20	Vitamin C for the treatment of COVID-19: A living systematic review	medRxiv	Preprint (not peer reviewed)	This living systematic review aims to provide a timely, rigorous and continuously updated summary of the evidence available on the role of vitamin C in the treatment of patients with COVID-19. Results will be pooled using meta-analysis and the GRADE system will be applied to assess the certainty of evidence for each outcome. A living, web-based version of this review will be openly available during the COVID-19 pandemic and changed whenever there are substantial updates.	The authors introduce a living, web-based systematic review that will provide updated summaries of available evidence on the use of vitamin C in treating COVID-19.	Baladia E, Pizarro AB, Rada G. Vitamin C for the treatment of COVID-19: A living systematic review [published online 2020 May 8]. medRxiv. doi:10.1101/2020.04.28.20083360
Children, pediatric morbidity and mortality, ICU admission	8-May-20	COVID-19 Infection in Children: Estimating Pediatric Morbidity and Mortality	medRxiv	Preprint (not peer reviewed)	Data on pediatric cases were available from government websites for 23 of 70 countries with a minimum of 1000 reported cases by April 13, 2020. Of 424,978 cases in these 23 countries, 8113 (1.9%) occurred in children. Nine publications provided data from 4251 cases in 4 additional countries. Combining data from the websites and publications, admission occurred in 330 of 2361 cases (14%) where data were provided. The ICU admission rate was 2.2% of confirmed cases (44/2031) and 7.2% of admitted children (23/318), where data were provided on these parameters. Death was reported for 15 cases. The true incidence of pediatric infection and disease will only be known once testing is expanded to individuals with less severe or no symptoms.	Children accounted for 1.9% of confirmed cases reported from both publications and government websites. Admission rates vary from 0.3 to 10% of confirmed cases, with about 7% of admitted children requiring ICU care.	Forbes MB, Mehta K, Kumar K, et al. COVID- 19 Infection in Children: Estimating Pediatric Morbidity and Mortality [published online 2020 May 8]. medRxiv. doi:10.1101/2020.05.05.20091751
Human milk, immune response, secretory IgA antibodies	8-May-20	Evidence of a significant secretory-IgA-dominant SARS-CoV-2 immune response in human milk following recovery from COVID-19	medRxiv	Preprint (not peer reviewed)	The extent of the human milk immune response to SARS-CoV-2 is unknown. This response is critical for infants and young children, who experience mild COVID-19 disease but are likely responsible for significant virus transmission. Perhaps even more significant is the fact that milk anti-bodies (Abs) could be purified and used as a COVID-19 therapeutic, given they would likely be of the secretory (s) class and highly resistant to proteolytic degradation in respiratory tissue. In this preliminary report, 15 milk samples obtained from donors previously-infected with SARS-CoV-2, as well as 10 negative control samples obtained pre-pandemic, were tested for reactivity to the Receptor Binding Domain of the SARS-CoV-2 Spike protein by ELISA assays measuring IgA, IgG, IgM, and secretory Ab. 80% of samples obtained post-pandemic exhibited IgA reactivity, and all these samples were also positive for secretory Ab reactivity, suggesting the IgA is predominantly sIgA. COVID-19 group mean optical density (OD) values of undiluted milk were significantly greater for IgA (p<0.0001), secretory-type Abs (p<0.0001), and IgG (p=0.017), but not for IgM, compared to pre-pandemic group mean values.	These data indicate that there is strong sIgA-dominant SARS-CoV-2 immune response in human milk after infection.	Fox A, Marino J, Amanat F, et al. Evidence of a significant secretory-IgA-dominant SARS-CoV-2 immune response in human milk following recovery from COVID-19 [published online 2020 May 8]. medRxiv. doi:10.1101/2020.05.04.20089995
Pediatrics, procalcitonin, biomarkers, area under curve, differential diagnosis, viral co-infection	8-May-20	Clinical features of suspected pediatric patients with 2019 novel coronavirus infection and the role of procalcitonin in early differential diagnosis	medRxiv	Preprint (not peer reviewed)	As a traditional biomarker, procalcitonin (PCT) has shown superior value in differentiating bacterial and viral infections as well as bacterial co-infections. However, the role of PCT in differentiating between viruses or viral co-infections in children remains unknown. This retrospective analysis aims to investigate the role of PCT in early differential diagnosis of COVID-19 in children. Of 77 suspected pediatric cases of COVID-19, 39 (50.6%) were confirmed. Of these, 4 (5.2%) had viral co-infection. Compared with the non-COVID-19 group (n=33) and the co-infection group (n=4), PCT of the COVID-19 confirmed group (n=35) was significantly reduced (0.05ng/ml [0.029-0.076] vs 0.103ng/ml [0.053-0.21]; P<.001 and vs. 0.144ng/ml [0.109-2.26]; P=.003). The area under curve (AUC) of the overall model is 0.817 ([95%CI]	The authors of this study conclude that, with moderate efficacy, PCT can provide an important basis for differentiating COVID-19 alone, other viral infection, or viral coinfection.	Peng D, Zhang J, Xu Y, Liu Z, Wu P. Clinical features of suspected pediatric patients with 2019 novel coronavirus infection and the role of procalcitonin in early differential diagnosis [published online 2020 May 8]. medRxiv. doi:10.1101/2020.04.07.20057315

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					[0.719-0.916]; *P*<.001). The AUC of PCT is 0.792 ([0.688-0.896]; *P*<.001). The cut-off value is 0.1ng/ml.		
Pregnancy, labor, social distancing, social support	8-May-20	Coronavirus Disease 2019 (COVID-19) and Pregnancy Combating Isolation to Improve Outcomes	Obstetrics & Gynecology	Current Commentary	With the current global pandemic, new challenges arise as social distancing and isolation have become the standard for safety. Evidence supports the protective benefits of social connections and support during pregnancy and labor. As health care professionals take appropriate precautions to protect patients and themselves from infection, there must be a balance to ensure that the importance of social and emotional support during important milestones, such as pregnancy and childbirth, are not neglected. Resources are available to help pregnant women, and technology represents an opportunity for innovation in providing care.	Social and emotional support have protective benefits during pregnancy and labor and should be preserved in an era of social distancing measures.	Jago CA, Singh SS, Moretti F. Coronavirus Disease 2019 (COVID-19) and Pregnancy Combating Isolation to Improve Outcomes [published online 2020 May 8]. Obstet Gynecol. doi:10.1097/AOG.0000000000003946
Pregnancy, hospitalization, ARDS, preterm delivery, cardiac arrest, United States	8-May-20	Clinical course of severe and critical COVID-19 in hospitalized pregnancies: a US cohort study	American Journal of Obstetrics & Gynecology MFM	Original Research	This cohort study presents 64 pregnant women with COVID-19, hospitalized at 12 U.S. institutions between March 5 and April 20, 2020. 44/64 (69%) had severe disease, and 20/64 (31%) had critical disease. The following pre-existing comorbidities were observed: 25% had a pulmonary condition, 17% had cardiac disease, and the mean BMI was 34 kg/m^2. Gestational age was a mean of 29±6 weeks at symptom onset and 30±6 weeks at hospital admission. The median duration of hospital stay was 6 days for severe and 10.5 days for critical patients (p=0.01). In women with critical disease, prone positioning was performed in 20% of cases, the rate of ARDS was 70%, and re-intubation was necessary in 20%. There was one case of maternal cardiac arrest, but no cases of cardiomyopathy and no maternal deaths. 32 (50%) women in this cohort delivered during the course of hospitalization. 15/17 (88%) of pregnant women with critical COVID-19 had preterm delivery, 94% of them via cesarean. There were no stillbirths, neonatal deaths, or cases of vertical transmission.	In this study of severe and critical COVID-19 in pregnant women, there was a high rate of ARDS, one case of cardiac arrest, but no deaths reported.	Pierce-Williams R, Burd J, Felder L, et al. Clinical course of severe and critical COVID-19 in hospitalized pregnancies: a US cohort study [published online 2020 May 8]. AJOG MFM. doi:10.1016/j.ajogmf.2020.100134
Pregnancy, placental swab, fetal membrane swab, intrapartum viral exposure, vertical transmission, New York	8-May-20	Detection of SARS-COV-2 in Placental and Fetal Membrane Samples	American Journal of Obstetrics & Gynecology MFM	COVID-19 Pregnancy Research	Of 32 COVID-19 positive pregnant patients who gave birth between March 1 and April 20, 2020 at NYU Langone Health, placental or membrane swabs were collected from 11 patients. Placental swabs were obtained from the amniotic surface after clearing the surface of maternal blood. Membrane swabs were obtained from between the amnion and chorion after manual separation of the membranes. Three of 11 swabs were positive for SARS-CoV-2 RNA on RT-PCR. None of the neonates tested positive for SARS-CoV2 on days of life 1 through 5, and none displayed symptoms of COVID-19. While there were no clinical signs of vertical transmission, these findings raise the possibility of intrapartum viral exposure. Given the mixing of maternal and fetal fluid and tissue during delivery, the origin of detected SARS-CoV-2 RNA may represent contamination from maternal blood, amniotic fluid, or COVID-19 infection of the membranes and amniotic sac. For infants who were delivered vaginally, contamination with vaginal secretions is also a possible source. Many neonates in this study were born via cesarean section, with decreased length of exposure to potentially contaminated tissues.	SARS-CoV-2 RNA was detected in 3/11 placental or membrane swab samples, suggesting the possibility of intrapartum viral exposure. However, no neonates tested positive for COVID-19 in this study.	Penfield CA, Brubaker SG, Limaye MA, et al. Detection of SARS-COV-2 in Placental and Fetal Membrane Samples [published online 2020 May 8]. AJOG MFM. doi:10.1016/j.ajogmf.2020.100133

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Postpartum death, maternal mortality, multi-organ failure, cardiopulmonary arrest, New York	8-May-20	A Postpartum Death Due to Coronavirus Disease 2019 (COVID-19) in the United States	Obstetrics & Gynecology	Case Report	A 36-year-old patient at 37 weeks' gestation presented with 1-week history of shortness of breath, fever, cough, and sore throat, to a hospital in Queens, New York. Within 3 hours of admission, she experienced respiratory distress, required intubation, and underwent cesarean delivery and transfer to the intensive care unit. She subsequently decompensated, with multiorgan failure, sepsis, and cardiopulmonary arrest within 36 hours of initial presentation, despite aggressive supportive care and investigational therapies. The pathogenesis leading to rapid deterioration is unknown.	In this case report from Queens, New York, a third trimester pregnant patient with COVID-19 experienced rapid onset of critical complications that proved fatal, despite an indolent presentation.	Vallejo V, Ilagan JG. A Postpartum Death Due to Coronavirus Disease 2019 (COVID-19) in the United States [published online, 2020 May 8]. Obstet Gynecol. 2020. doi:10.1097/AOG.0000000000003950
Children, age-related susceptibility, host factors, protective immunity	8-May-20	Lessons From COVID-19 in Children: Key Hypotheses to Guide Preventative and Therapeutic Strategies	Clinical Infectious Diseases	Review Article	The COVID-19 pandemic reveals a peculiar trend of milder disease and lower rates of case fatality in children compared to adults. Consistent epidemiologic evidence of reduced severity of infection in children across different populations and countries suggests there are underlying biologic differences between children and adults that mediate differential disease pathogenesis. The current review summarizes the current knowledge of pediatric clinical disease, role in transmission, risks for severe disease, protective immunity, as well as novel therapies and vaccine trials for children. The authors define key hypotheses and areas for future research that can use the pediatric model of disease, transmission, and immunity to develop preventive and therapeutic strategies for people of all age groups.	Authors review hypotheses, related to host factors and protective immunity between children and adults, that may explain differences in case fatality and severity of COVID-19 disease.	Singh T, Heston SM, Langel SN, et al. Lessons from COVID-19 in children: Key hypotheses to guide preventative and therapeutic strategies [published online, 2020 May 8]. Clin Infect Dis. 2020. doi:10.1093/cid/ciaa547
Pregnancy, ARDS, preterm delivery, placental pathology, neonatal serology, San Francisco, CA	8-May-20	Acute Respiratory Distress Syndrome in a Preterm Pregnant Patient With Coronavirus Disease 2019 (COVID-19)	Obstetrics & Gynecology	Case Report	This case report describes a pregnant woman at 28 weeks' gestation, who developed acute respiratory distress syndrome (ARDS) from SARS-CoV-2 infection. Her medical history was significant for moderate asthma, gestational diabetes mellitus, obesity, and three prior cesarean deliveries. The patient's deteriorating respiratory condition prompted uncomplicated cesarean delivery; her oxygenation and respiratory mechanics improved within hours of delivery, though she required prolonged mechanical ventilation until postpartum day 10. After birth, the newborn was resuscitated and intubated for respiratory distress; he was clinically stable at day 16 of life. Neonatal oral, nasopharyngeal, and rectal swabs for SARS-CoV-2, as well as COVID-19 IgG and IgM, were all negative. Placental pathology showed acute chorioamnionitis, with no histologic evidence of other placental infections.	In this case report, early delivery improved respiratory function in a pregnant patient with ARDS requiring positive-pressure ventilation. A preterm male neonate was delivered via cesarean section and tested negative for both SARS-CoV-2 viral RNA on RT-PCR and COVID-19 serologies.	Blauvelt CA, Chiu C, Donovan AL, et al. Acute Respiratory Distress Syndrome in a Preterm Pregnant Patient With Coronavirus Disease 2019 (COVID-19) [published online, 2020 May 8]. Obstet Gynecol. 2020. doi:10.1097/AOG.0000000000003949
Maternal psychological stress, fetal growth, neuro-developmental disorders	8-May-20	The COVID-19 Pandemic, Psychological Stress During Pregnancy, and Risk of Neurodevelopmental Disorders in Offspring: A Neglected Consequence	Journal of Psycho-somatic Obstetrics & Gynecology	Letter to the Editor	Psychological stress is an emerging challenge of the COVID-19 pandemic and may be more prevalent among pregnant women than other individuals, although data are lacking. Maternal psychological distress (e.g. stress, anxiety, and depression) has been found to be a risk factor for child or adult neurodevelopmental disorders, such as attention deficit hyperactivity disorder, autism spectrum disorder, schizophrenia spectrum disorders, antisocial behavior and depressive symptoms. Psychosocial stress can augment maternal inflammation and changes in the hypothalamo-pituitary-adrenal (HPA)-axis related hormones. These changes consequently impact fetal neural development and may be involved in the etiopathogenesis of neurodevelopmental disorders of offspring.	The authors suggest that psychological stress during the COVID-19 pandemic during pregnancy may have an adverse impact on fetal growth and neurodevelopmental disorders.	Abdoli A, Falahi S, Kenarkoohi A, et al. The COVID-19 pandemic, psychological stress during pregnancy, and risk of neurodevelopmental disorders in offspring: a neglected consequence [published online, 2020 May 8]. J Psychosom Obstet Gynaecol. 2020;1-2. doi:10.1080/0167482X.2020.1761321

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COVID-19; antenatal care; pregnancy; telemedicine; teleconsultation	7-May-20	Antenatal visit model in low-risk pregnancy during pandemic COVID-19: A call for adjustments	European Journal of Midwifery	Editorial	The author discusses an antenatal visit model for use in low-risk pregnancies during the COVID-19 pandemic. According to the author, antenatal care for low-risk pregnancies usually includes 10 appointments for nulliparous women and 7 appointments for parous women. Higher numbers of appointments do not correlate with better maternal and fetal outcomes. During the pandemic, the author reports an urgent need to reduce antenatal appointments to 6 visits. With the possible exception of fetal ultrasounds, the author suggests that routine visits be provided by a midwife in-person or through telephone/virtual consultations. The risk of exposure and virus transmission will thus be minimized. However, it is imperative for care to continue, particularly for women living with adversity including poverty, homelessness, substance mis-use, asylum-seeking status, domestic abuse, or mental health problems.	The author discusses an antenatal visit model for use in low-risk pregnancies during the COVID-19 pandemic. The author recommends reducing the number of antenatal care visits to 6, and completing them through telephone/virtual consultations whenever possible, to reduce viral transmission and exposure.	Sklaveniti D. Antenatal visit model in low-risk pregnancy during pandemic COVID-19: A call for adjustments. Eur J Midwifery. 2020;4:15. doi:10.18332/ejm/121097.
UK, United Kingdom, inflammatory bowel disease, IBD, children	7-May-20	Challenges in chronic paediatric disease during the COVID-19 pandemic: diagnosis and management of inflammatory bowel disease in children	Archives of Disease in Childhood	Postscript	The author of this postscript expresses concerns that the COVID-19 pandemic is affecting physicians' ability to treat the chronic diseases of their patients, particularly inflammatory bowel disease (IBD). As elective endoscopies are prohibited where the author is located in Southampton, UK, it is difficult to diagnose and treat IBD. While the author notes there have been 10 presumed cases of IBD diagnosed in Southampton, treatment with systemic immunosuppression is a careful balance of cost and benefit without endoscopic or histological confirmation of diagnosis. There is little currently known about the effects of COVID-19 on IBD, but children with IBD could face serious harm if they do not seek treatment due to COVID-19. The author notes that many children and young people with chronic conditions are especially vulnerable during the pandemic due to disrupted care.	This postscript expresses concerns that the COVID-19 pandemic is affecting physicians' ability to treat chronic diseases in pediatric patients, particularly inflammatory bowel disease. Children and young people with chronic conditions are especially vulnerable during the pandemic due to disrupted care.	Ashton JJ, Batra A, Coelho TAF, Afzal NA, Beattie RM. Challenges in chronic paediatric disease during the COVID-19 pandemic: diagnosis and management of inflammatory bowel disease in children. Arch Dis Child. 2020 Jul;105(7):706. doi: 10.1136/archdischild-2020-319482. Epub 2020 May 7. PMID: 32381515.
Quarantine, parenthood, reproduction, Italy	7-May-20	Desire for parenthood at the time of COVID-19 pandemic: an insight into the Italian situation	Journal of Psychosomatic Obstetrics & Gynecology	Original Research	This study evaluated the impact of the COVID-19 pandemic on couples of reproductive age in Italy and on their desire for parenthood. A quantitative correlational research study based on a web survey was conducted among Italian men and women 18 to 49 years of age in heterosexual stable relationships. The self-administered questionnaire was created using Google Forms and posted on chats and social networks three weeks after the beginning of the lockdown in Italy. Participants were asked about their mood before and during the quarantine using a scale from 1 to 10 (1 = no wellbeing; 10 = total wellbeing). Couples' quality of life and their reproductive desire were evaluated. 1482 respondents were included: 944 women (63.7%) and 538 men (36.3%). Participants reported significantly lower well-being scores during quarantine compared to before (mean score of 6.0 during quarantine (IQR: 4.0–7.0) compared to 7.0 before (IQR: 6.0–8.0), $p < 0.01$). 18.1% of participants were planning to have a child before the pandemic, of these 37.3% abandoned the intention. The main reasons reported were worries of future economic difficulties and consequences of COVID-19 on pregnancy. Of 81.9% who did not intend to conceive prior to	This study investigates Italian couples' overall well-being and reproductive desires before and after the implementation of lockdown to prevent the spread of COVID-19. Anticipated economic difficulties and uncertainty around the virus were common reasons to decide against conception, conversely, a need for change and positivity	Micelli E, Cito G, Cocci A, et al. Desire for parenthood at the time of COVID-19 pandemic: an insight into the Italian situation. J Psychosom Obstet Gynaecol. 2020;41(3):183-190. doi:10.1080/0167482X.2020.1759545

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					quarantine, 11.5% desired parenthood during quarantine (p <0.01), reporting a desire to change something in their lives and a need for positivity as the most common reasons. 4.3% of those not intending to conceive prior to quarantine reported actually trying to get pregnant.	were reported as reasons to conceive.	
Contraception, adolescents, essential care, virtual visits, telemedicine	7-May-20	Providing Contraception for Young People During a Pandemic Is Essential Health Care	JAMA Pediatrics	Viewpoint	Many reproductive health care services can be performed virtually, including contraception counseling, provision and maintenance of regular and emergency contraception, and sexual risk-reduction counseling. The authors propose a virtual visit approach for providing contraception to adolescents during COVID-19 that minimizes the need for in-person visits: first ensure privacy, exclude a current pregnancy, assess current contraceptive use and satisfaction, use shared decision making about contraceptive options, evaluate for contra-indications, and finally provide prescriptions and instructions (including bridge methods for those desiring long-acting reversible contraceptive methods). Due to the high safety profile of contraception, the authors conclude it is imperative to prioritize contraception access for young people throughout the pandemic as essential health care.	The authors provide a framework for virtual contraceptive care for adolescents and review some of the options available during the pandemic.	Wilkinson TA, Kottke MJ, Berlan ED. Providing Contraception for Young People During a Pandemic Is Essential Health Care. JAMA Pediatr. 2020;174(9):823–824. doi:10.1001/jamapediatrics.2020.1884
Pregnancy, asymptomatic, transmission, universal screening, United Kingdom, New York	7-May-20	Severe acute respiratory syndrome coronavirus 2 in pregnancy: symptomatic pregnant women are only the tip of the iceberg	American Journal of Obstetrics and Gynecology	Letter to the Editor	Universal screening of pregnant women has several potential benefits: reducing the risk of asymptomatic transmission to healthcare workers and other pregnant women, early patient isolation and use of appropriate personal protective equipment, and improving the understanding of perinatal transmission. The prevalence of SARS-CoV-2 in pregnant women admitted for delivery in a New York, USA hospital between March 22 and April 4, 2020, was 15.4% (33 of 215), and of these 33 women, 29 (88%) were asymptomatic. In London, United Kingdom, pregnant women admitted to The Portland Hospital for Women and Children were universally screened for SARS-CoV-2 starting March 27, 2020. As of April 20, 2020, 129 women had been tested on admission; 9 (7.0%) had a positive test result, and of these 9 women, 8 (88.9%) were asymptomatic. All asymptomatic women and their infants remained well, but the high proportion of asymptomatic women raises important questions about infection control and nosocomial transmission.	This article adds to the growing body of evidence showing high rates of asymptomatic infection in healthcare settings and highlights the benefits of universal screening of pregnant women.	Khalil A, Hill R, Ladhani S, Pattisson K, O'Brien P. Severe acute respiratory syndrome coronavirus 2 in pregnancy: symptomatic pregnant women are only the tip of the iceberg. Am J Obstet Gynecol. 2020. doi:10.1016/j.ajog.2020.05.005
Palliative care, prognostication, proactive planning, prognosis	7-May-20	Prognostication and Proactive Planning in COVID-19	Journal of Pain and Symptom Management	Original Article	How coronavirus affects the brain is not known, and there is the possibility for multitude of neurological complications. This case report studied an 11-year-old who initially presented with encephalitis and was subsequently diagnosed with COVID-19.	The authors provide mortality and morbidity data from various patents' groups. Patients aged 15–17 years old were the most common pediatric age group to be infected, but hospitalization was most common in patients aged less than one year.	Newport KB, Malhotra S, Widera E. Prognostication and Proactive Planning in COVID-19. [published online, 2020 May 7]. J Pain Symptom Manage. doi:10.1016/j.jpainsymman.2020.04.152
SARS, children, epidemiology, clinical	7-May-20	From SARS to COVID-19: What we have learned	International Journal of	Review	SARS-CoV and SARS-CoV-2 have certain similarities. To date, research has shown that their genes exhibit 79% of identical sequences and the receptor-binding domain structure is also very similar. This review drew upon the	This paper summarized the differences and similarities between	Zhou MY, Xie XL, Peng YG, et al. From SARS to COVID-19: What we have learned

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characteristics, pathogenesis		about children infected with COVID-19	Infectious Diseases		lessons learned from SARS, in terms of epidemiology, clinical characteristics, and pathogenesis, to further understand the features of COVID-19. By comparing the two diseases, it found that COVID-19 has a quicker and wider transmission, obvious family agglomeration, and higher morbidity and mortality. Newborns, asymptomatic children, and normal chest imaging cases emerged in COVID-19 literature. Children starting with gastrointestinal symptoms may progress to severe conditions and newborns whose mothers are infected with COVID-19 could have severe complications. The laboratory test data showed that the percentage of neutrophils and the level of LDH is higher, and the number of CD4+ and CD8+T-cells is decreased in children's COVID-19 cases. Based on these early observations, as pediatricians, this review put forward some thoughts on children's COVID-19 and gave some recommendations to contain the disease.	children's SARS and CVOID-19, as well as potential reasons for higher transmissibility of COVID-19 and why children infected with COVID-19 have mild clinical symptoms.	about children infected with COVID-19. Int J Infect Dis. 2020;96:710-714. doi:10.1016/j.ijid.2020.04.090
Children, youth, epidemiology, Canada	7-May-20	Laboratory-confirmed COVID-19 in Children and Youth in Canada, January 15-April 27, 2020	Canada Communi-cable Disease Report	Update	As of April 27, 2020, provinces and territories provided the Public Health Agency of Canada with detailed information on 24,079 cases of COVID-19, of which 3.9% (n=938) were younger than 20 years of age. The detection rate per 100,000 population was lower in this age group (11.9 per 100,000), compared with those aged 20-59 years (72.4 per 100,000) and 60 and older (113.6 per 100,000). The median age among those younger than 20 years of age was 13 years, and cases were distributed equally across male and female genders. Among provinces and territories with more than 100 cases, 1.6% to 9.8% of cases were younger than 20 years of age. Cases in this age group were more likely to be asymptomatic: 10.7% compared with 2.4% in those aged 20-59 years and 4.1% in those aged 60 and older. Children and youth experienced severe outcomes less often, but 2.2% (n=15/672) of cases within this age group were severe enough to require hospitalization. Based on available exposure information, 11.3% (n=59/520) of cases aged younger than 20 years had no known contact with a case. Canadian findings align with those of other countries.	This report provides data on the epidemiology of COVID-19 amoung children and youth in Canada, which align with those from other countries.	Paquette D, Bell C, Roy M, et al. Laboratory-confirmed COVID-19 in children and youth in Canada, January 15-April 27, 2020. Can Commun Dis Rep. 2020;46(5):121-124. doi:10.14745/ccdr.v46i06a04
Pregnancy, maternal fetal medicine, intubation, acute respiratory distress, counseling, USA	7-May-20	Severe COVID-19 Infection in Pregnancy Requiring Intubation Without Preterm Delivery: A Case Report	Case Reports in Women's Health	Case Report	A 36-year-old (gravida 2, para 1) African American woman positive for COVID-19 at 23 weeks of gestation with severe disease required admission to the intensive care unit and intubation. She completed 5 days of hydroxychloroquine and 7 days of prednisone. She was successfully intubated after 8 days and discharged home in a stable condition without preterm delivery on hospital day 11. Fetal considerations, particularly in the peri-viable gestational age window of this patient, often distract from clinical decision-making; there is limited experience with respiratory collapse requiring mechanical ventilation for COVID-19 pneumonia to determine if delivery facilitates maternal resuscitation or hinders it. Counseling should highlight the balance of risk and benefit for maternal status and fetal status but should underscore the precept that there rarely exists a disconnect between maternal and fetal interests.	A case of severe COVID-19 pneumonia in a pregnant patient highlights various aspects of complex intensive care as well as the need for counseling on indications for delivery based on both maternal and fetal status.	Hong L, Smith N, Keerthy M, et al. Severe COVID-19 infection in pregnancy requiring intubation without preterm delivery: A case report [published online 2020 May 7]. Case Rep Womens Health. doi:10.1016/j.crwh.2020.e00217

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Nutrition, micronutrients, anti-inflammatory properties, cytokine storm, comorbidities	7-May-20	Coronavirus Disease (COVID-19–SARS-CoV-2) and Nutrition: Is Infection in Italy Suggesting a Connection?	Frontiers in Immunology: Nutritional Immunology	Mini Review Article	This article speculates on a possible link between nutritional status and COVID-19 mortality, based on data emerging from the Italian National Health System. Both diabetes and obesity impair the immune response to viral infections, are associated with chronic low-grade inflammation, and may increase risk of mortality. While waiting for clinical trials to shed light on the clinical efficacy and beneficial effects of antibodies and anti-inflammatory cytokines, the authors highlight nutritionally derived products (various micronutrients e.g. vitamins, folic acid, iron, selenium, and zinc, as well as macronutrients e.g. omega 3 fatty acids and bioactive components e.g. polyphenols) that may inhibit the inflammatory cytokine secretion caused by SARS-CoV-2 infection.	Poor nutrition is linked to poor immune defense; nutritionally derived products may help alleviate COVID-19-induced inflammation.	Cena H, Chieppa M. Coronavirus Disease (COVID-19–SARS-CoV-2) and Nutrition: Is Infection in Italy Suggesting a Connection? [published online 2020 May 7]. Front Immunol. doi:10.3389/fimmu.2020.00944
Children, clinical characteristics, antiviral treatment, China	7-May-20	Coronavirus Disease 2019 in Children: Characteristics, Antimicrobial Treatment, and Outcomes	Journal of Clinical Virology	Original Article	This study retrospectively summarizes the characteristics, treatment and outcomes of pediatric cases of COVID-19 in Wuhan Children's Hospital. As of February 29, 2020, 75 children (mean age 6.1 years, range 1 month-15 years) were discharged; of these, one had severe pneumonia and one had critical disease. Children younger than 2 years accounted for the highest proportion (28%) of pediatric COVID-19 cases. All patients received interferon-α nebulization, and eight cases (including the severe and critical cases) were co-administrated ribavirin. Five patients with mild pneumonia were given arbidol. Twenty-three patients were given traditional Chinese medicine. The average length of stay and the time of SARS-CoV-2 clearance were 10.6 and 6.4 days, respectively.	The severity of COVID-19 in pediatric cases, reported here, were milder than adults. The efficacy of antiviral therapy in children with COVID-19 remains to be evaluated.	Peng H, Gao P, Xu Q, et al. Coronavirus disease 2019 in children: Characteristics, antimicrobial treatment, and outcomes [published online 2020 May 7]. J Clin Virol. doi:10.1016/j.jcv.2020.104425
Child, household transmission, lymphocyte count, stool samples, China	7-May-20	A Child With Household Transmitted COVID-19	BMC Infectious Diseases	Case Report	A 14-month-old boy was admitted to the hospital with a symptom of fever and was diagnosed with a mild form of COVID-19. The patient's mother and grandmother also tested positive for SARS-CoV-2 RNA. However, the patient's lymphocyte counts were normal. Chest CT revealed scattered ground glass opacities in the right lower lobe and resorption after treatment. The patient continued to test positive for SARS-CoV-2 RNA in nasopharyngeal swabs and stool samples at 17 days after the disappearance of symptoms. The authors suggest that attention should be given to the potential contagiousness of pediatric COVID-19 cases after clinical recovery.	This case report on pediatric COVID-19 features mild symptoms and extended positivity of SARS-CoV-2 RNA in stool and nasopharyngeal swabs after the disappearance of symptoms.	Mao LJ, Xu J, Xu ZH, et al. A child with household transmitted COVID-19. BMC Infect Dis. 2020;20(1):329. Published 2020 May 7. doi:10.1186/s12879-020-05056-w
Children, humoral immunity, immune characteristics, Spike protein, neutralizing antibodies, serum	7-May-20	Protective humoral immunity in SARS-CoV-2 infected pediatric patients	Cellular & Molecular Immunology	Correspondence	This report describes characteristics of immune response after SARS-CoV-2 attack in 6 children (range: 7-131 months), who tested positive by RT-PCR, and 5 uninfected controls, hospitalized during the same period without SARS-CoV-2 infection. Based on flow cytometry, lymphocyte count and percentages of CD3+, CD4+, and CD8+ T cells between infected and uninfected cases were comparable. However, the percentage of IgG+ in memory B cells was significantly higher in the infected group. In addition, Spike protein specific neutralizing antibodies against SARS-CoV-2 were detected in 5/6 children within 2-17 days post-infection. The absence of specific IgM antibodies after illness onset suggested that most of B cell class switching was completed within 1 week after virus exposure. Lastly, the authors collected serum from one infected patient and demonstrated its in vitro ability to block receptor binding between Spike protein and ACE2 protein, a vital pathway of SARS-CoV-2 entry and infection. These findings of protective humoral immunity in infected children, provide one possible explanation for milder symptoms in children after SARS-CoV-2 exposure.	Findings from this study provide evidence for protective humoral immunity (Spike protein specific neutralizing antibodies against SARS-CoV-2) in infected children, which may explain milder symptoms observed in the pediatric population.	Zhang Y, Xu J, Jia R, et al. Protective humoral immunity in SARS-CoV-2 infected pediatric patients. Cell Mol Immunol. https://doi.org/10.1038/s41423-020-0438-3

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Children, adolescents, clinical characteristics, preliminary data, Italy	7-May-20	Multicentre Italian Study of SARS-CoV-2 Infection in Children and Adolescents, Preliminary Data as at 10 April 2020	European Surveillance	Rapid Communication	This report presents preliminary results of an Italian multi-center study of 168 laboratory-confirmed pediatric cases of COVID-19 (median age: 2.3 years, range: 1 day-17.7 years, 55.9% male), of which 67.9% were hospitalized and 19.6% had comorbidities. 67.3% (113/168) of children had at least one parent who tested positive for SARS-CoV-2 infection. All but four (2.5%) enrolled children were symptomatic. Fever was the most common symptom; 31 children developed gastrointestinal symptoms, and 5 had seizures. Over the course of hospitalization, 33 children (19.6%) developed complications, such as interstitial pneumonia (n=26), severe acute respiratory illness (n=14) and peripheral vasculitis (n=1); two of the 33, a preterm neonate and a 2-month-old infant with congenital heart disease, required intensive care. Viral co-infection was documented in 10 children (5.9%). In total, 49 children received experimental treatments. All patients in the study recovered.	This report presents preliminary data from a multi-center study of pediatric COVID-19 cases in Italy, confirming low case fatality and favorable clinical course in children.	Garazzino S, Montagnani C, Donà D, et al. Multicentre Italian study of SARS-CoV-2 infection in children and adolescents, preliminary data as at 10 April 2020. Euro Surveill. doi:10.2807/1560-7917.ES.2020.25.18.2000600
Pregnancy, neonatal infection, emergency cesarean section, London, UK	7-May-20	Re: Novel Coronavirus COVID-19 in late pregnancy: outcomes of first nine cases in an inner city London hospital	European Journal of Obstetrics & Gynecology and Reproductive Biology	Correspondence	The authors report on 9 cases of laboratory-confirmed COVID-19 in mothers who delivered at an inner-city hospital in London, between March 7 and April 22, 2020. The median age and gestation at delivery were 31 years (range 18-39 years) and 39 weeks (range 27-39 weeks) respectively. 7/9 (89%) women had mild to moderate prodromal symptoms that warranted high level of suspicion for screening. 2 of the 9 women delivered via emergency caesarean section (CS) due to deteriorating maternal respiratory function; accompanying lymphopenia was a notable clinical feature in these cases. Of the remaining 7 women, 1 mother had a vaginal delivery, 6 underwent elective CS for obstetric indications, while an emergency CS was performed in 1 woman for suboptimal cardiotocography. All neonates were immediately isolated from mothers at birth; only 1 neonate (born to the most respiratory-compromised mother) developed signs of pneumonia on day 6 of life and was confirmed to have SARS-CoV-2 based on nasopharyngeal RT-PCR.	In this case series of 9 mothers with COVID-19 from London, 2 women with deteriorating respiratory function delivered via emergency cesarean section. One neonate tested positive for SARS-CoV-2 infection.	Govind A, Essien S, Kartikeyan A, et al. Re: Novel Coronavirus COVID-19 in late pregnancy: outcomes of first nine cases in an inner city London hospital [published online, 2020 May 7]. Eur J Obstet Gynecol Reprod Biol. 2020;doi:10.1016/j.ejogrb.2020.05.004
Pregnancy, hospitalization, ICU admission, non-pregnant women, New York State	7-May-20	Intensive Care Unit Admissions for Pregnant and Non-Pregnant Women with COVID-19	American Journal of Obstetrics & Gynecology	Research Letter	Of all acutely symptomatic patients evaluated at a large hospital system in New York State, between March 2 and April 9, 2020, 1,168 symptomatic patients were diagnosed with COVID-19. Of these, 332 (28.4%) were non-pregnant women, and 82 (7.0%) were pregnant women. Of these pregnant symptomatic patients with diagnosed COVID-19, 2.8% had only mild respiratory disease and were admitted for obstetrical indications. In total, 50 non-pregnant women (15.1%, 50/332) and 8 pregnant women (9.8%, 8/82) were admitted to the ICU for worsening respiratory status, a difference that was not statistically significant (p=0.22).	The authors conclude that hospitalized pregnant women with COVID-19 are not at increased risk for ICU admission compared to their non-pregnant counterparts.	Blitz MJ, Grünebaum A, Tekbali A, et al. Intensive Care Unit Admissions for Pregnant and Non-Pregnant Women with COVID-19 [published online 2020 May 7]. AJOG. doi:10.1016/j.ajog.2020.05.004
Children, neonates, pregnancy, clinical surveillance, Public Health England, UK	7-May-20	Prioritising Paediatric Surveillance During the COVID-19 Pandemic	Archives of Disease in Childhood	Editorial	This editorial describes efforts to collect surveillance data by Public Health England (PHE), which receives electronic notifications of all confirmed COVID-19 cases in children, from National Health Service (NHS) hospital laboratories in the UK. PHE is also working on a collaborative effort to conduct clinical surveillance of COVID-19 in neonates from birth up to 28 days of life through the British Pediatric Surveillance Unit, which will be linked to the UK Obstetric Surveillance System. Lastly, PHE is conducting sample collections to assess risk of vertical transmission in pregnant women with COVID-19, as well as seroprevalence surveys in children.	Public Health England is an executive agency, working in collaboration with the UK health system, to conduct clinical surveillance of COVID-19 in children, neonates, and pregnant women.	Ladhani SN, Amin-Chowdhury Z, Amirthalingam G, et al. Prioritising paediatric surveillance during the COVID-19 pandemic [published online, 2020 May 7]. Arch Dis Child. 2020.

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							doi:10.1136/archdischild-2020-319363
Children, primary care, routine, care, International Pediatric Association	7-May-20	Promoting and Supporting Children's Health and Healthcare During COVID-19 - International Paediatric Association Position Statement	Archives of Disease in Childhood	Original Research	This paper provides recommendations from the International Pediatric Association (IPA) for children's health and healthcare during COVID-19. The IPA is a membership organization of 169 pediatric societies, which includes 144 national pediatric societies, 10 regional pediatric societies, and 13 international pediatric specialty societies. The IPA outlines priorities for preserving newborn, child, and adolescent health during the COVID-19 crisis and beyond, where social distancing and lockdowns threaten access to routine care, immunization, and preventive services. The authors also recognize the need for specific strategies to reach children and youth at greatest risk, including those in low- and middle-income countries, as well as in fragile settings such as refugee camps.	This paper summarizes recommendations from the International Pediatric Association in preserving newborn, child, and adolescent health, by maintaining systems of primary care during the COVID-19 pandemic.	Klein JD, Koletzko B, El-Shabrawi MH, et al. Promoting and supporting children's health and healthcare during COVID-19 - International Paediatric Association Position Statement [published online, 2020 May 7]. Arch Dis Child. 2020. doi:10.1136/archdischild-2020-319370
Pregnancy, obstetric practice, implementation, New York, USA	7-May-20	Caring for Pregnant Patients with COVID-19: Practical Tips Getting from Policy to Practice	American Journal of Perinatology	Clinical Opinion	Authors from New York have experience caring for over 80 COVID-19 infected pregnant women at their institution and have encountered many challenges in applying new national standards for care. In this article, they review how to change outpatient and inpatient practices, as well as develop and disseminate new hospital protocols, and highlight the psychosocial challenges for pregnant patients and their providers.	Authors offer a blueprint for implementation of new standards of care for obstetric practice, to help providers and hospitals prepare as the number of COVID-19 cases increases in the United States.	London V, McLaren R Jr, Stein J, et al. Caring for Pregnant Patients with COVID-19: Practical Tips Getting from Policy to Practice [published online, 2020 May 7]. Am J Perinatol. 2020. doi:10.1055/s-0040-1710539
Pregnancy, preterm neonate, breast milk sample, Belgium	7-May-20	COVID-19 in a 26-week preterm neonate	Lancet Child & Adolescent Health	Case Report	An extremely preterm female neonate (26 gestational weeks + 4 days) was born at a tertiary level hospital in Brussels, Belgium, on March 1, 2020. The mother had been referred from a peripheral hospital for pre-eclampsia and suspected cholecystitis. During hospitalization, the mother developed HELLP (hemolysis, elevated liver enzymes, and low platelet count) syndrome and intramuscular corticosteroids were administered for fetal pulmonary maturation. The neonate was delivered by cesarean section 48 hours later and transferred to the NICU, where she received non-invasive intermittent positive pressure ventilation and surfactant therapy. Despite a pneumothorax requiring drainage, the neonate remained stable in a closed incubator throughout her admission. On day 6 after delivery, the mother's nasopharyngeal swab tested positive for SARS-CoV-2, and the neonate tested positive the following day. Prior to the mother's diagnosis, the neonate had received maternal expressed breast milk, which had tested negative for SARS-CoV-2. RT-PCR testing of the neonate's nasopharyngeal swab was positive 7 days after the initial positive test and tested negative after 14 days; the mother tested negative only after 21 days.	This case study describes an extremely preterm neonate, born to a mother with COVID-19. Both were diagnosed with SARS-CoV-2 following delivery and remained clinically stable. A maternal breast milk sample tested negative for SARS-CoV-2 RNA.	Piersigilli F, Carkeek K, Hocq C, van Grambezen B, Hubinont C, Chatzis O et al. COVID-19 in a 26-week preterm neonate [published online 2020 May 7]. Lancet Child & Adol Health. doi:10.1016/S2352-4642(20)30140-1

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Pregnancy, vaginal swab, rectal swab, perineal contamination, cesarean vs. natural delivery	7-May-20	SARS-CoV-2 Possible Contamination of Genital Area: Implications for Sexual and Vertical Transmission Routes	Journal of the European Academy of Dermatology and Venereology	Letter to Editor	The SARS-CoV-2 virus can be transmitted from person to person, directly or indirectly, via the respiratory, oro-fecal and probably sexual routes. However, mother-to-child transmission through the placenta probably does not occur, or likely occurs very rarely. This letter proposes a decision algorithm that takes into account these possible routes of transmission. Routine RT-PCR assays for SARS-CoV-2 detection should be performed in all pregnant women, on nasopharyngeal, vaginal, and rectal swabs. The possibility of perineal contamination, including the vulvar-vaginal area, should also be considered. The authors suggest cesarean delivery should be performed if SARS-CoV-2 is detected on vaginal or rectal swab; natural delivery could be otherwise permitted, since it has several advantages for maternal and neonatal health over cesarean section.	The authors suggest that cesarean delivery should be performed if SARS-CoV-2 viral RNA is detected in either vaginal or rectal swabs from a pregnant woman. Otherwise, natural delivery should be prioritized.	Delfino M, Guida M, Patrì A, Spirito L, Gallo L, Fabbrocini G. SARS-CoV-2 possible contamination of genital area: implications for sexual and vertical transmission routes [published online, 2020 May 7]. J Eur Acad Dermatol Venereol. 2020. doi:10.1111/jdv.16591
Children, pediatric immune system, asymptomatic carrier	7-May-20	COVID-19 in Newborns and Infants-Low Risk of Severe Disease: Silver Lining or Dark Cloud?	American Journal of Perinatology	Clinical Opinion	Data from China and the United States suggest a low prevalence of COVID-19 among neonates, infants, and children, with those affected not suffering from severe disease. In this article, the authors consider different theories to explain why this novel agent is sparing neonates, infants, and young children. These theories include the protective role of fetal hemoglobin in neonates; immature ACE2 interfering with viral entry into host cells; cross-immunity with other viral agents common in childhood; incomplete development of natural immunity leading to reduced risk for systemic inflammatory response syndrome (i.e. cytokine storm); differences in humoral immunity; and more efficient T-cells. The low severity of SARS-CoV-2 infection in the pediatric population is associated with a high incidence of asymptomatic or mildly symptomatic infection, making them efficient carriers and potentially major players in SARS-CoV-2 transmission to vulnerable adults.	Various features of the pediatric immune system are discussed to provide explanations for lower rates of infection and severe COVID-19 among children. Since most pediatric cases are asymptomatic, children are likely to be efficient carriers of infection according to the authors.	Rawat M, Chandrasekharan P, Hicar MD, Lakshminrusimha S. COVID-19 in Newborns and Infants-Low Risk of Severe Disease: Silver Lining or Dark Cloud? [published online, 2020 May 7]. Am J Perinatol. 2020. doi:10.1055/s-0040-1710512
Neonatal emergency transport system, standardized operational procedures, Italy	7-May-20	Neonatal Emergency Transport System During COVID-19 Pandemic in the Veneto Region: Proposal for Standard Operating Procedures	Pediatric Research	Correspondence	Neonatal Emergency Transport Service (NETS) is an essential service, especially during the COVID-19 pandemic. This report from the Veneto region of Italy presents the first recommendations available on how to reorganize NETS in order to centralize SARS-CoV-2 positive newborns and protect low-risk patients. The authors identify safe, standardized, operational procedures that are crucial for recognizing cases of SARS-CoV-2 infection in newborns, creating a pathway for the best stabilization and ambulance transport, and minimizing the risk of contamination while providing the best possible care for the newborn.	This report from Italy outlines standardized operational procedures for reorganizing a Neonatal Emergency Transport Service during the COVID-19, in order to minimize contamination risk and better stabilize potentially infected newborns.	Cavicchiolo ME, Doglioni N, Ventola MA, et al. Neonatal emergency transport system during COVID-19 pandemic in the Veneto Region: proposal for standard operating procedures [published online, 2020 May 7]. Pediatr Res. 2020. doi:10.1038/s41390-020-0937-z
Children, hospitalization, clinical characteristics, multicenter study, China	7-May-20	Children hospitalized for coronavirus disease 2019 (COVID-19): a multicenter retrospective descriptive study.	Journal of Infection	Letter to the Editor	Reports analyzing pediatric patients with COVID-19, particularly outside Wuhan, China, are limited. This letter presents data on 46 hospitalized children (≤18 years), with SARS-CoV-2 positive RT-PCR results of throat swabs, from 4 tertiary-care hospitals in Guangdong, Hunan, and Hubei provinces, China between January 9 and March 9, 2020. The median age of children was 8 years (IQR: 4-14 years), and 32 children (70%) had at least one infected family member. All cases were non-severe by clinical examination, and no children had comorbidities. 22 children (48%) were asymptomatic at onset; none experienced gastrointestinal symptoms. 20	This case series reports on 46 hospitalized children with SARS-CoV-2 infection from hospitals in 3 provinces of China, who had mild symptoms and favorable clinical course.	Zhang V, Liu S, Zhang J et al. Children hospitalized for coronavirus disease 2019 (COVID-19): a multicenter retrospective descriptive study [published online 2020 May 7]. Journal of Infection.

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					children (43%) had chest imaging abnormalities. None required mechanical ventilation or intensive care. All have been discharged, as of March 9. The median length of hospital stay was 15 days. Four children had positive rectal swabs but negative throat swabs after recovery.		doi:10.1016/j.jinf.2020.04.045
Children, asymptomatic, hyperinflammatory syndrome, Kawasaki disease shock syndrome, child mortality, UK	7-May-20	Hyper-inflammatory shock in children during COVID-19 pandemic	The Lancet	Correspondence	During a period of 10 days in mid-April 2020, South Thames Retrieval Service (London, UK) noted an unprecedented cluster of eight children with hyperinflammatory shock, showing features similar to Kawasaki disease shock syndrome. Six of the eight children were of Afro-Caribbean descent, and five were boys. All children except one were well above the 75th centile for weight. Four children had known family exposure to COVID-19. All tested negative for SARS-CoV-2 infection during the course of hospitalization. Clinical presentations included unrelenting fever, variable rash, conjunctivitis, peripheral edema, and generalized extremity pain with significant gastrointestinal symptoms. All progressed to warm, vasoplegic shock, requiring hemodynamic support and mechanical ventilation for cardiovascular stabilization. One child developed arrhythmia with refractory shock and died from a large cerebrovascular infarct. Since discharge of the remaining patients, two of the children have tested positive for SARS-CoV-2 infection (including the child who died, in whom SARS-CoV-2 was detected postmortem).	A clinical picture of hyperinflammatory syndrome, with multiorgan involvement similar to Kawasaki disease shock syndrome, may represent a new phenomenon affecting previously asymptomatic children with SARS-CoV-2 infection.	Riphagen S, Gomez X, Gonzalez-Martinez C, Wilkinson N, Theocharis P. Hyperinflammatory shock in children during COVID-19 pandemic [published online 2020 May 7]. Lancet. doi:1.1016/S0140-6736(20)31094-1
Children, clinical trial enrollment, pediatric treatment	7-May-20	Inclusion of Children in Clinical Trials of Treatments for Coronavirus Disease 2019 (COVID-19)	JAMA Pediatrics	Viewpoint	Clinical trials of several therapies for COVID-19 are being rapidly designed or already enrolling patients, but few are currently enrolling children. Between February 1 and April 11, 2020, there were 275 COVID-19 interventional clinical trials registered on ClinicalTrials.gov, of which only 30 were open to any patients younger than 18 years. In addition, global large-scale trials by the National Institutes of Health and WHO plan to enroll only adults. The exclusion of children from COVID-19 clinical trials is a lost opportunity to generate timely knowledge to guide treatment of pediatric populations. Simple extrapolation from adult to pediatric patients may not account for developmental differences in pathophysiology and drug metabolism, leaving children vulnerable to ineffective dosing or possibly unsafe treatments. Past experience demonstrates that it is possible to enroll children in clinical trials during epidemics, like the 2014 Ebola epidemic.	The exclusion of children from the majority of clinical trials for COVID-19 therapies may lead to ineffective dosing or unsafe treatments, due to a lack of evidence in pediatric populations.	Hwang TJ, Randolph AG, Bourgeois FT. Inclusion of Children in Clinical Trials of Treatments for Coronavirus Disease 2019 (COVID-19) [published online 2020 May 7]. JAMA. doi:10.1001/jamapediatrics.2020.1888
COVID-19; cancer treatment; pediatric; Italy	6-May-20	SARS-CoV-2 disease and children under treatment for cancer	Pediatric Blood & Cancer	Comment	The author highlights the importance of a shared vision for providing cancer care to pediatric patients in the face of the uncertainty and rapid change due to the COVID-19 pandemic. A major risk for children and adolescents with cancer lies in the associated strain on the medical services during the pandemic. While many hospitals across the Lombardy region in northern Italy has focused on COVID-19 cases, the Pediatric Unit at Fondazione IRCCS Istituto Nazionale Tumori (Milan) has continued to manage treatment of a significant number of children and adolescents with solid tumors. Only one patient with Ewing sarcoma (13-year-old female) needed to have her chemotherapy plan modified because of SARS-CoV-2 (diagnosis of SARS-CoV-2 pneumonia of her father); otherwise no changes were made to either the timing or the dose intensity of treatments. Since the beginning of the outbreak, a total of 145 courses of chemotherapy, and 2 courses of high-dose chemotherapy with autologous hematopoietic rescue were successfully	The author highlights the importance of a shared vision for providing cancer care to pediatric patients in the face of the uncertainty and rapid change due to the COVID-19 pandemic. Emerging information should be used to help characterize the potential impact of SARS-CoV-2 in specific	Terenziani M, Massimino M, Biassoni V. SARS-CoV-2 disease and children under treatment for cancer. Pediatr Blood Cancer. 2020;67(9):e28346. doi: 10.1002/pbc.28346.

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					conducted. Patients with febrile neutropenia continued to be managed according to existing institutional guidelines, performing lung imaging only in the event of respiratory symptoms. It is crucial to use emerging information to help characterize the potential impact of SARS-CoV-2 in specific patient settings, orient the implementation of contingency plans, and avoid measures that may be unduly restrictive of normal healthcare activities.	patient settings, orient the implementation of contingency plans, and avoid measures that may be unduly restrictive of normal healthcare activities.	
Beta-methasone, hyperglycemia, insulin, pregnancy	6-May-20	SARS-CoV-2 infection and glucose homeostasis in pregnancy. What about antenatal corticosteroids?	Diabetology & Metabolic Syndrome	Review	This review queried on the effects of corticosteroid use in pregnancies complicated by SARS-CoV-2. The authors performed a literature search using PubMed, regarding the use of corticosteroids in patients with SARS-CoV-2 infection, in pregnancies complicated by SARS-CoV-2, as well as their impact on glycemia in pregnant women with or without diabetes. SARS-CoV-2 infection appears to be a risk factor for complications in pregnancy. Corticosteroids may not be recommended for treating SARS-CoV-2 pneumonia since they may delay virus clearance from the body, but they may be needed for at-risk pregnancies. Corticosteroids in pregnancy have a diabetogenic potential. The authors state that hyperglycemia in pregnancy complicated by SARS-CoV-2 infection and requiring medical intervention, should be treated by insulin. SARS-CoV-2 and other coronaviruses may have effects on glycemia. Caution should be exercised while using corticosteroids in pregnant women with COVID-19 requiring preterm delivery.	This review investigates the effects of corticosteroids in pregnancies complicated by SARS-CoV-2, suggesting that the decision about the use of antenatal corticosteroids should be carefully made due to scarce reliable conclusions.	Kakoulidis I, Ilias I, Koukkou E. SARS-CoV-2 infection and glucose homeostasis in pregnancy. What about antenatal corticosteroids?. Diabetes Metab Syndr. 2020;14(4):519-520. doi:10.1016/j.dsx.2020.04.045
Pregnancy, maternal health, mental health	6-May-20	Maternal mental health in the time of the COVID-19 pandemic	Acta Obstetricia et Gynecologica Scandinavica	Editorial	The impact of the COVID-19 pandemic on maternal mental health is not yet fully understood. The authors express concern for the effects of stress-related to COVID-19, and in particular unintended consequences of COVID-19-related preventive measures on the mental health of pregnant women and new mothers. Negative psychological effects could lead to increased use of harmful coping methods, and there is also concern for an increase in gender-based intimate partner violence, a reduction in preventive help-seeking behavior, and an increase in suicide rates. The authors express further concern that mental health needs are overshadowed by more pressing issues during this crisis.	As pregnant women and new mothers may be at increased risk of developing mental health problems during the COVID-19 pandemic, the authors suggest to develop pro-active strategies to alleviate stress, with technology and Internet-based support as potentially valuable tools.	Thapa S, Mainali A, Schwank S, et al. Maternal mental health in the time of the COVID-19 pandemic [published online 2020 May 6]. Acta Obstet Gynecol Scand. 2020. doi:10.1111/aogs.13894
Newborn, neonate, postnatal transmission, breastfeeding	6-May-20	Newborns at Risk of COVID-19	Journal of Perinatal Medicine	Editorial	Newborns can be infected with SARS-CoV-2, and transmission is thought to primarily occur postnatally. Guidelines for the care of COVID-19-positive or suspected-positive mother-infant duos in the immediate post-natal period have been put forth, but there are differences in the proposed approaches. The authors discuss the strategies recommended by China, the European Society/WHO, and the CDC/American Academy of Pediatrics in the USA. They then describe the pros and cons of these different approaches. They also present emerging data about asymptomatic or mildly symptomatic mothers who become severely ill after delivery. In conclusion, the authors state that global collaborative research efforts are needed to fully understand the implications of the diverse approaches to handling newborns at risk of COVID-19.	Post-natal transmission of SARS-CoV-2 can lead to neonatal infections of COVID-19. Different guidelines have been proposed for the care of these mothers/infants; however, global research is needed to understand the outcomes of these various approaches.	Shah MD, Saugstad OD. Newborns at risk of COVID-19. [published online, 2020 May 6]. J Perinat Med. doi:10.1515/jpm-2020-0170

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Pregnancy, maternal fecal contamination, vaginal delivery, neonatal outcome, vertical transmission	6-May-20	How to Reduce the Potential Risk of Vertical Transmission of SARS-CoV-2 During Vaginal Delivery?	European Journal of Obstetrics & Gynecology and Reproductive Biology	Review Article	In addition to intrauterine infection and breastfeeding, potential routes of vertical transmission include vaginal delivery, through neonatal contact with fluids of both the maternal vagina and rectum. Current recommendations for pregnant women with COVID-19 suggest that delivery mode should be determined primarily by obstetric indication, unless the woman's respiratory condition demands urgent intervention. On the basis of this evidence, the authors suggest a pre-labor anorectal swab be taken from pregnant women who test positive for COVID-19 to identify newborns at risk of perinatal infection. This article also presents proposed preventive measures to reduce the potential vertical transmission during vaginal birth in women; these recommendations and their rationales should be considered as additional information, not to replace advice from international associations.	This article proposes preventive measures during vaginal delivery to reduce the potential risk of perinatal SARS-CoV-2 infection by targeting contamination from maternal anus and fecal material.	Carosso A, Cosma S, Serafini P, Benedetto C, Mahmood T. How to reduce the potential risk of vertical transmission of SARS-CoV-2 during vaginal delivery? [published online 2020 May 6]. Eur J Obstet Gynecol Reprod Biol. doi:10.1016/j.ejogrb.2020.04.065
Child, liver transplant, immuno-suppression, EBV co-infection, Italy	6-May-20	Child With Liver Transplant Recovers From COVID-19 Infection. A Case Report	Archives de Pédiatrie	Short Communication	A 55-month-old girl presented with asymptomatic Epstein-Barr Virus (EBV) primary infection five months after undergoing liver transplantation (from her father, who was EBV positive). In mid-March 2020, the child developed rhinitis shortly after her mother developed symptoms of later confirmed COVID-19. Two days later, the child developed fever, cough, and polypnea; three days later, she was referred to a hospital where she was diagnosed with COVID-19 on a nasopharyngeal swab. On admission, she had polypnea but no other signs of respiratory distress. She had no inflammatory syndrome and recovered from COVID-19 despite the high level of immunosuppression caused by her tacrolimus treatment to prevent transplant rejection.	To the authors' knowledge, this is the first case report of COVID-19 in an immunosuppressed pediatric patient with liver transplantation and confirmed co-infection with Epstein-Barr virus (EBV).	Morand A, Roquelaure B, Colson P, et al. Child with liver transplant recovers from COVID-19 infection. A case report [published online 2020 May 6]. Arch Pediatr. doi:10.1016/j.arcped.2020.05.004
Pregnancy, neonates, maternity care, clinical practice guidelines	6-May-20	Review of clinical practice guidelines for the care of pregnant women (and their babies) during COVID-19	Cochrane Pregnancy and Childbirth	Review	The authors of this review have developed a protocol to identify, collate and summarize national clinical practice guideline recommendations that address 14 key questions related to the care of pregnant women (and their newborns) during the COVID-19 pandemic. Nineteen countries with >10,000 confirmed COVID-19 cases were included, and two reviewers from each country searched for country-specific clinical practice guidelines. The consensus level across countries was set at 80% (i.e. where 80% of countries with a guideline that addressed the question made the same recommendation). Key findings are organized by COVID-19 status in pregnant women.	This review presents consensus recommendations on maternity care from 19 countries with >10,000 confirmed COVID-19 cases. Importantly, there was a lack of consensus on a variety of issues between issued guidelines.	Devane D, Kellie F, Finucane E, et al. on behalf of the Cochrane Pregnancy and Childbirth COVID Group. Review of clinical practice guidelines for the care of pregnant women (and their babies) during COVID-19 [published online 2020 May 6]. Cochrane.
Infant, anal swab, throat swab, hospitalization, Brazil	6-May-20	An infant with a mild SARS-CoV-2 infection detected only by anal swabs: a case report	The Brazilian Journal of Infectious Diseases	Case Report	This case report presents an 8-month-old infant, who was hospitalized with 1-day history of non-productive cough and runny nose. Chest CT showed no abnormal findings. The patient's anal swab was positive for SARS-CoV-2 via RT-PCR on day 2 after admission and remained positive for 8 days. Throat swabs were persistently negative throughout the hospital stay. Mild and asymptomatic cases of COVID-19, especially in children, might present with RT-PCR negative nasal/pharyngeal swabs and RT-PCR positive anal swabs. These patients are potential sources of infection via fecal–oral transmission.	This brief case report describes a hospitalized infant SARS-CoV-2 infection, confirmed in anal swab samples, which remained positive for 8 days. Throat swab samples were negative throughout the patient's hospital stay.	Li J, Feng J, Liu TH, Xu FC, Song GQ. An infant with a mild SARS-CoV-2 infection detected only by anal swabs: a case report [published online, 2020 May 6]. Braz J Infect Dis. doi:10.1016/j.bjid.2020.04.009

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Pregnancy, postpartum respiratory distress, decompensation, neonates, Canada	6-May-20	Postpartum exacerbation of antenatal COVID-19 pneumonia in 3 women	Canadian Medical Association Journal	Original Article	In this case series, 3 women with histories of COVID-19 exposures were admitted in their third trimester for delivery. All women delivered by cesarean section, and all newborns tested negative for SARS-CoV-2 on RT-PCR. Between 28-81 hours postpartum, all women showed postpartum respiratory distress with deoxygenation and sudden clinical decompensation, associated with lymphopenia, elevated CRP, and changes in chest CT consistent with SARS-CoV-2 infection. The authors hypothesize that the develop of serious symptoms after delivery may be due to hemodynamic, immunologic and plasma volume changes that interfered with normal hormonal and diuresis changes postpartum. These changes may have predisposed to further changes in pulmonary vasculature and decompensation, particularly in immunocompromised hosts with COVID-19, who have systemic inflammatory changes.	Three reported cases of pregnant women with COVID-19 show that normal peripartum chest CT, in the presence of mild symptoms, does not preclude an abrupt postpartum decompensation.	An P, Wood BJ, Li W, Zhang M, Ye Y. Postpartum exacerbation of antenatal COVID-19 pneumonia in 3 women [published online, 2020 May 6]. CMAJ. 2020. doi:10.1503/cmaj.200553
Infants, neonates, preterm delivery, pediatric intensive care, UK	6-May-20	COVID-19 in Neonates and Infants: Progression and Recovery	The Pediatric Infectious Diseases Journal	Brief Report	This case series reports on 8/70 (11.4%) SARS-CoV-2 positive infants (range: 5 days-12 months), who were tested between March 10 and April 17, 2020. 5/8 (63%) developed fever, 4/8 (50%) had lower respiratory tract involvement, 2/8 (25%) had neutropenia and thrombocytosis, and 4/8 infants (50%) were treated for suspected sepsis with broad-spectrum antibiotics. Only 1/8 (13%) required pediatric intensive care following premature delivery at 34 weeks' gestation; the neonate was still able to be breastfed after delivery. All patients were eventually discharged.	In this case series of neonates and infants, cases of COVID-19 ranged from asymptomatic to moderately severe; all recovered quickly and were asymptomatic by discharge.	Ng KF, Bandi S, Bird PW, Wei-Tze Tang J. COVID-19 in Neonates and Infants: Progression and Recovery [published online, 2020 May 6]. Pediatr Infect Dis J. 2020. doi:10.1097/INF.0000000000002738
Children, risk factors, inflammatory biomarkers, lung segment involvement, China	6-May-20	The Risk of Children Hospitalized With Severe COVID-19 in Wuhan	The Pediatric Infectious Diseases Journal	Original Studies	This retrospective case-control study of children with SARS-CoV-2 infection, at Wuhan Children's Hospital, analyzed risk factors associated with the development and progression of COVID-19. Of 260 children admitted by March 14, 2020, 8 children were diagnosed with severe COVID-19 pneumonia and included in this study. Thirty-five children with non-severe COVID-19 infection, matched for age, sex and date of admission, were randomly selected from hospital admissions. In severe cases, the most common symptoms were dyspnea (87.5%), fever (62.5%) and cough (62.5%). White blood cell count was significantly higher in severe children than non-severe children. Levels of inflammatory bio-makers, such as CRP, IL-6, IL-10 and D-dimer, were elevated in severe children compared with non-severe children on admission. In addition, levels of total bilirubin and uric acid were clearly elevated in severe children compared with non-severe children on admission. All severe children displayed lesions on chest CT; more lung segments were involved in severe children than in non-severe children, which was the only risk factor associated with severe COVID-19 pneumonia in multivariable analysis.	In this case-control study comparing severe vs. non-severe cases of COVID-19 in children, the involvement of ≥3 lung segments was associated with greater risk of severe disease. Elevated inflammatory biomarkers, like IL-6, high total bilirubin, and D-dimer, were also identified as early risk factors for severe disease.	Wang Y, Zhu F, Wang C, et al. The Risk of Children Hospitalized With Severe COVID-19 in Wuhan [published online, 2020 May 6]. Pediatr Infect Dis J. 2020. doi:10.1097/INF.0000000000002739
Child, hematuria, multi-organ involvement, respiratory virus panel, Brazil	6-May-20	Hematuria Associated With SARS-CoV-2 Infection in a Child	The Pediatric Infectious Diseases Journal	Letters to the Editor	This case report describes a 10-year-old female, previously healthy, who was admitted to the emergency department with a one-day history of fever, mild respiratory symptoms, and hematuria. Urinalysis showed the presence of normally shaped red blood cells and renal ultrasound showed no abnormalities. The patient's nasopharyngeal swab specimen was positive for SARS-CoV-2 RNA and negative for all other respiratory viruses. The urine sample was negative for SARS-CoV-2 RNA. Nasopharyngeal RT-PCR tests remained positive on day 7 but negative on day 21 after onset of symptoms.	A case of mild COVID-19 in a 10-year-old child presented with mild respiratory symptoms and hematuria, suggesting the possibility of multi-organ involvement.	Almeida FJ, Olmos RD, Oliveira DBL, et al. Hematuria Associated With SARS-CoV-2 Infection in a Child [published online, 2020 May 6]. Pediatr Infect Dis J. 2020.

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					Hematuria and renal injury have been commonly described in viral respiratory infections, like influenza and adenovirus, and have been observed in adults hospitalized with COVID-19. Pediatricians should be aware of the possibility of similar presentations of multi organ involvement in children.		doi:10.1097/INF.0000000000002737
Children, co-infection, respiratory pathogens, China	6-May-20	Co-infection and Other Clinical Characteristics of COVID-19 in Children	Pediatrics	Peer-Reviewed Article (pre-publication release)	A total of 74 pediatric patients with RT-PCR confirmed COVID-19 were included in this study. None of the children had comorbidities. Of the 68 cases whose epidemiological data were complete, 65 (95.6%) cases were household contacts of adults. Cough (32.4%) and fever (27.0%) were the predominant symptoms of 44 (59.5%) symptomatic patients at illness onset. Abnormalities in leukocyte count were found in 23 (31.1%) children and 10 (13.5%) children presented with abnormal lymphocyte count. Of the 34 (46.0%) patients who had nucleic acid testing results for common respiratory pathogens, 19 (51.4%) showed co-infection with other pathogens other than SARS-CoV-2. Ten (13.5%) children had RT-PCR analysis for fecal specimens and 8 of them showed prolonged existence of SARS-CoV-2 RNA.	Pediatric COVID-19 patients presented with symptoms distinct from adults and were susceptible to co-infection with other respiratory pathogens. Persistent fecal shedding of viral RNA was found after respiratory specimens turned negative.	Wu Q, Xing Y, Shi L, et al. Co-infection and Other Clinical Characteristics of COVID-19 in Children [published online, 2020 May 6]. Pediatrics. 2020. doi:10.1542/peds.2020-0961
Children, pediatric emergency department attendance, UK	6-May-20	Where Have All the Children Gone? Decreases in Paediatric Emergency Department Attendances at the Start of the COVID-19 Pandemic of 2020	Archives of Disease in Childhood	Letter	Although children and young people (CYP, defined here as <16 years) can become infected with SARS-CoV-2, it appears that they are mainly asymptomatic or experience mild symptoms, resulting in a much smaller number of COVID-19 related emergency department (ED) attendances. This letter reports findings from a comparison of ED attendance data for CYP since the first reported cases of COVID-19 with the same weeks in 2019. There was a 5.6% decrease between February 2019 and February 2020, and a 30.4% decrease between March 2019 and March 2020 at a large district general hospital in Greater Manchester, UK. There was a 0.6% decrease between February 2019 and February 2020, and a 33.8% decrease between March 2019 and March 2020 at a regional children's hospital in the same area. The reasons why children were not attending likely reflect changing behaviors and concerns of their caregivers during the pandemic.	Based on Emergency Department (ED) attendance data from two hospitals in the UK, findings show that children are presenting to the ED at a lower rate during the pandemic (February and March 2020) compared to the same months in 2019.	Isba R, Edge R, Jenner R, Broughton E, Francis N, Butler J. Where have all the children gone? Decreases in paediatric emergency department attendances at the start of the COVID-19 pandemic of 2020 [published online, 2020 May 6]. Arch Dis Child. 2020. doi:10.1136/archdischild-2020-319385
Children, immune preparedness, innate immunity, natural antibodies, memory B cells	6-May-20	The immune system of children: the key to understanding SARS-CoV-2 susceptibility?	The Lancet Child & Adolescent Health	Comment	To date, there is no evidence to support a lower degree of expression or function of the SARS-CoV-2 receptor (namely ACE2) in children, who experience milder COVID-19 disease than adults. During the first years of life, frequent infections build the pool of memory T and B cells that will prevent reinfection by commonly encountered pathogens. Pediatric immune preparedness, fit to react to novel pathogens including SARS-CoV-2, might be based on the abundance of natural antibodies in children. These antibodies (mostly IgM) are generated independently of previous antigen encounters, have broad reactivity, and contain infection during the 2 weeks necessary for production of high-affinity antibodies and memory B cells. Preliminary results from a prospective study designed to test these hypotheses suggest an early polyclonal B-cell response with production of substantial numbers of plasmablasts (mostly IgM) in children. This response is not observed in adults with severe disease.	The immune preparedness of children, who are better equipped to respond to frequent, novel infection through innate immunity (e.g. natural IgM antibodies), may explain differences in COVID-19 susceptibility and disease course between children and adults.	Carsetti R, Quintarelli C, Quinti L, Mortari EP, Zumla A, Ippolito G et al. The immune system of children: the key to understanding SARS-CoV-2 susceptibility? [published online 2020 May 6]. Lancet Child & Adol Health. doi:10.1016/S2352-4642(20)30135-8

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Neonatal nutrition, breastfeeding, human milk banking	6-May-20	Maintaining safety and service provision in human milk banking: a call to action in response to the COVID-19 pandemic	The Lancet Child & Adolescent Health	Comment	A Virtual Communication Network of milk bank leaders formed on March 17, 2020, and now has more than 80 members from 34 countries. Data collated from regional and country leads show that more than 800,000 infants are estimated to receive donor milk worldwide annually. The group actively discusses COVID-19-specific challenges and has developed mitigation strategies to ensure donor milk safety and service continuation, which will shortly be made available as a publication. Unlike HIV, where transmission via breastfeeding was a source of infection, there is no evidence to support SARS-CoV-2 transmission from human milk, and the virus is inactivated by heat treatment. In line with WHO recommendations, the promotion of breastfeeding and a human milk diet, using donor milk bank resources, must be prioritized as an essential component of early newborn care.	A Virtual Communication Network of international milk bank leaders considers issues related to the provision of donor milk services during the COVID-19 pandemic and provides guidance around breastfeeding.	Shenker N, on behalf of the Virtual Collaborative Network of Human Milk Banks and Associations. Maintaining safety and service provision in human milk banking: a call to action in response to the COVID-19 pandemic [published online 2020 May 6]. Lancet Child & Adol Health. doi:10.1016/S2352-4642(20)30134-6
Fetal surgery, perinatal management, vertical transmission	6-May-20	Fetal Diagnosis and Therapy During the COVID-19 Pandemic: Guidance on Behalf of the International Fetal Medicine and Surgery Society	Fetal Diagnosis and Therapy	Original Paper	This review discusses potential modifications to obstetric management and fetal procedures in both SARS-CoV-2 negative and positive patients with fetal anomalies or disorders. Most fetal therapies are time sensitive and cannot be delayed. If personnel and resources are available, procedures of proven benefit should continue to be offered, acknowledging any fetal and maternal risks, including those to health care workers. There is, to date, minimal, unconfirmed evidence of spontaneous vertical transmission, though it may theoretically be increased with some procedures. It is important to know a mother's preoperative SARS-CoV-2 status to avoid or defer certain procedures while she is contagious. Some fetal conditions may alternatively be managed neonatally. Counseling regarding fetal interventions that carry the possibility of additional intra- or postoperative morbidity must be provided in the context of local resource availability.	Fetal interventions of proven benefit should continue to be offered, taking into account the added maternal and fetal risks presented by positive SARS-CoV-2 status.	Deprest J, Choolani M, Chervenak F, et al. Fetal Diagnosis and Therapy during the COVID-19 Pandemic: Guidance on Behalf of the International Fetal Medicine and Surgery Society [published online, 2020 May 6]. Fetal Diagn Ther. 2020;1-10. doi:10.1159/000508254
Children, clinical characteristics, epidemiology, chest CT lesions, discharge criteria, China	6-May-20	A Single-Center, Retrospective Study of COVID-19 Features in Children: A Descriptive Investigation	BMC Medicine	Research Article	Among 50 children with positive SARS-CoV-2 RT-PCR tests, admitted to Wuhan Children's Hospital, five had negative results initially but showed positive results in subsequent tests. Eight (16%) patients had lymphopenia, seven (14%) had thrombocytopenia, four (8%) had lymphocytosis, two (4%) had thrombocytosis, ten (20%) had elevated C-reactive protein, four (8%) had hemoglobin above, and six (12%) had below standard reference values. Seven (14%) of the 50 had no radiologic evidence of disease on chest CT. For the 43 patients who had abnormal CT findings, in addition to previously reported patterns of ground-glass opacity (67%), local patchy shadowing (37%), local bilateral patchy shadowing (21%), and lesion location of lower lobes (65%), other CT features showed an overwhelming number of pediatric patients with lesions in the subpleural area (95%), and 22 of the 28 lower lobe lesions were in the posterior segment (78%). Lesions were not completely absorbed in 67% of the 15 patients who received a chest CT at discharge, and 26% of these patients had CT lesions that were either unchanged or worse. All 15 patients had normal body temperatures, no clinical symptoms, and consecutive negative PCR tests at discharge.	This retrospective study concludes that CT is a powerful tool to detect and characterize COVID-19 pneumonia but has little utility in evaluating clinical recovery for children, prior to discharge.	Ma H, Hu J, Tian J, et al. A single-center, retrospective study of COVID-19 features in children: a descriptive investigation. BMC Med. 2020;18(1):123. Published 2020 May 6. doi:10.1186/s12916-020-01596-9
pregnancy, breastfeeding, COVID-19	5-May-20	Pregnancy and breastfeeding during COVID-19 pandemic: A	medRxiv	Preprint (not peer-reviewed)	This systematic review describes the outcomes of published cases (up to 8 April 2020) of pregnant women diagnosed with COVID-19 (confirmed by clinical/radiological evidence of pneumonia compatible with SARS-CoV-2 and/or by PCR testing). Searches were conducted in PubMed using PRISMA	This study reviews the outcomes of published cases (n=30) up to 8 April 2020 of pregnant	Rodrigues C, Baia I, Domingues R, Barros H. Pregnancy and breastfeeding during

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		systematic review of published pregnancy cases			standards to identify original studies in any language. The authors identified 30 original studies reporting 212 cases of pregnant women with COVID-19 (30 discharged while pregnant); 200 from China and 12 from other countries. The following data were collected from each study: maternal age, pregnancy complications, type of delivery, indication for C-section, gestational age at birth (or admission), pregnancy outcome, maternal admission to ICU, maternal death, neonatal outcomes, intra-uterine and/or neonatal samples collected for detection of SARS-CoV-2 (amniotic fluid, cord blood, placenta, breast milk, nasopharyngeal and anal swabs) and their results. Maternal age ranged from 22 to 41 years. The 182 deliveries resulted in 1 stillbirth and 185 live births. 4 women with severe COVID-19 required admission to an ICU but no cases of maternal death were reported. There was 1 neonatal death in a preterm infant from a pregnant woman with vaginal bleeding in her 3rd trimester. Preterm births occurred in 28.7% of cases, but the causes are unclear. All cases with amniotic fluid, placenta, and/or cord blood analyzed for the SARS-CoV-2 virus were negative. 4 newborns were positive for SARS-CoV-2 and 3 newborns had high levels of IgM antibodies. Breast milk samples from 13 mothers (from 7 studies) showed no evidence of SARS-CoV-2. The authors conclude that pregnant women and newborns should be considered particularly vulnerable populations in the context of the COVID-19 pandemic. Considering the benefits of breastfeeding and the fact that transmission of respiratory viruses (including SARS-CoV-2) is insignificant through breast milk, the authors conclude there is insufficient evidence to discourage breastfeeding.	women (n=212) diagnosed with COVID-19. The following data were summarized: maternal age, pregnancy complications, type of delivery, indication for C-section, gestational age at birth (or admission), pregnancy outcome, maternal admission to ICU, maternal death, neonatal outcomes, intra-uterine and/or neonatal samples collected for detection of SARS-CoV-2 (amniotic fluid, cord blood, placenta, breast milk, nasopharyngeal and anal swabs) and their results.	COVID-19 pandemic: A systematic review of published pregnancy cases. medRxiv. 2020:2020.04.25.20079509. doi: 10.1101/2020.04.25.20079509.
COVID-19; children; health benefit	5-May-20	Every cloud: how the COVID-19 pandemic may benefit child health	Pediatric Research	Comment	The authors discuss the potential benefits to child health resulting from the COVID-19 pandemic, which has brought several short-comings of the current healthcare delivery infrastructure into focus and put long-sought changes into effect. Remote screening using telehealth or digital applications is efficient, pragmatic, and simple. Automation and simplification allow healthcare providers to focus on the more immediate or complex needs of their patient population. Through necessity, digitally enabled care has become an indispensable tool for seeing patients and will likely be a permanent fixture in pediatric healthcare. Telehealth helps pediatricians triage minor contagious illnesses efficiently and confidently, allows ill children to remain at home, and provides flexibility through virtual visits during the work day or after hours. For pediatric hospitalists or specialists, the limitations on care in the COVID-19 pandemic have forced medical rounds to be modified to smaller teams and limited contact with potentially contagious children, which may benefit both the staff and patients. Remote rounding using virtual platforms may allow greater numbers of learners to participate in the care of children with rare or interesting findings without overwhelming the space. Similarly, virtual learning may entice resourceful organizations and institutions to embrace virtual conferences or lectureships. Lessons learned from the pandemic will allow healthcare systems to re-focus on delivering high-quality and efficient care.	The authors discuss the potential benefits to child health resulting from the COVID-19 pandemic, which has brought several short-comings of the current healthcare delivery infrastructure into focus and put long-sought changes into effect, e.g., telehealth. Lessons learned from the pandemic will allow healthcare systems to re-focus on delivering high-quality and efficient care.	Roland D, Stansfield BK. Every cloud: how the COVID-19 pandemic may benefit child health. Pediatr Res. 2020. doi: 10.1038/s41390-020-0947-x.
Pregnancy, maternal	5-May-20	Pregnancy outcomes,	medRxiv	Pre-print (not peer-reviewed)	The aim of this systematic review was to examine maternal and fetal outcomes in pregnant women with COVID-19 and to assess the incidence of	In this systematic review of COVID-19 in	Gajbhiye R, Modi D, Mahale S. Pregnancy outcomes,

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outcomes, neonatal outcomes, preterm birth,		Newborn complications and Maternal-Fetal Transmission of SARS-CoV-2 in women with COVID-19: A systematic review of 441 cases			maternal-fetal transmission of SARS-CoV-2. Articles were reviewed up to May 3, 2020. 50 studies reporting the information on 441 pregnant women and 391 neonates were included. The primary outcome measures were maternal health characteristics and adverse pregnancy outcomes, neonatal outcomes and SARS-CoV-2 infection in neonates. Out of 441 women affected by COVID-19 in pregnancy, 387 women had delivered. There were 9 maternal deaths reported. The most common symptoms were fever (56%), cough (43%), myalgia (19%), dyspnea (18%) and diarrhea (6%). Pneumonia was diagnosed by CT scan in 96 % of COVID-19 pregnant women. Pregnancy complications included delivery by C-section (80%), preterm labor (26%), fetal distress (8%) and premature rupture of membranes (9%). 6 still births (2%) were reported. The most common co-morbidities associated were hypertensive disorders (10%), diabetes (9%), placental disorders (2%), co-infections (3%), scarred uterus (3%) and hypothyroidism (3%). Amongst neonates of COVID-19 mothers, preterm births (25%), respiratory distress syndrome (8%), and pneumonia (8%) were reported. There were 4 neonatal deaths and the vertical transmission rate of SARS-CoV-2 was estimated to be 8%.	pregnancy, the most common maternal complications were C-section delivery and preterm labor, while the most common neonatal complications were preterm birth, respiratory distress syndrome, and pneumonia. The vertical transmission rate was estimated to be 8%.	Newborn complications and Maternal-Fetal Transmission of SARS-CoV-2 in women with COVID-19: A systematic review. medRxiv. 2020 May 5.
Children, viral shedding, Kaplan-Meier analysis, China	5-May-20	Symptomatic Infection Is Associated With Prolonged Duration of Viral Shedding in Mild Coronavirus Disease 2019: A Retrospective Study of 110 Children in Wuhan	The Pediatric Infectious Diseases Journal	Original Studies (peer-reviewed)	Data from 110 children (median age: 6 years) with COVID-19 at Wuhan Children's Hospital, from January 30 to March 10, 2020, were analyzed retrospectively. The median period of viral SARS-CoV-2 RNA shedding, assessed via RT-PCR on throat or nasopharyngeal swab, was 15 days (IRQ: 11-20 days) as measured from illness onset to discharge. This period was shorter in asymptomatic patients (26.4%) compared with symptomatic patients (73.6%) (11 vs. 17 days). Multivariable regression analysis showed increased odds of symptomatic infection was associated with age <6 years (OR 8.9, 95% CI 2.6-31.4; p=0.001), hypersensitive C-reactive protein >3.0 mg/L (OR 4.89; 95% CI 1.1-21.8; p=0.037) and presenting pneumonia in chest radiologic findings (OR 8.5; 95% CI 2.7-26.6; p<0.001). Kaplan-Meier analysis revealed that symptomatic infection (p<0.001), fever (p=0.006), pneumonia (p=0.003) and lymphocyte counts <2.0×10^9/L (p=0.008) were associated with prolonged duration of viral RNA shedding in children with COVID-19.	In this study, prolonged duration of viral RNA shedding in children with COVID-19 was associated with symptomatic infection, fever, pneumonia and lymphocyte count of 2.0×10^9/L.	Lu Y, Li Y, Deng W, et al. Symptomatic Infection is Associated with Prolonged Duration of Viral Shedding in Mild Coronavirus Disease 2019: A Retrospective Study of 110 Children in Wuhan [published online, 2020 May 5]. Pediatr Infect Dis J. 2020. doi:10.1097/INF.0000000000002729
Children, super spreaders, transmission, community testing, family clusters, school closures	5-May-20	Children Are Not COVID-19 Super Spreaders: Time to Go Back to School	Archives of Disease in Childhood	Viewpoint	Early contact tracing data from Shenzhen, China appeared to confirm a role for children in COVID-19 transmission; however, in some regions where widespread community testing has been implemented (e.g. South Korea, Iceland), children are significantly underrepresented in the number of positive cases among the general populations. Thus, evidence is emerging that children could be less likely to become infected than adults. Alternatively, children could have a more transient upper respiratory infection with minimal viral shedding; data on family clusters have shown that children are not likely to be the index case in households. Currently, children do not appear to be super spreaders but until there is high-quality sero-surveillance data, these questions cannot be answered with certainty.	Based on studies of widespread community testing and family clusters, the authors argue that children do not appear to play a significant role in COVID-19 transmission.	Munro APS, Faust SN. Children are not COVID-19 super spreaders: time to go back to school [published online, 2020 May 5]. Arch Dis Child. 2020. doi:10.1136/archdischild-2020-319474

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Children, renin-angiotensin-aldosterone system, cardiovascular disease, chronic kidney disease	5-May-20	ACE2, COVID-19, and ACE Inhibitor and ARB Use During the Pandemic: The Pediatric Perspective	Hypertension	Original Article	This review highlights the relationship of COVID-19 and the use of ACE inhibitors and angiotensin II receptor blockers (ARB) to treat chronic kidney and cardiovascular disease, from a pediatric perspective. A summary of the renin-angiotensin-aldosterone system and review of the literature pertaining to the ACE2/Angiotensin-(1-7) pathway in children are provided. Currently, there is no evidence that children who are taking ACE inhibitors or ARBs are at increased risk of SARS-CoV-2 infection or severe disease. Given the proven benefits of these medications, especially for youth with chronic conditions, many scientific societies affirm the continued use of these agents.	ACE inhibitors and angiotensin II receptor blockers have not been conclusively shown to increase risk of SARS-CoV-2 infection and should continue to be used in children with chronic conditions.	South AM, Brady TM, Flynn JT. ACE2, COVID-19, and ACE Inhibitor and ARB Use during the Pandemic: The Pediatric Perspective [published online, 2020 May 5]. Hypertension. 2020. doi:10.1161/HYPERTENSIONAHA.120.15291
Pregnancy, questionnaire, systematic screening, Italy	5-May-20	Effectiveness of a COVID-19 Screening Questionnaire for Pregnant Women at Admission to an Obstetric Unit in Milan	International Journal of Gynaecology & Obstetrics	Brief Communication	Sutton et al. reported on universal testing with nasopharyngeal swabs to detect severe SARS-CoV-2 infection in 215 women admitted for delivery at the Presbyterian Allen Hospital in New York, USA. However, this approach is only feasible in major hospitals in high-resource countries with efficient lab facilities in-house. An alternative approach is considered in this report from a COVID-19 maternity hub in Milan, Italy. This facility opted for systematic screening for SARS-CoV-2 using a specific questionnaire, administered at obstetrics admission; suspected cases underwent nasopharyngeal swab testing and were managed as suspected COVID-19 cases until results were available. Of 139 women screened (between April 1-9, 2020) using this questionnaire, 6 (4.3%) were considered suspected cases while the remaining 133 (95.7%) were not. Nasopharyngeal swab results were positive in 2 suspected cases and 1 woman with an unremarkable screening response. This screening approach may be less efficient in areas where the absolute rate of undetected COVID-19 cases would be markedly higher.	A COVID-19 maternity hub in Milan, Italy employed a questionnaire to systematically screen for suspected cases of SARS-CoV-2 among pregnant women at obstetrics admission. This is an inexpensive and possibly effective tool in settings with relatively lower incidence.	Tassis B, Lunghi G, Frattaruolo MP, Ruggiero M, Somigliana E, Ferrazzi E. Effectiveness of a COVID-19 screening questionnaire for pregnant women at admission to an obstetric unit in Milan [published online, 2020 May 5]. Int J Gynaecol Obstet. 2020. doi:10.1002/ijgo.13191
Pregnancy, breast milk samples, vaginal secretions, China	5-May-20	Coronavirus Disease 2019 Among Pregnant Chinese Women: Case Series Data on the Safety of Vaginal Birth and Breastfeeding	BJOG	Case Series	In this single center cohort study, 13 pregnant women with SARS-CoV-2 infection, diagnosed between January 31 and March 9, 2020 at Renmin Hospital, Wuhan, China, were included. Of the 13 women, 5 were in their first trimester, 3 in their second trimester, and 5 in their third trimester. Of the 5 women during their third trimester who gave birth, all delivered live newborns. Among these 5 deliveries, the primary adverse perinatal outcomes included premature delivery (n = 2) and neonatal pneumonia (n = 2). One of 9 maternal stool samples was positive for SARS-CoV-2 on RT-PCR; all 13 vaginal secretion samples in addition to 5 neonatal throat swabs and 4 neonatal anal swabs were negative. However, 1 of 3 samples of breast milk was positive by viral nucleic acid testing.	Negative SARS-CoV-2 test results for vaginal secretion specimens, from pregnant women with COVID-19, suggest that vaginal delivery may be a safe option. However, a positive breast milk sample in this study warrants further study of the risk for viral contamination.	Wu Y, Liu C, Dong L, et al. Coronavirus disease 2019 among pregnant Chinese women: Case series data on the safety of vaginal birth and breastfeeding [published online, 2020 May 5]. BJOG. 2020. doi:10.1111/1471-0528.16276
Pregnancy, neonatal death, maternal hypoxia, ARDS, inflammatory storm, fetal myocardium, China	5-May-20	Critically Ill Pregnant Patient With COVID-19 and Neonatal Death Within Two Hours of Birth	International Journal of Gynaecology & Obstetrics	Brief Communication	Most pregnant women with COVID-19 appear to experience a milder clinical course. In contrast, the present report describes a critical case of COVID-19 in a 31-year-old pregnant woman, admitted to Xiaolan People's Hospital of Zhongshan at 35+2 weeks of pregnancy with no known comorbidity or history of chronic illness. Onset of symptoms in the patient began with a sore throat and dry cough for 4 days, followed by fever and dyspnea for half a day. Within 12 hours of hospitalization, the patient experienced rapid aggravation of disease, progressing to acute respiratory distress syndrome and septic shock. An emergency cesarean delivery was performed at the bedside, but the neonate died within two hours of birth. Maternal hypoxia may have caused sudden changes in the fetal intrauterine environment,	This case report describes neonatal death following emergency cesarean delivery in a pregnant woman with severe COVID-19, which progressed to ARDS and septic shock. Causes of death may relate to conditions of maternal	Li J, Wang Y, Zeng Y, et al. Critically ill pregnant patient with COVID-19 and neonatal death within two hours of birth [published online, 2020 May 5]. Int J Gynaecol Obstet. 2020. doi:10.1002/ijgo.13189

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					while the inflammatory storm caused by maternal infection may have triggered a systemic immune response that attacked fetal organs. Biochemical examination of umbilical cord blood at birth revealed a marked increase in myocardial enzymes, suggesting severe damage to the fetal myocardium.	hypoxia and inflammatory storm, leading to damage of fetal organs.	
COVID-19; children; respiratory failure; Severe Thrombocytopenia; United States	4-May-20	Severe Pediatric COVID-19 Presenting With Respiratory Failure and Severe Thrombocytopenia	Pediatrics	Case Report	In this report, the authors described the case of a 12-year-old female with severe pediatric COVID-19 presenting with respiratory failure and severe thrombocytopenia in the United States. The patient had no past medical history and presented with fever, cough, and vomiting [date not specified]. Laboratory evaluation revealed severe thrombocytopenia (<10 x103/micL) and elevated markers of inflammation. The patient progressed to respiratory failure, and nasopharyngeal RT-PCR results for SARS-CoV-2 returned positive. Because of the severity of her thrombocytopenia, she was treated with IV immunoglobulin and steroids, with prompt improvement in platelets. The patient's severe acute respiratory distress syndrome was managed with mechanical ventilation, inhaled nitric oxide, and then airway pressure release ventilation. After azithromycin and hydroxychloroquine were given without improvement, the patient received tocilizumab, an anti-interleukin-6 receptor antibody, and remdesivir, a broad anti-viral agent, with significant clinical benefit soon afterward.	In this report, the authors described the case of a 12-year-old female with severe pediatric COVID-19 presenting with respiratory failure and severe thrombocytopenia in the United States. The patient was treated with tocilizumab, an anti-interleukin-6 receptor antibody, and remdesivir, a broad anti-viral agent, with significant clinical benefit.	Patel PA, Chandrakasan S, Mickells GE, et al. Severe Pediatric COVID-19 Presenting With Respiratory Failure and Severe Thrombocytopenia. Pediatrics. 2020;146(1):e20201437. doi:10.1542/peds.2020-1437.
COVID-19; pediatric; Iran; child; diagnosis; imaging	4-May-20	Pediatric coronavirus disease 2019 (COVID-19): An insight from west of Iran	Nothern Clinics of Istanbul	Article	This descriptive study examines the clinical, laboratory, and radiological characteristics of pediatric patients with COVID-19 in Hamadan and Sanandaj, in western Iran. Medical records of children diagnosed as probable or confirmed COVID-19 cases were extracted and analyzed between 1 March-15 April 2020. 30 patients (46.7% male; age range 1 day-15 years, median age 5.5 years) were admitted during that time. 63% of the patients (n=19) were confirmed to be positive for SARS-CoV-2 by RT-PCR, while 37% (n=11) were considered as probable cases by chest CT. 36.7% (n=11) cases had a definite history of close COVID-19 contact. The most common symptoms were fever, cough, and dyspnea. None of the patients presented with a runny nose. Lymphopenia and marked elevation of C-reactive protein were observed in 4 (13.3%) and 12 (40%) cases, respectively. 10 (33.3%) cases had normal chest X-rays. Ground-glass opacities (GGOs) were the most common findings in those who had CT scans (n=19, 73.1%). All but one of the patients were discharged without sequala. An 11-year-old girl with acute lymphocytic leukemia in remission by chemotherapy expired with a fulminant pneumonia within 48 hours of hospitalization. The child tested negative for SARS-CoV-2 by RT-PCR but had extensive GGOs on CT in both lungs. The findings suggest that COVID-19 is not uncommon in children and could have different presentations. The authors recommend concomitant use of RT-PCR and chest CT scans in symptomatic cases, to diagnose the disease.	This descriptive study analyzes medical records to examine the clinical, laboratory, and radiological characteristics of pediatric patients with COVID-19 in Hamadan and Sanandaj, in western Iran. The findings suggest that COVID-19 is not uncommon in children and could have different presentations. The authors recommend concomitant use of RT-PCR and chest CT scans in symptomatic cases, to diagnose the disease.	Soltani J, Sedighi I, Shalchi Z. Pediatric coronavirus disease 2019 (COVID-19): An insight from west of Iran. North Clin Istanb. 2020;7(3):284-291. doi:10.14744/nci.2020.90277.

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Pregnancy, clinical course, maternal outcomes, vertical transmission	4-May-20	Current State of Knowledge About SARS-CoV-2 and COVID-19 Disease in Pregnant Women	Medical Science Monitor	Report	The aim of this study was to review early data regarding SARS-CoV-2 infection and COVID-19 in pregnant women. The report focuses on case studies and retrospective data primarily from China, the origin of the epidemic [dates of review not specified]. The authors describe the symptoms, clinical course, management, and outcomes of pregnant women with COVID-19 reported in multiple studies, and conclude that from the data published at the time of this report, they cannot draw clear conclusions as to the clinical course or conditions of pregnant women infected with SARS-CoV-2 and suffering from COVID-19. They also conclude that there is no evidence that SARS-CoV-2 is subject to intra-uterine or transplacental transmission from mother to fetus.	The authors report early data on the clinical course and outcomes of pregnant women infected with SARS-CoV-2. At the time of this report, there was insufficient evidence for the authors to draw conclusions about the clinical course of COVID-19 in pregnant women.	Gujski M, Humeniuk E, Bojar I. Current State of Knowledge About SARS-CoV-2 and COVID-19 Disease in Pregnant Women. Med Sci Monit. 2020;26:e924725. Published 2020 May 9. doi:10.12659/MSM.924725
Lower genital tract, transmission, breast milk, neonatal	4-May-20	Severe acute respiratory syndrome coronavirus 2 detection in the female lower genital tract	American Journal of Obstetrics and Gynecology	Research Letter	In this study, the authors recruited 35 women (age range 35-88 years) who tested positive for SARS-CoV-2 infection from January 28-February 18, 2020 at three branches of the Tongji Hospital in China. 27 women tested positive for SARS-CoV-2 by RT-PCR. To avoid false positives, vaginal fluid, exfoliated cell, and anal swabs were collected twice from each patient and tested at two separate laboratories, with positive cases being defined as patients with a positive test from either laboratory. The time between the beginning of symptoms and the collection of swabs ranged from 8-41 days. One anal swab and no swabs from the lower genital tract were positive for SARS-CoV-2. Breast milk obtained from one post-partum patient on the third day after delivery tested negative, along with neonatal throat swabs. The authors concluded that SARS-CoV-2 was not found in the lower genital tract in cervical exfoliated and vaginal fluid, and thus the lower genital tract may not be a transmission route for SAS-CoV-2.	The authors tested vaginal and anal samples from women who tested positive for SARS-CoV-2 infection by RT-PCR, reporting negative findings for the tests. They also report no SARS-CoV-2 detected in breastmilk and neonate throat swabs. They concluded that SARS-CoV-2 was not transmitted through the lower genital tract.	Cui P, Chen Z, Wang T et al. Severe acute respiratory syndrome coronavirus 2 detection in the female lower genital tract. Am J Obstet Gynecol. 2020 Jul;223(1):131-134. doi: 10.1016/j.ajog.2020.04.038. Epub 2020 May 4. PMID: 32376320; PMCID: PMC7196539.
Children, IL-6, inflammatory marker, cytokine storm	4-May-20	Interleukin-6 Levels in Children Developing SARS-CoV-2 Infection	Pediatrics and Neonatology	Perspectives	Recently, the authors demonstrated that COVID-19 severity in adult patients was strongly associated with higher interleukin-6 (IL-6) levels. In this article, data from 6 studies (total sample size: n=117 pediatric patients; ranging from newborn to adolescence) were synthesized. In contrast to results in adults, the pediatric COVID-19 cases had IL-6 levels within normal range (mean 86.3%; range 67-100%), and all of the current studies observed patients having mild symptoms. This finding reinforces previous notions that the cytokine storm, indicated by excessive circulating IL-6, is less likely to occur in children. As a marker of COVID-19 severity, IL-6 may be relatively more consistent compared to other inflammatory markers, such as C-reactive protein.	Based on review of a small number of studies, pediatric cases had IL-6 levels within normal range, suggesting an absence of cytokine storm compared to adults.	Soraya GV, Ulhaq ZS. Interleukin-6 levels in children developing SARS-CoV-2 infection [published online 2020 May 4]. Pediatr Neonatol. doi:10.1016/j.pedneo.2020.04.007
Female reproductive system, pregnancy, renin-angiotensin system	4-May-20	Potential Influence of COVID-19/ACE2 on the Female Reproductive System	Molecular Human Reproduction	Review	The SARS-CoV-2 virus invades the target cell by binding to angiotensin-converting enzyme (ACE) 2 and modulates the expression of ACE2 in host cells. ACE2, a pivotal component of the renin-angiotensin system, exerts its physiological functions by modulating the levels of angiotensin II (Ang II) and Ang-(1-7). In this article, authors review existing literature on the distribution and function of ACE2 in the female reproductive system, hoping to clarify the potential harm of SARS-CoV-2 to female fertility. Available	Wide expression of the ACE-2 receptor in the ovary, uterus, vagina, and placenta suggest the possibility of mother-to-child and sexual transmission of	Jing Y, Run-Qian L, Hao-Ran W, et al. Potential influence of COVID-19/ACE2 on the female reproductive system [published online, 2020 May 4]. Mol Hum Reprod. 2020.

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					evidence suggests that ACE2 is widely expressed in the ovary, uterus, vagina and placenta. Therefore, the possibility of mother-to-child and sexual transmission exists. Ang II, ACE2 and Ang-(1-7) regulate follicle development and ovulation, modulate luteal angiogenesis and degeneration, and also influence the regular changes in endometrial tissue and embryo development. Taking these functions into account, by modulating the expression of ACE2 receptors, SARS-CoV-2 may disturb female reproductive functions.	SARS-CoV-2. Binding of SARS-CoV-2 virus to the ACE-2 receptor may disrupt female reproductive functions regulated by the renin-angiotensin system.	doi:10.1093/molehr/gaaa030
Neonatal infection, hypoxemia, perioral cyanosis, poor sucking, maternal expressed milk, Italy	4-May-20	Early Neonatal SARS-CoV-2 Infection Manifesting With Hypoxemia Requiring Respiratory Support	Pediatrics	Case Report	On the second day after uncomplicated vaginal delivery of a male neonate, the mother developed fever without respiratory symptoms, and her nasopharyngeal swab was positive for SARS-CoV-2. A nasopharyngeal swab obtained on the same day was also positive for the neonate, who was isolated from his mother. After 48 hours of isolation, on day 5 of life, the neonate developed perioral cyanosis and poor sucking without signs of respiratory distress. Arterial blood gas analysis demonstrated moderate hypoxia. The neonate was admitted to the NICU and placed on 30% inspired oxygen via high-flow nasal cannula, and his condition improved. He was fed maternal expressed milk by nasogastric tube for 48 hours, after which he was able to be fully fed orally. On days 15 and 21 of life, his qualitative PCR for COVID-19 remained positive.	A case of COVID-19 in a 3-day-old neonate manifested with silent hypoxemia. The neonate was fed expressed maternal milk via nasogastric tube until he was able to be fed orally. The nasopharyngeal swab remained positive for more than two weeks, unlike previous reports showing rapid virologic clearance.	Sinelli MT, Paterlini G, Citterio M, Di Marco A, Fedeli T, Ventura ML. Early Neonatal SARS-CoV-2 Infection Manifesting With Hypoxemia Requiring Respiratory Support [published online, 2020 May 4]. Pediatrics. 2020. doi:10.1542/peds.2020-1121
Obesity, young age, ICU admission, USA	4-May-20	Obesity could shift severe COVID-19 disease to younger ages	Lancet	Correspondence	Obesity is an underappreciated risk factor for COVID-19 and is particularly relevant in the USA, where the prevalence of obesity is around 40%, versus a prevalence of 6.2% in China, 20% in Italy, and 24% in Spain. In a dataset of 265 patients (58% male) with COVID-19 admitted to the ICU at various university hospitals at 6 sites across the country, a significant inverse correlation between age and BMI was observed. In other words, younger individuals admitted to the ICU were more likely to be obese. The median BMI was 29.3kg/m^2, with 25% exceeding a BMI of 34.7kg/m^2. Obesity can restrict ventilation by impeding diaphragm excursion, impairs immune responses to viral infection, is pro-inflammatory, and induces diabetes and oxidant stress to adversely affect cardiovascular function. The authors conclude that in populations with a high prevalence of obesity, COVID-19 will affect younger populations more than previously reported.	Younger patients with COVID-19, admitted to ICUs across various university hospitals in the USA, were more likely to be obese than older patients. Obesity warrants further attention as a pro-inflammatory risk factor for COVID-19, especially in younger individuals.	Kass DA, Duggal P, Cingolani O. Obesity could shift severe COVID-19 disease to younger ages [published online 2020 May 4]. Lancet. doi:10.1016/S0140-6736(20)31024-2
Pregnancy, antenatal, intrapartum, postpartum care, UK	4-May-20	Covid-19 and pregnancy	BMJ	Practice	The UK Royal College of Obstetricians and Gynaecologists (RCOG) recently published a set of guidelines related to COVID-19 in pregnancy, on April 17, 2020. This summary reviews the development of the guideline and key recommendations. The guideline itself summarizes the available evidence on the effects of COVID-19 on pregnant women and fetuses. It provides recommendations on the care of pregnant women with suspected or confirmed COVID-19 in the antepartum, intrapartum, and postnatal stages.	This brief summary reviews guidelines recently published by the UK Royal College of Obstetricians and Gynaecologists on caring for pregnant women with COVID-19.	Covid-19 and pregnancy. BMJ. 2020;369:m1672. Published 2020 May 4. doi:10.1136/bmj.m1672
Pediatric, neonatal resuscitation,	4-May-20	Interim Guidance for Basic and Advanced Life	Pediatrics	Scientific Statement	The American Heart Association, in collaboration with other organizations, has compiled interim guidance to help rescuers treat victims of cardiac arrest with suspected or confirmed COVID-19. The challenge is to ensure	These guidelines offer considerations for pediatric and	Topjian A, Aziz K, Kamath-Rayne BD, et al. Interim Guidance for Basic and

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basic life support		Support in Children and Neonates With Suspected or Confirmed COVID-19			that patients with or without COVID-19 who experience cardiac arrest have the best possible chance of survival without compromising the safety of rescuers. The present statement applies specifically to pediatric and neonatal resuscitations, with situation- and setting-specific considerations.	resuscitation in suspected or confirmed COVID-19 patients.	Advanced Life Support in Children and Neonates With Suspected or Confirmed COVID-19 [published online, 2020 May 4]. Pediatrics. 2020. doi:10.1542/peds.2020-1405
Pediatrics, ethical issues, ventilator allocation	4-May-20	Pediatric Ethical Issues During the COVID-19 Pandemic Are Not Just About Ventilator Triage	Acta Paediatrica	View	Administrators and providers worry about an overwhelming shortage in critical life-saving ventilators for adults during the COVID-19 pandemic. However, algorithms for ventilator allocation do not easily translate to pediatric medicine nor does ventilator allocation represent an urgent crisis for pediatric medicine. In this report, authors highlight underrecognized pediatric ethical concerns: other triage decisions for scarce resources (e.g. redeployment of skilled pediatric personnel to adult medicine), the negative psychosocial effects of the pandemic on children, including food insecurity, the moral and emotional toll on clinicians, and system inadequacies.	Attention has focused on triage decisions surrounding ventilator shortages for critically ill adult patients. In contrast, this report highlights ethical concerns specific to children during the COVID-19 pandemic.	Haward MF, Moore GP, Lantos J, Janvier A. Pediatric ethical issues during the COVID-19 pandemic are not just about ventilator triage [published online, 2020 May 4]. Acta Paediatr. 2020. doi:10.1111/apa.15334
Pediatric physicians, survey, Australia, New Zealand	4-May-20	COVID-19 and Paediatric Health Services: A Survey of Paediatric Physicians in Australia and New Zealand	Journal of Paediatrics and Child Health	Original Article	The aim of this study was to assess attitudes, readiness and confidence in the early stages of the COVID-19 pandemic through an online survey of pediatric physicians and sub-specialists across Australia and New Zealand, between March 17 and 24, 2020. Of 542 respondents (an estimated 11% of the pediatric physician workforce in Australia and New Zealand), a minority (36.6%) agreed that their national response had been well coordinated; the majority (92.7%) agreed that senior-level hospital administrators were taking the situation seriously. Most reported a good understanding of the natural history of COVID-19 in children, and knowledge of where to find local information. A large proportion of physicians (86.1%) were worried about becoming infected through their work; few (5.8%) reported that they would not come to work to avoid infection. Closure of school and childcares would reduce the ability to continue work at current capacity for 23.6% of respondents.	In this survey of pediatric physicians in Australia and New Zealand, most felt informed and were willing to work despite concerns about exposure at work.	Foley DA, Kirk M, Jepp C, et al. COVID-19 and paediatric health services: A survey of paediatric physicians in Australia and New Zealand [published online, 2020 May 4]. J Paediatr Child Health. 2020. doi:10.1111/jpc.14903
Chilblain-like lesions, pediatrics, Spain	3-May-20	Chilblain-like lesions in pediatrics dermatological outpatients during the COVID-19 outbreak	Dermatologic Therapy	Special Issue Article	This article describes a retrospective, cross-sectional study that evaluated the dermatological care of outpatients under age 16 years who consulted, in person or telemetrically, at the Hospital Universitario San Cecilio de Granada in Spain for acral lesions (chilblain-like or erythema multiforme-like) from 15 March-24 April 2020 during COVID-19 pandemic. Of the 27 patients collected, 18 (66%) were male and overall mean age was 14.44 years [age range not specified]. All lacked a personal history of interest and denied previous episodes of chilblains or Raynaud's phenomenon/disease. The clinic was limited to purpuric lesions located on acral regions distributed on hands and feet, asymptomatic (67%) or associated with pruritus (11%) or mild pain (22%). No administration of local or systemic treatment was necessary and the lesions resolved spontaneously without sequelae. No respiratory symptoms were observed for any of the patients and only one had suffered diarrheal outbreak coinciding with the skin symptoms. 74% reported no SARS-CoV-2 infection in the family whereas 26% reported asymptomatic	This article describes a retrospective, cross-sectional study that evaluated the dermatological care of pediatric outpatients who consulted, in person or telemetrically, at a hospital in Spain for acral lesions (chilblain-like or erythema multiforme-like) during the COVID-19 pandemic. While an	Garcia-Lara G, Linares-González L, Ródenas-Herranz T. Chilblain-like lesions in pediatrics dermatological outpatients during the COVID-19 outbreak. Dermatol Ther. 2020;33:e13516. doi:10.1111/dth.13516.

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					family members. It is difficult to establish a relationship with SARS-CoV-2 infection and even the few tests performed (n=2 PCR, n=9 IgM, n=9 IgA, n=9 IgG) offer negative serological results. However, dermatologists and pediatricians should be aware of the possibility of an association of the lesions with COVID-19 infection and their complications, in developing protocols to clinical practice.	association of the lesions with SARS-CoV-2 infection may exist, it could not be established in this study.	
Radiology, lung ultrasound, diagnosis, children, Italy	3-May-20	Lung Ultrasound in Children with COVID-19: Preliminary Findings	Ultrasound in Medicine & Biology	Clinical Note	Recent evidence indicates the usefulness of lung ultrasound (LUS) in detecting COVID-19 pneumonia in adults; however, no data are available on the use of LUS in children with COVID-19 pneumonia. In this report, the authors describe the radiologic features on LUS of ten children with COVID-19 admitted to two tertiary-level pediatric hospitals in Rome, Italy. LUS revealed signs of lung involvement including findings of vertical artifacts (70%), pleural irregularities (60%), areas of white lung (10%), and subpleural consolidations (10%). In the authors' experience, routine use of LUS in the evaluation of children with suspected or confirmed COVID-19 was useful in diagnosing and monitoring pediatric COVID-19 pneumonia, reducing unnecessary radiation/sedation, and decreasing exposure of health care workers to SARS-CoV-2.	The authors found that lung ultrasound (LUS) was able to detect COVID-19 pneumonia in ten children in Italy. Physical examination of the patient and bedside LUS can be performed by the same pediatrician, decreasing exposure of healthcare personnel to the virus.	Musolino AM, Supino MC, Buonsenso D, et al. Lung Ultrasound in Children with COVID-19: Preliminary Findings. [published online, 2020 May 3]. Ultrasound Med Biol. doi:10.1016/j.ultrasmedbio.2020.04.026
Vertical transmission, congenital vs. perinatal transmission, placenta, breast milk samples, maternal antibodies	3-May-20	Evidence for and Against Vertical Transmission for SARS-CoV-2 (COVID-19)	American Journal of Obstetrics and Gynecology	Review (journal pre-proof)	Twelve articles, published between February 10 and April 4, 2020, reporting on 68 cases of maternal infection in the third trimester of pregnancy and deliveries of 71 neonates were identified. In these studies, SARS-CoV-2 viral nucleic acid was recovered by RT-PCR from nasal/throat swabs, sputum and feces of symptomatic patients, including neonates, but not from maternal vaginal swabs, amniotic fluid, placenta, cord blood, neonatal blood or breast milk samples. Understanding perinatal exposure, influenced by mode of delivery (e.g. exposure to maternal feces during vaginal delivery) and time interval from delivery to the diagnosis of neonatal infection (e.g. exposure to maternal respiratory secretions after birth), is crucial in differentiating congenital from perinatal infection. The low presence of viremia (observed in only 1% of symptomatic adults) decreases the likelihood of placental infection. In addition, the interpretation of IgM and IgG antibodies levels in cord and neonatal blood, in the context of serological evidence for vertical transmission, is also discussed in this review.	This review discusses published literature to date that support or refute the possibility of vertical transmission, both congenital and perinatal, of SARS-CoV-2 infection.	Lamouroux A, Attie-Bitach T, Martinovic J, Leruez-Ville M, Ville Y. Evidence for and against vertical transmission for SARS-CoV-2 (COVID-19) [published online, 2020 May 3]. Am J Obstet Gynecol. 2020. doi:10.1016/j.ajog.2020.04.039
Children, athletes, alveolar ventilation, immunological model	2-May-20	The First, Holistic Immunological Model of COVID-19: Implications for Prevention, Diagnosis, and Public Health Measures	Pediatric Allergy and Immunology	Review Article	In this proposed, immunological model of COVID-19, authors argue that the confrontation between SARS-CoV-2 and innate immunity is crucial in determining outcomes. Natural antibodies and other components of innate immunity are the first line of defense and must block the virus from spreading past the upper airways in the first 10-12 days from infection (5-7 days from disease onset), i.e. in the time required to prepare an efficient adaptive primary antibody response. Mannose Binding Lectin (MBL) plays a pivotal role in innate immunity as a pattern-recognition receptor and may inhibit interaction between SARS-CoV-2 and the ACE2 binding site. Serum MBL levels are distinctly higher in children (3-19 years) than adults and decline with age. In addition, natural IgM antibody levels have been shown to reach adult values in children 5 to 10 years old and decline with age, especially after the early 40s.	Authors describe key features of innate immunity (e.g. Mannose Binding Lectin, natural IgM antibodies), which form the first line of defense against viral infection and may serve a protective role in children.	Matricardi PM, Dal Negro RW, Nisini R. The first, holistic immunological model of COVID-19: implications for prevention, diagnosis, and public health measures [published online, 2020 May 2]. Pediatr Allergy Immunol. 2020. doi:10.1111/pai.13271

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Neonates, postnatal infection, NICU, respiratory support modalities	2-May-20	COVID-19 and Neonatal Respiratory Care: Current Evidence and Practical Approach	American Journal of Perinatology	Review Article	Authors comprehensively review current evidence regarding COVID-19 perinatal transmission, respiratory outcomes of neonates born to mothers with COVID-19 and infants with documented SARS-CoV-2 infection, and the evidence for using different respiratory support modalities and aerosol-generating procedures in this specific population. The results demonstrated that to date, neonatal COVID-19 infection is uncommon, generally acquired postnatally, and associated with favorable respiratory outcomes. The reason why infants display a milder spectrum of disease remains unclear. Nonetheless, the risk of severe or critical illness in young patients exists. Currently, the recommended respiratory approach for infants with suspected or confirmed infection is not evidence based but should include all routinely used types of support, with the addition of viral filters, proper personal protective equipment, and separation of infants with suspected or confirmed COVID-19 from their mothers and placement in isolation rooms, ideally with negative pressure.	This report outlines current evidence on neonatal COVID-19, including recommended approaches for respiratory support for neonates with suspected or confirmed infection.	Shalish W, Lakshminrusimha S, Manzoni P, Keszler M, Sant'Anna GM. COVID-19 and Neonatal Respiratory Care: Current Evidence and Practical Approach [published online, 2020 May 2]. Am J Perinatol. 2020. doi:10.1055/s-0040-1710522
Neonatal, late onset infection, pregnancy, breastfeeding, maternal antibodies, Italy	2-May-20	Neonatal Late Onset Infection With Severe Acute Respiratory Syndrome Coronavirus 2	American Journal of Perinatology	Short Communication	This observational study aimed to evaluate post-discharge SARS-CoV-2 status of newborns (born to pregnant women with COVID-19) who were negative for SARS-CoV-2 infection at birth. Of seven pregnant women with documented SARS-CoV-2 infection, one woman had a spontaneous abortion at 8 weeks of gestational age, four women recovered and are still in follow-up, and two women delivered, at term and pre-term respectively. At birth and 3 days of life, both neonates were negative for SARS-CoV-2 infection. At the 15-day follow-up, one newborn tested positive on nasopharyngeal swab, although he was asymptomatic. This newborn had been breastfed by his mother, who wore a mask while recovering from COVID-19. Since breast milk samples tested negative, respiratory secretions were the likely source of late-onset neonatal infection. Authors speculate that SARS-CoV-2 IgG antibodies (documented at birth in neonatal blood) protected the newborn from symptomatic infection, preserving the benefits of breastfeeding. At follow-up, the second newborn tested negative for SARS-CoV-2 on nasopharyngeal and rectal swabs and had been fed expressed milk by his father. These findings highlight the importance of long-term follow-up of newborns to mothers with COVID-19 in pregnancy.	This case report describes one case of late-onset, asymptomatic neonatal infection, following delivery by a COVID-19 positive mother. It is possible that maternal SARS-CoV-2 IgG antibodies, documented in neonatal blood at birth, protected the newborn from a symptomatic course of infection.	Buonsenso D, Costa S, Sanguinetti M, et al. Neonatal Late Onset Infection with Severe Acute Respiratory Syndrome Coronavirus 2 [published online, 2020 May 2]. Am J Perinatol. 2020. doi:10.1055/s-0040-1710541
coronavirus; COVID-19; obstetric protocol; pandemic	1-May-20	Labor and Delivery guidance for COVID-19	American Journal of Obstetrics and Gynecology - Maternal and Fetal Medicine	Clinical Perspective	The authors provide guidance to US healthcare systems to screen and test pregnant patients for SARS-CoV-2, to reduce the risk of maternal and neonatal COVID-19, and for management of labor and delivery (L&D) COVID-19 and critically ill COVID-19 patients. The article is divided into 7 sections, each of which offers suggestions for L&D care during the COVID-19 pandemic. Section 1 focuses on appropriate screening, testing, and preparation of pregnant women before the visit and at admission to L&D. Section 2 guides screening of patients and visitors to L&D and the appropriate use of PPE for patients, visitors, and staff. Section 3 continues the discussion of PPE as well as general changes to routine L&D workflow. Section 4 is about intrapartum care, section 5 includes postpartum care, emphasizing expediated discharge. Section 6 discusses care for suspected or confirmed COVID-19 patients. Transaminitis, elevated creatine, and thrombocytopenia can make it difficult to distinguish between COVID-19 and	The authors provide guidance to US healthcare systems to screen and test pregnant patients for SARS-CoV-2, to reduce the risk of maternal and neonatal COVID-19, and for management of labor and delivery (L&D) COVID-19 and critically ill COVID-19 patients.	Boelig RC, Manuck T, Oliver EA, et al. Labor and delivery guidance for COVID-19. *Am J Obstet Gynecol MFM*. 2020;2(2):100110. doi:10.1016/j.ajogmf.2020.100110

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					pre-eclampsia, hemolysis, elevated liver enzyme levels, and low platelet count syndrome in hypertensive patients. Finally, section 7 discusses care for the critically ill COVID-19 pregnant patient and neonate. The authors stress that COVID-19 pregnancy-specific guidance is continually changing and suggest the website www.pregnacycovid19.com for providers and patients to remain updated on the latest information.		
coronavirus diseases, SARS-CoV, SARS, MERS-CoV, MERS, SARS-CoV-2, COVID-19	1-May-20	Coronavirus Infections in Children Including COVID-19: An Overview of the Epidemiology, Clinical Features, Diagnosis, Treatment and Prevention Options in Children	The Pediatric Infectious Disease Journal	Original Research	This review summarizes epidemiologic, clinical, and diagnostic findings, as well as treatment and prevention options for common circulating and novel coronavirus (CoV) infections in humans, with a focus on infections in children. 4 CoVs commonly circulate among humans: HCoV2-229E, -HKU1, -NL63, and -OC43. The novel CoVs severe acute respiratory syndrome coronavirus (SARS-CoV) emerged in 2002, and Middle East respiratory syndrome coronavirus (MERS-CoV) in 2012. The 2019 novel coronavirus (SARS-CoV-2) emerged, leading to the coronavirus disease 2019 (COVID-19). In humans, CoVs mostly cause respiratory and gastro-intestinal symptoms. SARS-CoV, MERS-CoV, and SARS-CoV-2 seem to less commonly affect children and to cause fewer symptoms and less severe disease in this age group compared with adults, and are associated with much lower case-fatality rates in children. Preliminary evidence suggests children are just as likely as adults to become infected with SARS-CoV-2, but are less likely to be symptomatic or develop severe symptoms. However, the importance of children in transmitting the virus remains uncertain. Children have gastro-intestinal symptoms more commonly than adults. Most children with SARS-CoV present with fever, but this is not the case for the other novel CoVs.	This review summarizes epidemiologic, clinical, and diagnostic findings, as well as treatment and prevention options, for common circulating and novel coronaviruses (CoVs) infections in humans, with a focus on infections in children.	Zimmermann P, Curtis N. Coronavirus Infections in Children Including COVID-19: An Overview of the Epidemiology, Clinical Features, Diagnosis, Treatment and Prevention Options in Children. Pediatr Infect Dis J. 2020;39(5):355-368. doi:10.1097/INF.0000000000002660
Obstetrics, breast feeding, breast milk, PPE, cesarean delivery, Jordan	1-May-20	Multidisciplinary team management and cesarean delivery for a Jordanian woman infected with SARS-COV-2: A case report	Case Reports in Women's Health	Case Report	In this case report, the authors describe a cesarean delivery for a woman with COVID-19 in Jordan. A previously healthy 30-year-old woman, gravida 4 para 3, was admitted at 36 weeks gestation of an uncomplicated pregnancy in March 2020 after her nasopharyngeal swab was positive for SARS-COV-2. She reported a mild dry cough, runny nose, and episodes of chills and headache three days prior to admission. On admission her vital signs were stable without fever or hypoxia. She was treated with hydroxychloroquine 400 mg twice daily for a total of 9 days with mild symptoms. Her blood tests were unremarkable except for mild D-dimer elevation (0.65 micrograms/ml). The decision was made to perform a C-section on the 3rd day of admission, given that she had a history of prior c-section and vaginal delivery complicated by severe postpartum hemorrhage. A multi-disciplinary meeting was held prior to the delivery, and precautions were taken including regional (spinal) anesthesia, minimizing the number of staff, appropriate staff PPE including a filtering facepiece level 3 (FFP3) mask, and patient use of an N95 make throughout the procedure. A vigorous infant was born, weighing 2.5 kg with APGAR scores of 8 at 1 min and 9 at 5 min. The infant was isolated from the mother and tested negative for SARS-CoV- at birth, 72 hours, and 6 days of life. Although she was bottle fed until negative testing of maternal breast milk, the authors note that there is no evidence of SARS-COV-2 in breast milk of mothers with COVID-19, therefore expressed breast milk by infected mothers can be given to infants by a caregiver. The patient remained in	The authors describe the cesarean delivery for a SARS-CoV-2 positive mother in Jordan. Although the infant was initially bottle fed, the authors report that there is no evidence of SARS-COV-2 in breast milk of mothers with COVID-19, therefore expressed breast-milk by infected mothers can be given to infants by a caregiver. Both mother and infant were discharged without complications.	AlZaghal LA, AlZaghal N, Alomari SO, et al. Multidisciplinary team management and cesarean delivery for a Jordanian woman infected with SARS-COV-2: A case report. Case Rep Womens Health. 2020 May 1;27:e00212. doi: 10.1016/j.crwh.2020.e00212.

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					stable condition throughout the 11-day hospital stay and was discharged home after 6 days of treatment and a negative nasopharyngeal swab.		
pediatric, homeless, temporary accommodations, housing, United Kingdom	1-May-20	Impacts of COVID-19 on vulnerable children in temporary accommodation in the UK	Lancet Public Health	Commentary	The COVID-19 pandemic has direct and indirect health, social, and educational consequences for children living in temporary or insecure accommodations. These authors focus on such concerns in the United Kingdom. Many homeless children have pre-existing health conditions making them more susceptible to viral infection, and they rarely have the ability to self-isolate and adhere to social distancing recommendations. Hand washing and hygiene are reduced for homeless children because of minimal access to soap, water, disinfectants, and bathrooms. Homeless children <5 years old are not only at risk of exposure due to overcrowding in sub-standard housing, but also of immediate and long-term effects on growth, health, and brain development. During the COVID-19 pandemic, these children might stay in temporary accommodation for extended periods because limited housing services are currently available. Restrictions on face-to-face contact with general practitioners and health outreach services during the pandemic increase health risks for children. Furthermore, for these families, access to basic essentials, such as food and diapers, is scarce. Risks to parental mental health are increased at this time as well. The authors stress that children in temporary accommodations must not be further marginalized. They say the UK government needs to work collaboratively with health services and the housing sector to reduce overcrowding and transmission of COVID-19 in this vulnerable population.	The COVID-19 pandemic has direct and indirect health, social, and educational consequences for children living in temporary or insecure accommodations. These authors focus on such concerns in the United Kingdom.	Rosenthal DM, Ucci M, Heys M, Hayward A, Lakhanpaul M. Impacts of COVID-19 on vulnerable children in temporary accommodation in the UK. Lancet Public Health. 2020 May;5(5):e241-e242. doi: 10.1016/S2468-2667(20)30080-3. Epub 2020 Mar 31. PMID: 32243776; PMCID: PMC7270343.
COVID-19, pregnancy, delivery, anesthesia	1-May-20	Emergency Caesarean delivery in a patient with confirmed COVID-19 under spinal anesthesia	British Journal of Anesthesia	Case Report	The authors report the case of a 27-year old pregnant woman, who reported to the Wuhan Red Cross hospital in China on January 27, 2020. She exhibited dropping oxygen saturation levels (92-93%), and B-ultrasound depicting lowered amniotic fluid and possible uterine distress. During the delivery via C-section, she had a body temperature of 37.9°C, BP of 110/80, heart rate of 98 beats/minute and ventilatory frequency of 22 bpm. Dry and wet pulmonary rales were appreciated on bilateral lung auscultation. She tested positive for SARS-CoV-2, the signs of which were also seen on a chest CT. The authors decided on a single dose spinal anesthesia, with a subarachnoid puncture performed between L2-L3 injected with a 3.0mL volume of glucose 50% (0.5mL), ropivacaine 1% (1.5mL), and saline (1.0mL), followed by an epidural catheter. The patient had a cough and tachycardia and required constant communication due to dysphoria and agitation. She delivered a healthy male infant (3100g). Her oxygen saturation increased gradually, and her temperature returned to normal by day 3. SARS-CoV-2 was negative on nasopharyngeal swabs of neonate and mother on day 3 and 5 after surgery. Thus, the authors concluded the safety of using spinal anesthetic during C-sections for SARS-CoV-2 positive pregnant patients.	The authors report the case of a 27-year old pregnant woman who tested positive for SARS-CoV-2 in her third trimester. The authors used her case to demonstrate the successful use of spinal anesthesia in a pregnant COVID-19 patient, with symptom resolution and negative SARS-CoV-2 tests in both mother and infant by day 3 post-surgery.	Xia H, Zhao S, Wu Z, et al. Emergency Caesarean delivery in a patient with confirmed COVID-19 under spinal anaesthesia. Br J Anaesth. 2020 May;124(5):e216-e218. doi: 10.1016/j.bja.2020.02.016. Epub 2020 Mar 17.
Pediatrics, emergency department, Italy	1-May-20	Children with Covid-19 in Pediatric Emergency Departments in Italy	The New England Journal of Medicine	Correspondence	On February 20, 2020, the incidence of COVID-19 began to rapidly escalate in Italy. Children < 18 years of age who had COVID-19 composed only 1% of the total number of patients; 11% of these children were hospitalized, and none died. The authors of this letter describe the results of The Coronavirus Infection in Pediatric Emergency Departments (CONFIDENCE) study, involving a cohort of 100 Italian children < 18 years of age with COVID-19	The authors of this letter discuss the results of The Coronavirus Infection in Pediatric Emergency Departments	Parri N, Fenge M. Children with Covid-19 in Pediatric Emergency Departments in Italy. N Engl J Med. 2020.

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					confirmed by RT-PCR testing of nasal or nasopharyngeal swabs who were assessed between March 3 – 27, 2020 across 17 pediatric emergency departments. They compared the results of the CONFIDENCE study with those from three other cohorts in previously published analyses. Among their patients, the incidence of transmission through apparent exposure to a family cluster was lower than in other cohorts, probably because of the late lockdown in Italy. They also noted that fewer patients in their cohort had moderate-to-severe disease, possibly because chest radiography was predominantly used, and chest computed tomography was rarely used.	(CONFIDENCE) study and compared those results to results from three other cohorts. Differences in results may be attributable to the timing of lock-down policies and imaging modalities.	
Radiology, children, China	1-May-20	Clinical Characteristics and Radiological Features of Children Infected With the 2019 Novel Coronavirus	Clinical Radiology	Original Research	The authors sought to summarize the common clinical and radiological (chest radiography and chest CT) findings of SARS-CoV-2 in children. They included nine children admitted from 22 January-9 February 2020 to a single center in southern China for a confirmed COVID-19 infection. Among the children, six had fever (including two with a cough), one had only a cough, one had a stuffy nose, and one was asymptomatic. Chest radiographs were mostly normal in six cases whereas increased and/or disordered bilateral bronchovascular shadows and dense hilar shadows were seen in three cases. Chest CT was normal in four cases. Typical CT findings included patchy, peripheral ground-grass opacities, subpleural lamellar dense shadows, and parenchymal bands. The clinical manifestations and radiological findings of the COVID-19 positive children were mild and lacked a typical pattern.	The authors were not able to identify a typical pattern of radiology findings in COVID-19 positive pediatric patients. Eight children in the study had mild symptoms and one was asymptomatic.	Lu Y, Wen H, Rong D et al. Clinical characteristics and radiological features of children infected with the 2019 novel coronavirus. [published online, 2020 May 1]. Clin Radiol. doi:10.1016/j.crad.2020.04.010
Breastfeeding, Infants, Mother-to-child transmission	1-May-20	Breastfeeding of infants born to mothers with COVID-19: a rapid review	Annals of Translational Medicine	Rapid Review	This systematic review examined 4,481 records to assess mother-to-child transmission through milk and respiratory droplets during breastfeeding of mothers with COVID-19, SARS, MERS and influenza. Current findings indicate that SARS-CoV-2 viral nucleic acid has not been detected in breast milk and the benefits of breastfeeding may outweigh the risk of SARS-CoV-2 infection in infants. This article did conclude that because SARS-CoV-2 is transmitted via close contact and droplets, transmission from mother to infant may be possible while breastfeeding. However, by taking effective precautions, the risk of transmission while breastfeeding can be reduced but not entirely avoided.	There is no evidence of detected viral nucleic acid in breast milk of mothers with COVID-19. Taking appropriate precautions can reduce the risk of transmission contact during breastfeeding. The benefits of breastfeeding are thus likely to outweigh the risk of COVID-19 infection in infants.	Yang N, Che S, Zhang J, et al. COVID-19 Evidence and Recommendations Working Group (2020). Breastfeeding of infants born to mothers with COVID-19: a rapid review. Annals of translational medicine, 8(10), 618. doi:10.21037/atm-20-3299
Children, infants, neonates, diagnosis, screening, management, patient education, breastfeeding, WHO	1-May-20	Rapid Advice Guidelines for Management of Children With COVID-19	Annals of Translational Medicine	Guideline	An international multidisciplinary working group developed the present rapid advice guidelines for management of children with COVID-19 using the methods and process proposed by the WHO and GRADE working group. This guideline focuses on the management of children younger than 18 years old infected with SARS-CoV-2, including screening, diagnosis, treatment, and patient education. The target users of the guideline include pediatricians, clinical pharmacists, general practitioners, nurses, policy makers, national ministries of health, child rights advocacy groups and other health workers in general and children's hospitals, primary clinics and communities worldwide, as well as families involved in the prevention and control of COVID-19 in children. The article proposes clinical questions, accompanied by rationale and evidence summaries to support the outline	To the authors' knowledge, this guideline is the first international rapid advice guideline for management of children with COVID-19 based on WHO guidance approach, supported by systematic review of existing guidelines.	Liu E, Smyth RL, Luo Z, et al. Rapid advice guidelines for management of children with COVID-19. Ann Transl Med. 2020;8(10):617. doi:10.21037/atm-20-3754

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					recommendations. For example, breastfeeding mothers with SARS-CoV-2 infection should continue to breastfeed their newborns, while taking appropriate precautions, based on limited evidence of viral transmission via breastmilk.		
Antibiotic agents, children, bacterial coinfection, treatment	1-May-20	Efficacy and Safety of Antibiotic Agents in Children With COVID-19: A Rapid Review	Annals of Translational Medicine	Rapid Review	This review evaluated the efficacy and safety of antibiotic agents in children and adults with COVID-19. Since there was insufficient evidence for the treatment of COVID-19 in children, this study captured the treatment of COVID-19 in adults. Researchers found that although a high proportion of patients with COVID-19 were treated with antibiotics, there was no direct evidence to support the efficacy of antibiotic agents in children with COVID-19. This study recommends against the use of antibiotic agents for children with COVID-19 when there is no evidence of bacterial co-infection.	This is the first systematic review aiming to assess the application of antibiotic agents for children with COVID-19.	Wang J, Tang Y, Ma Y, et al. Efficacy and safety of antibiotic agents in children with COVID-19: a rapid review. Ann Transl Med. 2020;8(10):619. doi:10.21037/atm-20-3300
Children, adults, clinical characteristics, symptoms, gastrointestinal, meta-analysis, rapid review	1-May-20	Clinical Characteristics of Children With COVID-19: A Rapid Review and Meta-Analysis	Annals of Translational Medicine	Rapid Review and Meta-Analysis	While research has proven that people of all ages are susceptible to SARS-CoV-2, only a few guidelines published so far include recommendations for children. Children's respiratory structural characteristics and immune response system differ essentially from those in adults, and the diagnostic criteria and management according to recommendations targeting adults may not be appropriate for children. This study found that the course of COVID-19 in children can be characterized by mild illness and no symptoms. However, researchers found that attention should be paid to the children with COVID-19 who present gastrointestinal symptoms, such as nausea, vomiting, and diarrhea. Because the characteristics of COVID-19 differ between adults and children in multiple ways, specific criteria for the diagnosis and treatment of COVID-19 in children are urgently needed.	This study goes to show that most children with COVID-19 have only mild symptoms, and many are asymptomatic.	Wang Z, Zhou Q, Wang C, et al. Clinical characteristics of children with COVID-19: a rapid review and meta-analysis. Ann Transl Med. 2020;8(10):620. doi:10.21037/atm-20-3302
Children, asymptomatic infection, computed tomographic scans, western China	1-May-20	A Follow-Up Study of Children Infected With SARS-CoV-2 From Western China	Annals of Translational Medicine	Original Research	This case study clarified the characteristics and the duration of positive nucleic acid in symptomatic and asymptomatic children infected with SARS-CoV-2. Researchers followed 32 children who tested positive for SARS-CoV-2 from four provinces in China from hospital discharge and to the end of the 14-day quarantine. Eleven children (34%) were asymptomatic, among whom six children had normal CT scan images. Results showed that age and gender were not associated with clinical symptoms or the CT scan results in children infected with SARS-CoV-2. The concentrations of white blood cells and neutrophils were higher in children with asymptomatic infection than in children with clinical symptoms or abnormalities. Overall, researchers found a significant negative correlation between the lymphocyte count and the duration of positive nucleic acid test.	Results showed that children with asymptomatic infections should be quarantined for the same duration as symptomatic patients infected with SARS-CoV-2. This study found a significant negative correlation between the lymphocyte count and the duration of positive nucleic acid test.	Xu H, Liu E, Xie J, et al. A follow-up study of children infected with SARS-CoV-2 from western China. Ann Transl Med. 2020;8(10):623. doi:10.21037/atm-20-3192
Antiviral agents, children, meta-analysis, rapid review	1-May-20	Potential Effectiveness and Safety of Antiviral Agents in Children With Coronavirus Disease 2019: A Rapid Review	Annals of Translational Medicine	Rapid Review and Meta-Analysis	This rapid review aimed to assess the potential effectiveness and safety of antiviral agents for COVID-19 in children based on 23 identified articles. These findings may inform the development of guidelines regarding the clinical treatment of children with COVID-19. Based on the analysis of indirect evidence from adult patients with COVID-19, very low to low-quality evidence indicated that lopinavir/ritonavir, arbidol and hydroxychloroquine were not effective. There was no evidence showing the effectiveness of antiviral agents for children with COVID-19, and the clinical efficacy of existing antiviral agents is still uncertain. Results do not suggest clinical	There is no evidence to bolster the use of antiviral agents in the treatment of COVID-19 in children, with the exception of clinical trials after thorough ethical assessment.	Shi Q, Zhou Q, Wang X, et al. Potential effectiveness and safety of antiviral agents in children with coronavirus disease 2019: a rapid review and meta-analysis. Ann Transl Med. 2020;8(10):624. doi:10.21037/atm-20-3301

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		and Meta-Analysis			routine use of antivirals for COVID-19 in children, with the exception of clinical trials.		
Children, IVIG, SARS, MERS, ARDS, systematic review	1-May-20	Effectiveness of Intravenous Immunoglobulin for Children With Severe COVID-19: A Rapid Review	Annals of Translational Medicine	Original Article	In this systematic review of literature on the use of IV immunoglobulin (IVIG) in patients with COVID-19, SARS, or MERS, including both adults and children, a total of 1,519 articles were identified. Finally, six studies met the inclusion criteria, including one randomized controlled trial (RCT), four case series and one case report involving 198 patients. One case series showed that survival of COVID-19 patients with acute respiratory distress syndrome (ARDS) had not improved with IVIG therapy. One case report showed high-dose IVIG could improve the outcome of COVID-19 adults. Three observational studies showed inconsistent results of the effect of IVIG on SARS patients. One RCT showed that IVIG did not reduce mortality or the incidence of nosocomial infection in adults with severe SARS.	There is insufficient existing evidence to support the efficacy or safety of IVIG in the treatment of COVID-19, in both adults and children.	Zhang J, Yang Y, Yang N, et al. Effectiveness of intravenous immunoglobulin for children with severe COVID-19: a rapid review. Ann Transl Med. 2020;8(10):625. doi:10.21037/atm-20-3305
Pregnancy complications, adverse neonatal outcomes, fetal death, SARS-CoV, MERS-CoV	1-May-20	Potential Implications of SARS-CoV-2 on Pregnancy	Taiwanese Journal of Obstetrics and Gynecology	Correspondence	To date, there are limited data on the consequences of COVID-19 on pregnancy; however, SARS in 2003 and MERS in 2012 were responsible for severe complications during pregnancy. In a review of previous coronavirus infections in pregnancy, there were 13 cases of SARS-CoV and 11 cases of MERS-CoV reported in the literature. Maternal outcomes of the 13 SARS cases include: 4 had miscarriage, 2 opted for termination of pregnancy, 2 required mechanical ventilation, 3 were treated conservatively, and 2 died. No neonatal adverse effect was noted except for 2 premature births. Maternal outcomes of the 11 MERS-CoV cases include: 2 were asymptomatic, 2 required mechanical ventilation, 3 were treated conservatively, 1 refused treatment, and 3 died. 2 cases of intrauterine fetal demise and 1 fetal death due to prematurity were reported. Neonatal infection due to possible vertical transmission was not detected in any of the SARS or MERS cases, except for 1 SARS case in the United States where cord blood and breast milk were positive for the SARS-CoV antibody.	In light of SARS-CoV-2 having similar pathogenic characteristics as SARS-CoV and MERS-CoV, pregnant women who become infected are at risk for adverse maternal and fetal complications.	Tseng JY. Potential implications of SARS-CoV-2 on pregnancy. Taiwan J Obstet Gynecol. 2020;59(3):464-465. doi:10.1016/j.tjog.2020.03.025
Pregnancy, prenatal care, well-child visit, interim schedule	1-May-20	Interim Schedule for Pregnant Women and Children During the COVID-19 Pandemic	Journal of the College of Family Physicians of Canada	Practice	Pregnant women, newborns, and children due for vaccinations still require care during the COVID-19 pandemic. Given that there is a need to reduce the number of visits to the clinic, and women, children and their caregivers might wish to reduce exposure to others, the timing and frequency of visits can be adjusted. Many health care providers are transitioning to virtual visits instead of in-person visits whenever possible. The goal of this guide is to propose an interim well-child and prenatal visit schedule that providers can use and adapt to their local settings.	This guide proposes an interim schedule for well-child and prenatal visits given the need to reduce the number of clinic visits during the pandemic.	Bogler T, Bogler O. Interim schedule for pregnant women and children during the COVID-19 pandemic. Can Fam Physician. 2020;66(5):e155-e161.
Infant, malnutrition, critical disease, T cell counts, nasopharyngeal viral shedding	1-May-20	A Typical Case of Critically Ill Infant of Coronavirus Disease 2019 With Persistent Reduction of T Lymphocytes	The Pediatric Infectious Disease Journal	Original Studies	This case presents a critically ill, 8-month-old male infant with COVID-19 and a history of poor growth and malnutrition, in addition to past neonatal cardiac surgery and two episodes of pneumonia in early infancy. Once admitted to the hospital, he developed life-threatening clinical features of COVID-19, including high fever, septic shock, recurrent apnea, petechiae and acute kidney injury and persistent reduction of CD3+, CD4+ and CD8+ T cells. The duration of nasopharyngeal virus shedding lasted 49 days despite administration of lopinavir/ritonavir for 8 days. CD3+, CD4+ and CD8+ T cell counts were partially recovered 68 days post-disease onset. Nucleic acid tests and serum antibody levels for SARS-CoV-2 in the infant's mother, who	A persistent reduction of CD4+ and CD8+ T cells as well as prolonged nasopharyngeal viral SARS-CoV-2 shedding were key clinical features of a critically ill infant with COVID-19 in this case study.	Qiu L, Jiao R, Zhang A, et al. A Typical Case of Critically Ill Infant of Coronavirus Disease 2019 With Persistent Reduction of T Lymphocytes [published online, 2020 May 1]. Pediatr Infect Dis J. 2020. doi:10.1097/INF.0000000000002720

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					kept intimate contact with the infant, were negative despite inconsistent personal protection.		
Pregnancy, maternal morbidity, critical care, mechanical ventilation, USA	1-May-20	Care of Critically Ill Pregnant Patients With COVID-19: A Case Series	American Journal of Obstetrics and Gynecology	Research Letter	This retrospective, multi-center case series describes 5 symptomatic pregnant women with positive SARS-CoV-2 testing and requiring critical care. Women were in their late second (n=3) or third (n=2) trimester. At the end of the study period, 1 woman is still critically ill and hasn't delivered, 3 had uncomplicated cesarean delivery, and 1 was discharged and is receiving close outpatient follow up. Intubation timing ranged from 7-14 days from symptom onset in these cases. Various oxygen delivery methods, including high flow nasal cannula, noninvasive positive pressure ventilation, and endotracheal intubation, can all be utilized safely in pregnancy. For intubated patients with COVID-19, timing of delivery must balance maternal and neonatal risk and benefit, with delivery considered a potential tool to improve ventilation due to physiologic changes associated with pregnancy. There is limited evidence to guide specific management around fetal monitoring, administration of antenatal corticosteroids, and delivery in patients with COVID-19.	This case series presents strategies for management of critically ill pregnant women with COVID-19, using various oxygen delivery methods.	Hirshberg A, Kern-Goldberger AR, Levine LD, et al. Care of critically ill pregnant patients with COVID-19: a case series [published online, 2020 May 1]. Am J Obstet Gynecol. 2020. doi:10.1016/j.ajog.2020.04.029
Immuno-compromised children, immuno-modulatory therapy, UK NICE	1-May-20	Covid-19 Is No Worse in Immunocompromised Children, Says NICE	BMJ	News	The UK National Institute for Health and Care Excellence (NICE) recently issued a guideline, stating that "COVID-19 usually causes a mild, self-limiting illness in children and young people, even in those who are immunocompromised." NICE advises continuation of usual treatment with reduced face-to-face contact where safely possible, as well as discussion between patients and providers regarding the risks and benefits of initiating immuno-modulatory therapies. Patients taking drugs that affect the immune response may have atypical presentations of COVID-19; for example, patients taking prednisolone may not develop fever. In addition, the guidelines warn against the use of empirical antibiotics, unless there is clinical suspicion of bacterial infection or co-infection.	This news report describes recent rapid guidelines from the UK on caring for immuno-compromised children during the COVID-19 pandemic. Existing data suggests that immuno-compromised children are not at higher risk for severe disease.	Wise J. Covid-19 is no worse in immunocompromised children, says NICE. BMJ. 2020;369:m1802. Published 2020 May 1. doi:10.1136/bmj.m1802
Child, sickle cell disease, acute chest syndrome, anti-human IL-6 receptor monoclonal antibody	1-May-20	Dramatic Improvement After Tocilizumab of a Severe COVID-19 in a Child With Sickle Cell Disease and Acute Chest Syndrome	American Journal of Hematology	Correspondence	Tocilizumab (TCZ) was administered to a 16-year-old girl with homozygous sickle cell disease (SCD) who developed severe COVID-19 associated with acute chest syndrome and pulmonary embolism. On admission, levels of C-reactive protein, lactate dehydrogenase, and D-dimer were increased. The patient required non-invasive ventilation, red blood cell exchange transfusion followed by simple transfusion, and anticoagulation. Plasma levels of pro-inflammatory IL-6 were extremely high and increased further, after TCZ injection, before decreasing. The patient's respiratory status, as well as CT pulmonary angiography imaging, improved dramatically following TCZ treatment.	Tocilizumab, an anti-human IL-6 receptor monoclonal antibody, appears to be safe and effective treatment for severe COVID-19 and acute chest syndrome in children with sickle cell disease.	Odièvre MH, de Marcellus C, Ducou Le Pointe H, et al. Dramatic improvement after Tocilizumab of a severe COVID-19 in a child with sickle cell disease and acute chest syndrome [published online, 2020 May 1]. Am J Hematol. 2020. doi:10.1002/ajh.25855
Neonatal management, infection control, telehealth, routine follow-up, China	1-May-20	Neonatal Management During the Coronavirus Disease (COVID-19) Outbreak: The Chinese Experience	NeoReviews	Article	This article reviews published information from Chinese pediatric and neonatal societies regarding their approach to neonatal management during the 2019-2020 COVID-19 outbreak in China. These approaches include consensus guidelines focused on perinatal infection prevention and high-risk neonatal transport, as well as strategies for transitioning routine neonatal outpatient follow-up to an online program.	This review summarizes infection control measures and telehealth strategies for routine, neonatal follow-up, published by Chinese pediatric and neonatal societies.	Ma X, Zhu J, Du L. Neonatal Management During the Coronavirus Disease (COVID-19) Outbreak: The Chinese Experience. Neoreviews. 2020;21(5):e293-e297. doi:10.1542/neo.21-5-e293

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Pediatric pulmonology, pediatric care, podcast	1-May-20	Brief Report: International Perspectives on the Pediatric COVID-19 Experience	Pediatric Pulmonology	Commentary	On March 31, 2020, the International Committee of the American Thoracic Society Pediatrics Assembly recorded an online podcast, during which pediatric pulmonologists worldwide shared their experience on COVID-19 in children. The aim was to share personal experience in organizing pediatric care in different health care settings globally, protecting health care workers, and isolation practices. This manuscript summarizes the common themes of the podcast which centered around three main topics: more benign clinical disease and progression in pediatric cases compared to adults, a strong need for strategies to protect health care workers, and social or economic disparities as a barrier to successful pandemic control.	International pediatric pulmonologists discuss clinical characteristics of COVID-19 in children, strategies to protect health care workers, and the role of socioeconomic disparities in the pandemic.	Yilmaz O, Gochicoa-Rangel L, Blau H, et al. Brief report: International perspectives on the pediatric COVID-19 experience [published online, 2020 May 1]. Pediatr Pulmonol. 2020. doi:10.1002/ppul.24800
Children, age-related susceptibility, thymus, adaptive immune system, prolonged viral elimination	1-May-20	Why the SARS-Cov-2 Has Prolonged Spreading Time in Children?	Pediatric Pulmonology	Letter to the Editor	Aging presents structural and functional loss, affecting the immune system. Thymus hypoplasia and the gradual decrease in both function and number of T cell/T_{reg} cells in the elderly increase susceptibility to viral infections. In contrast, in children, the thymus is active and associated with an adequate adaptive immune response, shaped dynamically by vaccines and common viral infections in childhood. This controlled and organized immune response protects children from severe tissue damage but also makes viral elimination more difficult, resulting in prolonged elimination time as observed in existing case studies.	This letter argues that a functional thymus and a controlled, adaptive immune response prevents children from COVID-19 related tissue damage but contributes to prolonged viral elimination time.	Yurttutan S, İpek S, Güllü UU. Why the SARS-Cov-2 has prolonged spreading time in children? [published online, 2020 May 1]. Pediatr Pulmonol. 2020. doi:10.1002/ppul.24795
Children, pediatric emergency department, clinical characteristics, epidemiology, Italy	1-May-20	Children with Covid-19 in Pediatric Emergency Departments in Italy	New England Journal of Medicine	Correspondence	The Coronavirus Infection in Pediatric Emergency Departments (CONFIDENCE) study involved a cohort of 100 Italian children (<18 years) with COVID-19, confirmed by RT-PCR testing of nasal or nasopharyngeal swabs. Children (median age 3.3 years, range 0-27.5 years) were assessed between March 3 and March 27, 2020 in 17 pediatric emergency departments. Exposure to SARS-CoV-2 from an unknown source or from a source outside the child's family accounted for 55% of the cases of infection. Common symptoms were cough (44%) and no feeding or difficulty feeding (23%). Among the entire cohort, 21% of patients were asymptomatic, 58% had mild disease, 19% had moderate disease, 1% had severe disease, and 1% were in critical condition. Of the 9 patients who received respiratory support, 6 had coexisting conditions. No deaths were reported.	Most children with COVID-19 in this Italian cohort had mild disease; no deaths were reported. The incidence of transmission through family cluster exposure was lower in this cohort, compared to previously studied cohorts in other countries.	Parri N, Lenge M, Buonsenso D. Children with Covid-19 in Pediatric Emergency Departments in Italy [published online, 2020 May 1]. NEJM. doi:10.1056/NEJMc2007617
Pregnancy, mother-newborn separation, breastfeeding, infection control, prenatal clinics	1-May-20	Coronavirus Disease 2019 (COVID-19) and Pregnancy: Responding to a Rapidly Evolving Situation	Obstetrics & Gynecology	Current Commentary	Although guidelines for pregnant women have been rapidly developed based on the best available evidence, additional information is critically needed to inform key decisions, such as whether pregnant health care workers should receive special consideration, whether to temporarily separate infected mothers and their newborns, and whether it is safe for infected women to breastfeed. Some current recommendations are well supported, based largely on what we know from seasonal influenza: patients should avoid contact with ill persons, avoid touching their face, cover coughs and sneezes, wash hands frequently, disinfect contaminated surfaces, and stay home when sick. Prenatal clinics should ensure all pregnant women and their visitors are screened for fever and respiratory symptoms, and symptomatic women should be isolated from well women and required to wear a mask. The authors recommend that as COVID-19 rapidly spreads, obstetricians must keep up to date on the latest information.	This review discusses current guidelines for infection control in pregnant women.	Rasmussen SA, Jamieson DJ. Coronavirus Disease 2019 (COVID-19) and Pregnancy: Responding to a Rapidly Evolving Situation. Obstet Gynecol. 2020;135(5):999-1002. doi:10.1097/AOG.0000000000003873