

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
<i>New publications since our last update have been highlighted in blue. This document will be updated if new publications from the month of March continue to be identified.</i>							
Pediatric, communication , children, pediatric palliative	31-Mar-20	<a href="#">Applying Palliative Care Principles to Communicate With Children About COVID-19</a>	Journal of Pain and Symptom Management	Original Article	Palliative care teams encourage families to ground their communication on COVID-19 with children on key values: (1) honesty and trust: an honest answer for children with underlying health conditions would be to acknowledge; (2) self-compassion: adults should admit emotions, such as fear, anxiety, and sadness, and then model healthy habits to live through these real feelings; (3) safety: as children sense a lack of human control, teaching children tangible ways to try to be safer can be empowering; (4) sensitivity: intuitive and conscious awareness of the child's level of curiosity, maturity, developmental stage, and current emotion are essential to protect the child from too much or too little information; (5) connection: with school closures and skilled nursing lockdowns, deliberate and creative forms of connection offer children the security of human connection; (6) preparedness: consider discussing preparedness in a way that models caring for the community vs. hoarding; (7) community building: avoiding nationalistic language and xenophobia phrasing protects children from creating a sense of other vs. us; (8) recognition of death as a part of the life cycle: families may consider to share family beliefs about the meaning of a good life; (9) legacy: discussing with children the ways that history has impacted the community may be a way to help the child consider this current pandemic in a larger context.	This article summarizes communication training and skillsets to help families consider caring ways to communicate with their children and grandchildren about COVID-19.	Weaver MS, Wiener L. Applying Palliative Care Principles to Communicate With Children About COVID-19. J Pain Symptom Manage. 2020;60(1):e8-e11. doi: 10.1016/j.jpainsymman.2020.03.020
Pregnancy, emergency cesarean section, neonate, amniotic fluid, placenta, cord blood, South Korea	31-Mar-20	<a href="#">Emergency cesarean section on severe acute respiratory syndrome coronavirus 2 (SARS- CoV-2) confirmed patient</a>	Korean Journal of Anesthesiology	Case Report	This case report describes the first case of a SARS-CoV-2 positive pregnant woman, who delivered via cesarean section at 37+6 weeks gestation in the Republic of Korea. Obstructed labor with incomplete rotation of the fetal head provided indication for cesarean section. The neonate was born 6 minutes after incision and was transferred immediately to a private room in the NICU. SARS-CoV-2 RT-PCR results using placenta, amniotic fluid, and cord blood samples were negative. Neonatal nasopharyngeal swabs were also negative on two consecutive SARS-CoV-2 RT-PCR tests. A negative pressure operating room, skillful medical team, personal protective equipment, and powered air-purifying respirator were employed for this safe delivery.	A neonate born to a mother with confirmed COVID-19 tested negative on two consecutive SARS-CoV-2 RT-PCR tests. Placenta, amniotic fluid, and cord blood samples were also negative.	Lee DH, Lee J, Kim E, Woo K, Park HY, An J. Emergency cesarean section on severe acute respiratory syndrome coronavirus 2 (SARS- CoV-2) confirmed patient [published online, 2020 Mar 31]. Korean J Anesthesiol. 2020. doi:10.4097/kja.20116
Nutritional management, ICU stay, malnutrition, poly-morbidity, Europe	31-Mar-20	<a href="#">ESPEN Expert Statements and Practical Guidance for Nutritional Management of Individuals With SARS-CoV-2 Infection</a>	Clinical Nutrition	Editorial	Poor outcomes and higher mortality due to COVID-19 are reported in immunocompromised patients, namely older adults and poly-morbid individuals, as well as generally malnourished people. ICU stay, poly-morbidity and older age are all commonly associated with high risk for malnutrition, representing a relevant risk factor for higher morbidity and mortality in chronic and acute disease. At the same time, prolonged ICU stays, required for stabilization of clinically severe COVID-19, may directly worsen or cause malnutrition, leading to severe loss of skeletal muscle mass and function. Prevention, diagnosis and treatment of malnutrition should therefore be routinely included in the management of COVID-19 patients. In this document, the European Society for Clinical Nutrition and	ESPEN provides practical recommendations for the nutritional management of COVID-19 patients in the ICU, who face higher risk of malnutrition during prolonged ICU stays.	Barazzoni R, Bischoff SC, Breda J, et al. ESPEN expert statements and practical guidance for nutritional management of individuals with SARS-CoV-2 infection [published online, 2020 Mar 31]. Clin Nutr. 2020. doi:10.1016/j.clnu.2020.03.022

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					Metabolism (ESPEN) aims at providing concise guidance for nutritional management of COVID-19 patients by proposing 10 practical recommendations. The practical guidance is focused on the ICU setting or in the context of older age and poly-morbidity.		
Pediatric Inflammatory Bowel Disease, immunomodulatory drugs, biologic treatment, China, South Korea	31-Mar-20	<a href="#">COVID-19 and Paediatric Inflammatory Bowel Diseases: Global Experience and Provisional Guidance (March 2020) from the Paediatric IBD Porto group of ESPGHAN.</a>	Journal of Pediatric Gastroenterology and Nutrition	Societal Paper	Concerns have been raised over the risk of COVID-19 to children with inflammatory bowel disease (IBD). This paper gathers global experience, from a circulating electronic reporting system of children with IBD infected with SARS-CoV-2, along with surveys completed by major PIBD centers in China and South Korea. Eight PIBD children had COVID-19 globally, all with mild infection and without need for hospitalization despite treatment with immunomodulators and/or biologics. No cases have been reported in China and South Korea, but biologic treatment has been delayed in 79 children, of whom 17 (22%) had exacerbation of their IBD. Authors provide provisional guidance for managing PIBD in the era of COVID-19: standard IBD treatments including biologics should continue at present, especially in children who have severe IBD course and milder SARS-CoV-2 infection.	Authors describe the clinical course of COVID-19 in children with underlying IBD, receiving treatment with immunomodulators and/or biologics, and summarize guidance points for management of PIBD in the era of COVID-19.	Turner D, Huang Y, Martín-de-Carpi J, et al. COVID-19 and Paediatric Inflammatory Bowel Diseases: Global Experience and Provisional Guidance (March 2020) from the Paediatric IBD Porto group of ESPGHAN [published online, 2020 Mar 31]. J Pediatr Gastroenterol Nutr. 2020. doi:10.1097/MPG.0000000000002729
Children vs. adults, disease characteristics, epidemiology	31-Mar-20	<a href="#">COVID-19 epidemic: disease characteristics in children.</a>	Journal of Medical Virology	Review	Although information regarding the epidemiology of COVID-19 in children has accumulated, relevant comprehensive reports are lacking. The present article reviews the epidemiological characteristics of COVID-19 in children, including clustered infection characteristics, age and sex distributions, transmission patterns, mortality rate, and clinical characteristics. As more regions have launched pathogen detection campaigns, and because younger children cannot wear masks, the number of infection cases in younger age groups increased significantly,	This comprehensive review of current literature on pediatric COVID-19 highlights epidemiological and clinical characteristics of disease.	Jiatong S, Lanqin L, Wenjun L. COVID-19 epidemic: disease characteristics in children [published online, 2020 Mar 31]. J Med Virol. 2020. doi:10.1002/jmv.25807
Children, childhood obesity, weight gain, school closings, social distancing	30-Mar-20	<a href="#">COVID-19 Related School Closings and Risk of Weight Gain Among Children.</a>	Obesity	Perspective	Authors anticipate that social distancing measures and school closures due to the COVID-19 pandemic will likely double out-of-school time this year for many children in the U.S. As a result, risk factors for weight gain conventionally associated with summer recess, such as consumption of calorie-dense foods and lack of physical activity, may be exacerbated. The risk of overnutrition and weight gain is linked to food insecurity, which may be worsened in the context of missed school meals, contributing to disparities in health and educational attainment.	School closures in many areas of the U.S., due to the COVID-19 crisis, may exacerbate the epidemic of childhood obesity and increase disparities in obesity risk.	Rundle AG, Park Y, Herbstman JB, Kinsey EW, Wang YC. COVID-19 Related School Closings and Risk of Weight Gain Among Children [published online, 2020 Mar 30]. Obesity (Silver Spring). 2020. doi:10.1002/oby.22813
Low-income children, food insecurity, missed meals, nutrition assistance	30-Mar-20	<a href="#">Feeding Low-Income Children During the Covid-19 Pandemic</a>	New England Journal of Medicine	Perspective	An essential element of COVID-19 response will be feeding children from low-income families. Brief periods of food insecurity can cause short-term health effects that increase risk of contracting communicable diseases, as well as long-term developmental harm. Children from low-income households, already at risk for poorer health and academic performance than children from high-income households, may be further disadvantaged by nutrition shortfalls. Several states and schools are adapting traditional service models to ensure distribution of food while preventing disease transmission. Recent legislation around provisions for nutrition assistance reflects a	Schools and childcare facilities must balance roles of preventing disease transmission and ensuring access to food for children who rely on the federal nutrition safety net, to avoid exacerbating disparities in health and educational attainment.	Dunn CG, Kenney E, Fleischhacker SE, Bleich SN. Feeding Low-Income Children during the Covid-19 Pandemic [published online, 2020 Mar 30]. N Engl J Med. 2020. doi:10.1056/NEJMp2005638

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					shift in responsibility for feeding children from the National School Lunch Program and School Breakfast Program to SNAP.		
Breastfeeding, donor milk, donor milk banking, China, Italy, United States	30-Mar-20	<a href="#">International Perspectives Concerning Donor Milk Banking During the SARS-CoV-2 (COVID-19) Pandemic</a>	Journal of Human Lactation	Insights into Practice and Policy	Based on personal communications with colleagues in China, Italy, and the author's own donor milk bank in the United States, the author has attempted to document the pandemic's current effect on donor milk banking as well as donor milk supply and demand. There is heightened anxiety in donors who must interact with the healthcare system to have their blood drawn for screening, or when they drop off their milk at the milk bank. The author's organization is engaged in educating mothers that there is no evidence of coronavirus transmission through human milk and that previous coronaviruses have been destroyed by pasteurization. Other milk banking organizations have issued statements upholding the importance of donor milk and recommending the addition of questions about risk of COVID-19 exposure to donor screening protocols, as well as deferral of donors who report symptoms or test positive for SARS-CoV-2.	This article discusses the effects of the COVID-19 crisis on donor milk banking and details programmatic changes and emergency preparedness strategies implemented at a non-profit U.S. milk bank to ensure sustained supply of donor milk, transport of "safe" milk from donors to milk banks under quarantine, and support for breastfeeding mothers.	Marinelli KA. International Perspectives Concerning Donor Milk Banking During the SARS-CoV-2 (COVID-19) Pandemic [publis+H7hed online ahead of print, 2020 Mar 30]. J Hum Lact. 2020. doi:10.1177/0890334420917661
Maternal and neonatal outcomes, preterm delivery, pneumonia, China, case control study	30-Mar-20	<a href="#">Maternal and Neonatal Outcomes of Pregnant Women With COVID-19 Pneumonia: A Case-Control Study</a>	Clinical Infectious Diseases	Original Research	This case-control study compares clinical characteristics, maternal and neonatal outcomes of pregnant women with and without COVID-19 pneumonia at a tertiary hospital in Wuhan, China. From January 24 to February 29, 2020, 34 pregnant women with confirmed or suspected COVID-19 were admitted to labor in the third trimester. Compared to controls, COVID-19 pneumonia patients had lower counts of white blood cells, neutrophils, C-reactive protein, and ALT on admission. Five mothers with confirmed or suspected COVID-19 pneumonia had preterm delivery, which was significantly higher than the control group. None experienced respiratory failure during hospital stay. COVID-19 infection was not found in the newborns, and none developed severe neonatal complications.	This is one of the first case control studies to assess the association between COVID-19 pneumonia and maternal neonatal outcomes.	Li N, Han L, Peng M, et al. Maternal and neonatal outcomes of pregnant women with COVID-19 pneumonia: a case-control study [published online, 2020 Mar 30]. Clin Infect Dis. 2020;ciaa352. doi:10.1093/cid/ciaa352
Children, fecal viral shedding, stool samples, recovery phase	29-Mar-20	<a href="#">Detectable SARS-CoV-2 Viral RNA in Feces of Three Children during Recovery Period of COVID-19 Pneumonia.</a>	Journal of Medical Virology	Short Communication	Three cases of SARS-CoV-2 infected children were diagnosed from February 3 to February 17, 2020 in Tianjin, China. All cases experienced mild illness and recovered soon after treatment, with testing of throat swab samples turning negative within 14, 11, 7 days after diagnosis, respectively. However, within 10 days after been discharged, all three cases tested positive for SARS-CoV-2 in stool samples, in spite of consistently negative throat swab specimens. The possibility of fecal-oral transmission of SARS-CoV-2 infection, especially in cases of children, must be considered.	This article corroborates findings from other studies that report prolonged shedding of viral nucleic acid in stool samples, compared to throat swab samples.	Zhang T, Cui X, Zhao X, et al. Detectable SARS-CoV-2 Viral RNA in Feces of Three Children during Recovery Period of COVID-19 Pneumonia [published online, 2020 Mar 29]. J Med Virol. 2020. doi:10.1002/jmv.25795
COVID-19; SARS-CoV-2; Children; Asymptomatic presentation; Community transmission	28-Mar-20	<a href="#">COVID-19 in children: More than meets the eye</a>	Travel Medicine and Infectious Disease	Editorial	The author describes what is known about pediatric COVID-19 and the epidemiology of SARS-CoV-2 infections in children. Infections with SARS-CoV-2 in children were absent or rarely noted in early reports, and the associated morbidity in COVID-19 was deemed as mostly mild. In the hitherto largest pediatric COVID-19 study, 94.1% were diagnosed as asymptomatic, or with mild or moderate disease. In fact, 13% of laboratory-confirmed cases were asymptomatic which is	The author describes what is known about pediatric COVID-19 and the epidemiology of SARS-CoV-2 infections in children. Infections with SARS-CoV-2 in	Hagmann SHF. COVID-19 in children: More than meets the eye. Travel Med Infect Dis. 2020;34:101649. doi:10.1016/j.tmaid.2020.101649

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					notable as this may be an underestimation of the true rate of asymptomatic infection, since many children without symptoms are unlikely to be tested. Virologic data demonstrated that such asymptomatic or oligosymptomatic individuals carry potentially infectious SARS-CoV-2 particles in their nasopharyngeal secretions, likely contributing to early transmission to close contacts. In addition, the evidence of fecal shedding of SARS-CoV-2 in the stool of an asymptomatic child for a prolonged period raises the concern that infants and children who are not toilet-trained could facilitate fecal-oral transmission of the virus. Consequently, children and infants may play a pivotal role in community-based transmission of SARS-CoV-2.	children were absent or rarely noted in early reports, and the associated morbidity in COVID-19 was deemed as mostly mild. Children and infants may play a pivotal role in community-based transmission of SARS-CoV-2.	
Pregnancy, postpartum fever, neonates, China	28-Mar-20	<a href="#">Clinical analysis of pregnant women with 2019 novel coronavirus pneumonia</a>	Journal of Medical Virology	Research Article	Five cases of pregnant women with confirmed COVID-19 were identified among patients admitted to the Maternal and Child Hospital of Hubei Province between January 20 and February 10, 2020. Ages of patients ranged from 25 to 31 years old, and gestational ages ranged from 38 to 41 weeks. None of the patients had antepartum fever, but all developed a low-grade fever (37.5°C-38.5°C) within 24 hours after delivery. All patients had normal liver and renal function; two patients had elevated plasma levels of the myocardial enzyme. Unusual chest imaging manifestations, namely ground-glass opacity, were frequently observed in bilateral (3/5) or unilateral lobe (2/5) by CT scan. There were no complications observed during labor or in newborns. All neonates tested negative for SARS-CoV-2 infection by quantitative RT-PCR.	Primary clinical manifestations of COVID-19 pregnant women may consist of low-grade postpartum fever or mild respiratory symptoms. All neonates in this study tested negative for COVID-19.	Chen S, Liao E, Shao Y. Clinical analysis of pregnant women with 2019 novel coronavirus pneumonia [published online, 2020 Mar 28]. J Med Virol. 2020. doi:10.1002/jmv.25789
COVID-19; CT; Child; Mild; SARS-CoV-2; China	27-Mar-20	<a href="#">A mild type of childhood Covid-19 - A case report</a>	Radiology of infectious diseases	A Case Report	The authors report the case of a 9-year-old boy with mild COVID-19 symptoms who presented to a hospital in China. The patient had a fever for 3 days without any other symptoms. He had lived in Wuhan two weeks before the disease onset yet had no history of SARS-CoV-2 exposure. He tested negative for influenza A and B but tested positive for SARS-CoV-2. His physical examination, chest X-ray, and chest CT were unremarkable. The patient's fever subsided after an "oral administration of cattilan and IV drip of lysine acetylsalicylate injection" for one day. On admission, routine blood tests showed a white blood cell of 4.22 x 10 <sup>9</sup> /L, neutrophil percentage of 37.4%, and lymphocyte percentage of 53.8%. The patient also had elevated lactate dehydrogenase, alpha-hydroxybutyrate dehydrogenase, CRP, and serum amyloid. He was discharged 8 days later following a normal chest CT and negative PCR test. The authors recommend that if children and adolescents have a history of living or traveling in epidemic areas within one to two weeks, the possibility of SARS-CoV-2 infection cannot be ruled out regardless of mild or atypical symptoms. Patients with positive SARS-CoV-2 results should be placed under immediate quarantine, while those with negative results should be closely observed or undergo CT examination of lung changes to avoid missed diagnoses.	The authors report the case of a 9-year-old boy with mild COVID-19 symptoms in China. The possibility of SARS-CoV-2 infection cannot be ruled out regardless of mild or atypical symptoms, especially if patients have a recent history of traveling/living in COVID-19 pandemic areas.	Yin X, Dong L, Zhang Y, et al. A mild type of childhood Covid-19 - A case report. Radiol Infect Dis. 2020;7(2):78-80. doi:10.1016/j.jrid.2020.03.004

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children, mental health, quarantine, isolation, separation, China	27-Mar-20	<a href="#">Mental health considerations for children quarantined because of COVID-19</a>	The Lancet: Child and Adolescent Health	Commentary	This commentary briefly discusses the potential impact of COVID-19 lockdowns and quarantine on children. Children who are separated from their caregivers require special attention, including children with confirmed or suspected SARS-CoV-2 infection quarantined in local hospitals or collective medical observation centers and children whose caregivers are infected with SARS-CoV-2 or who have died from COVID-19. Separation from caregivers pushes children into a state of crisis and might increase the risk of psychiatric disorders. A study of previous pandemic diseases found that children quarantined or isolated were more likely to develop acute stress disorder, adjustment disorder, and grief. 30% of the children who were isolated or quarantined met the clinical criteria for post-traumatic stress disorder. Furthermore, parent-child separation in the first few years after birth can disrupt the ongoing attachment processes and negatively impact psychological development. The authors detail strategies implemented in China to mitigate the negative impact of quarantine on children's mental health, including 24-hour access to nurses in children's isolation wards, guidance from nutritionists, and communication with parents via mobile devices at any time. Other measures seek to increase children's access to disease information via comic books and videos, establish a regular activity schedule, provide night lights and small gifts, and provide timely referrals to psychiatrists when children express worry, anxiety, difficulty sleeping, and loss of appetite. The authors propose pediatric healthcare workers receive formal training to discern children's normal and abnormal behaviors, use rapid screening tools for mental health, and recognize red flags indicating further intervention or referral are needed.	This commentary briefly discusses the potential impact of COVID-19 lockdowns and quarantine on children and summarizes strategies implemented in China to support the mental health of children in hospital isolation wards and collective medical observation centers.	Liu JJ, Bao Y, Huang X, Shi J, Lu L. Mental health considerations for children quarantined because of COVID-19. Lancet Child Adolesc Health. 2020;4(5):347-349. doi:10.1016/S2352-4642(20)30096-1
Children, infants, symptoms, case definitions, vertical transmission	27-Mar-20	<a href="#">COVID-19 in the pediatric population</a>  [No Abstract and Article not available for free]	Dermatologic Therapy	Letter to the Editor	The authors describe the current knowledge of how the COVID-19 pandemic impacts pediatric populations and what previous cases and studies indicate. Three neonatal cases with COVID-19 were reported and highlight the possibility of COVID-19 vertical transmission to infant during delivery or breastfeeding. A study evaluated 9 hospitalized infants infected with COVID-19 who did not show clinical progression requiring intensive care. Another study showed a high frequency (83.3%) of COVID-19 RNA detection and prolonged virus RNA shedding in feces of pediatric patients for more than 1 month. This highlights a likelihood of poor performance of current case definitions of COVID-19, especially in infants. One study demonstrated that chest imaging alterations in infected children with COVID-19 might occur earlier than clinical symptoms and that allow early identification of the large underdiagnosed suspected pneumonia cases. In conclusion, most of the pediatric patients with COVID-19 have mild symptoms, without fever or pneumonia, and will recover within 1-2 weeks after disease onset.	The authors describe previous cases and studies to explain that most of the pediatric patients with COVID-19 have mild symptoms, without fever or pneumonia, and will recover within 1-2 weeks after disease onset. The authors critique that current case definitions of COVID-19 are poor, particularly for infants.	Abdelmaksoud A, Kroumpouzou G, Jafferany, M, et al. COVID-19 in the pediatric population. Dermatologic Therapy. 2020;33:e13339. doi:10.1111/dth.13339

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Pregnancy, asymptomatic, labor induction, neonates	27-Mar-20	<a href="#">COVID-19 in pregnancy: early lessons</a>	American Journal of Obstetrics & Gynecology MFM	Case Series	This report presents seven initial cases of confirmed COVID-19 in pregnancy presenting to a single large New York City tertiary care hospital. Five of the seven patients presented with symptoms of COVID-19, including cough, myalgias, fevers, chest pain, and headache. Four patients were admitted to the hospital, including two who required supportive care with intravenous hydration. Most notably, the other two (28.6%) admitted patients were asymptomatic on admission to the hospital, presenting instead for obstetrically indicated labor inductions; both of these patients became symptomatic post-partum, each requiring ICU admission. SARS-CoV-2 PCR results for neonates, delivered by the two initially asymptomatic patients, were negative on the first day of life.	Two pregnant women were admitted for labor inductions and became symptomatic post-partum, developing clinically severe COVID-19, confirmed by SARS-CoV-2 PCR. Neonates born to these women tested negative for SARS-CoV-2 infection.	Breslin N, Baptiste C, Miller R, Fuchs K, Goffman D, Gyamfi-Bannerman C, D'Alton M. COVID-19 in pregnancy: early lessons [published online 27 Mar 2020]. American Journal of Obstetrics & Gynecology MFM. 2020. doi:10.1016/j.ajogmf.2020.100111
Children, close contacts, household secondary attack rate, reproductive number, China	27-Mar-20	<a href="#">Epidemiology and Transmission of COVID-19 in Shenzhen China: Analysis of 391 cases and 1,286 of their close contacts</a>	medRxiv	Original Research	The Shenzhen CDC identified 391 SARS-CoV-2 cases from January 14 to February 12, 2020 and 1286 close contacts. Cases were older than the general population (mean age: 45 years) and balanced between males (187) and females (204). 91% had mild or moderate clinical severity at initial assessment. Three have died, 225 have recovered (median time to recovery: 21 days). Cases were isolated on average 4.6 days after developing symptoms; contact tracing reduced this by 1.9 days. Household contacts and those travelling with a case were at higher risk of infection (ORs 6 and 7) than other close contacts. The household secondary attack rate was 15%, and children were as likely to be infected as adults. The observed reproductive number was 0.4, with a mean serial interval of 6.3 days.	Surveillance data from Shenzhen, China show that children are at similar risk of SARS-CoV-2 infection as the general population, though less likely to have severe symptoms.	Bi Q, Wu Y, Mei S, et al. Epidemiology and Transmission of COVID-19 in Shenzhen China: Analysis of 391 cases and 1,286 of their close contacts. doi:10.1101/2020.03.03.20028423
Children, childhood respiratory illness, underlying lung disease, UK	27-Mar-20	<a href="#">COVID-19 infection in children</a>	The Lancet Respiratory Medicine	Spotlight	The outcomes of childhood respiratory illnesses in the UK are consistently worse compared to other countries, as are levels of obesity and antenatal smoking. For children with an underlying chest condition (such as cystic fibrosis or severe asthma), parental concern is heightened. It is hard to determine common clinical characteristics in children with severe disease, and it is unclear whether there is a common biomarker, due to a small number of reported cases.	Although severe COVID-19 in children is rare, this article raises concerns over the clinical outcomes of children with underlying respiratory illnesses, in the UK.	Sinha, Ian P., et al. COVID-19 infection in children. The Lancet Respiratory Medicine. 2020. doi: 10.1016/S2213-2600(20)30152-1
Maternal health care management, patient triage, nosocomial infection, China	26-Mar-20	<a href="#">Maternal Health Care Management During the Outbreak of Coronavirus Disease 2019 (COVID-19)</a>	Journal of Medical Virology	Review	This article presents the managing processes of 3 pregnant women that presented with fever during hospitalization at an OB/GYN department in Shenzhen, summarizing strategies like antenatal care planning, patient triage based on risk level, admission control, and measures counteracting emergencies. Despite many confirmed COVID-19 cases in the hospital, no nosocomial infection has occurred among pregnant women.	Maternal management strategies are needed to prevent nosocomial infection among hospitalized pregnant women.	Chen Y, Li Z, Zhang YY, Zhao WH, Yu ZY. Maternal health care management during the outbreak of coronavirus disease 2019 (COVID-19) [published online, 2020 Mar 26]. J Med Virol. 2020. doi:10.1002/jmv.25787
Vertical transmission, IgM antibody levels, molecular diagnostic testing	26-Mar-20	<a href="#">Can SARS-CoV-2 Infection Be Acquired In Utero?</a>	JAMA	Editorial	This editorial responds to two JAMA articles, published in the same issue, regarding the possible vertical transmission of SARS-CoV-2 in utero, based on elevated IgM antibody levels in neonatal blood following birth. However, there is no virologic evidence for congenital infection since no infant specimen tested positive for the virus by RT-PCR. In addition, IgM assays can be prone to false-positive and false-negative results, along with cross-reactivity and testing challenges,	This editorial advises caution in interpreting the results of the 2 JAMA research letters published on March 26, on the transmission of COVID-19 in utero. The	Kimberlin DW, Stagno S. Can SARS-CoV-2 Infection Be Acquired In Utero? More Definitive Evidence Is Needed. JAMA. Published online March 26, 2020. doi:10.1001/jama.2020.4868

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					especially compared to molecular diagnostic tests based on nucleic acid amplification. The kinetics of decline in SARS-CoV-2 IgM in the study by Dong et al. are also unusually rapid, compared to rates of decline in other congenitally transmitted infections like rubella.	author stresses that this possibility cannot be ruled out, however, because COVID-19 has been detected in blood samples.	
Neonates, early onset infection, vertical transmission, prematurity, sepsis, China	26-Mar-20	<a href="#">Neonatal Early-Onset Infection With SARS-CoV-2 in 33 Neonates Born to Mothers With COVID-19 in Wuhan, China</a>	JAMA Pediatrics	Research Letter	This cohort study recruited neonates born to mothers with COVID-19 from Wuhan Children's Hospital. Clinical data were obtained from medical records, and SARS-CoV-2 RT-PCR tests were conducted using nasopharyngeal and anal swab samples, collected from January to February 2020. Thirty-three neonates born to mothers with COVID-19, including 3 neonates with early-onset COVID-19, were identified. The most seriously ill neonate may have been symptomatic from prematurity, asphyxia, and sepsis, rather than SARS-CoV-2 infection.	Vertical maternal-fetal transmission cannot be ruled out in the current cohort, although symptoms of severe neonatal cases of COVID-19 may be attributable to other, non-viral causes.	Zeng L, Xia S, Yuan W, et al. Neonatal Early-Onset Infection With SARS-CoV-2 in 33 Neonates Born to Mothers With COVID-19 in Wuhan, China [published online, 2020 Mar 26]. JAMA Pediatr. 2020;e200878. doi:10.1001/jamapediatrics.2020.0878
Serological testing, vertical transmission, IgM / IgG concentrations, cytokine levels, China	26-Mar-20	<a href="#">Antibodies in Infants Born to Mothers With COVID-19 Pneumonia</a>	JAMA	Research Letter	New serological diagnostic criteria (released by the Chinese National Health Commission on Mar 4) were applied to a cohort of 6 pregnant women with confirmed COVID-19, admitted to Zhongnan Hospital, Wuhan from February 16 to March 6, 2020. All six mothers had mild clinical manifestations and cesarean deliveries in their third trimester in negative pressure isolation rooms. Infants were isolated from their mothers immediately after delivery. While neonatal throat swabs and blood samples tested negative for viral nucleic acid by RT-PCR, virus-specific antibodies were detected in the blood serum of all six infants. IgG concentrations (passively transferred across the placenta beginning in the second trimester) were elevated in six infants (not usually passively transferred), and IgM concentrations were detected in two infants. Abnormal weight and pathology of placentas in mothers with SARS have been noted (Ng et al, 2006), but placental damage among women in this study is unknown. IgM could have been produced by the fetus if the virus crossed the placenta. Inflammatory cytokine IL-6 was also significantly increased in all neonatal sera samples.	This research builds upon an earlier cohort study of nine pregnant women from the same hospital (Chen et al, Feb 2020), and contributes new data on serological characteristics of mothers and newborns. The presence of anti-SARS-CoV-2 IgM in 2 infants suggests possible transplacental transmission. Study is limited by lack of cord blood, amniotic fluid, and breast milk data.	Zeng H, Xu C, Fan J, et al. Antibodies in Infants Born to Mothers With COVID-19 Pneumonia [published online, 2020 Mar 26]. JAMA. 2020;e204861. doi:10.1001/jama.2020.4861
Serological testing, breastmilk sample, vertical transmission, IgM / IgG concentrations, cytokine levels, China	26-Mar-20	<a href="#">Possible Vertical Transmission of SARS-CoV-2 From an Infected Mother to Her Newborn</a>	JAMA	Research Letter	This case report describes the birth of an infant with elevated anti-SARS-CoV-2 IgM antibodies and cytokine levels, despite no physical contact with a mother with laboratory-confirmed COVID-19. The mother developed COVID-19 symptoms and was admitted to Renmin Hospital, Wuhan on January 28, 2020, where she received antiviral, antibiotic, corticosteroid, and oxygen therapies. RT-PCR tests of the patient's vaginal secretions were negative. An infant girl was delivered on February 22, 2020 by cesarean section in a negative pressure isolation room; she was immediately quarantined in the NICU. At two hours of age, the neonate had elevated IgG and IgM levels (usually appear 3 to 7 days after infection) and abnormal cytokine test results. Mother's breastmilk tested negative by RT-PCR	Elevated IgM levels in a neonate born to a mother with confirmed COVID-19 raise suspicion of transmission in utero. However, the infant's repeatedly negative RT-PCR test results are difficult to explain. Study limitations include lack of amniotic	Dong L, Tian J, He S, et al. Possible Vertical Transmission of SARS-CoV-2 From an Infected Mother to Her Newborn [published online, 2020 Mar 26]. JAMA. 2020;e204621. doi:10.1001/jama.2020.4621

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					on February 28, but her antibody levels were still elevated one day later. Elevated IgM antibody levels in the neonate suggest that she was infected in utero, during the 23 days from the time of the mother's diagnosis to delivery. The elevated IgG level may reflect maternal or infant infection.	fluid or placenta testing. Infection at delivery cannot be ruled out.	
Pregnancy, newborn management, nursing, breastfeeding, neonatal isolation, China	26-Mar-20	<a href="#">Experience of Clinical Management for Pregnant Women and Newborns with Novel Coronavirus Pneumonia in Tongji Hospital, China.</a>	Current Medical Science	Article	During breastfeeding, close attention must be paid to hygiene of hands and breasts. Suspected and confirmed cases of COVID-19 are not recommended to breastfeed, according to clinicians at Tongji Hospital. Breastfeeding is not suggested while taking lopinavir/ritonavir, which can be secreted in the milk of rates. During the suspension of breastfeeding, it is recommended that the mother empties her breasts regularly. Newborns who have been confirmed or are suspected of having SARS-CoV-2 infection should be transferred to an isolation ward for observation or treatment. Only when the mother is found negative on two consecutive nucleic acid tests, and under informed consent, should the mother and child be in the same room.	These guidelines from Tongji Hospital (based on the New Diagnosis and Treatment Scheme for Novel Coronavirus Infected Pneumonia, Trial Edition 5) are consistent with earlier recommendations against breastfeeding for mothers with COVID-19, from other Chinese institutions.	Wang SS, Zhou X, Lin XG, et al. Experience of Clinical Management for Pregnant Women and Newborns with Novel Coronavirus Pneumonia in Tongji Hospital, China [published online, 2020 Mar 26]. <i>Curr Med Sci.</i> 2020. doi:10.1007/s11596-020-2174-4
Pregnancy, safe delivery, newborn management, skin-to-skin contact	26-Mar-20	<a href="#">Safe Delivery for COVID-19 Infected Pregnancies</a>	BJOG: International Journal of Obstetrics & Gynecology	Commentary	Recommendations for neonatal management include: Newborns of the suspected COVID-19 infected mother should be transferred to the neonatal isolation ward immediately after being evaluated as in good general condition by the attending neonatologist. If the maternal nucleic acid test is negative for two consecutive tests, the newborn may be transferred out of the isolation ward for mother-to-child or home care. If the maternal nucleic acid test is positive or if a maternal infection is confirmed, newborns should be quarantined for at least 14 days.	Recommendations for newborn isolation from mothers with suspected or confirmed COVID-19 align with guidelines from previous Chinese experience. There is no mention of breastfeeding.	Qi H, Luo X, Zheng Y, et al. Safe Delivery for COVID-19 Infected Pregnancies [published online, 2020 Mar 26]. <i>BJOG.</i> 2020. doi:10.1111/1471-0528.16231
Children, MERS, SARS, routine immunization, cross-reactivity, MMR	25-Mar-20	<a href="#">Routine Childhood Immunization May Protect Against COVID-19</a>	Medical Hypotheses	Letter to Editor	Different age groups are susceptible to infection, however SARS-CoV, MERS-CoV and SARS-CoV-2 seem to less commonly infect children and to cause milder symptoms and are associated with much lower case-fatality rates and most of them recover quickly from the infection. This mysterious lower rate of fatality and symptomatic illness could be advocated to the active viral immunization (e.g. varicella, Hepatitis B, MMR, Poliomyelitis, and rotavirus) of children globally, from birth till six years. Immunizations may build immunity against SARS-CoV-2 by protecting lung cells from invasion. MMR is already been used to induce bystander immunity against other virus strains.	Cross-reactivity from common childhood immunizations (e.g. MMR) may explain lower case fatality rates and susceptibility of children to SARS-CoV-2 infection. Future clinical trials must assess the prophylactic and/or therapeutic efficacy of other vaccinations for emerging COVID-19.	Salman S, Salem ML. Routine childhood immunization may protect against COVID-19 [published online, 2020 Mar 25]. <i>Med Hypotheses.</i> 2020;140:109689. doi:10.1016/j.mehy.2020.109689
Pregnancy, neonates, preterm birth, perinatal outcomes, vertical transmission	25-Mar-20	<a href="#">Outcome of Coronavirus spectrum infections (SARS, MERS, COVID 1 -19) during pregnancy: a</a>	American Journal of Obstetrics & Gynecology MFM	Systematic Review	19 studies including 79 women were eligible for this systematic review: 41 pregnancies (51.9%) affected by COVID-19, 12 (15.2%) by MERS, and 26 (32.9%) by SARS. An overt diagnosis of pneumonia was made in 91.8% of pregnancies, and the most common symptoms were fever (82.6%), cough (57.1%) and dyspnea (27.0%). For all CoV infections, the rate of miscarriage was 39.1% (95% CI 20.2-59.8); the rate of preterm birth < 37 weeks was 24.3% (95% CI 12.5-38.6);	Pre-term birth is the most common adverse outcome in pregnancies affected by COVID-19. Miscarriage, preeclampsia, cesarean, and perinatal death	Di Mascio D, Khalil A, Saccone G, et al. Outcome of Coronavirus spectrum infections (SARS, MERS, COVID 1 -19) during pregnancy: a systematic review and meta-analysis [published online, 2020 Mar 25]. <i>Am J</i>



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		<a href="#">systematic review and meta-analysis</a>			premature pre-labor rupture of membranes occurred in 20.7% (95% CI 9.5-34.9), pre-eclampsia in 16.2% (95% CI 4.2-34.1), and fetal growth restriction in 11.7% (95% CI 3.2-24.4). 84% were delivered by cesarean; the rate of perinatal death was 11.1% (95% CI 8.4-19.6) and 57.2% (95% CI 3.6-99.8) of newborns were admitted to the NICU. When focusing on COVID-19, the most common adverse pregnancy outcome was preterm birth, occurring in 41.1% (95% CI 25.6-57.6) of cases, while the rate of perinatal death was 7.0% (95% CI 1.4-16.3). None of the 41 newborns assessed showed clinical signs of vertical transmission.	were more common than in the general population. No evidence exists in support of vertical transmission.	Obstet Gynecol MFM. 2020. doi:10.1016/j.ajogmf.2020.100107
Pregnancy, neonate, preterm labor, Honduras	25-Mar-20	<a href="#">A pregnant woman with COVID-19 in Central America</a>	Travel Medicine and Infectious Disease	Case Report	On March 9, 2020, a 41-year-old female, who was 31 weeks pregnant, with gestational hypertension and hypothyroidism, presented to the Hospital Escuela of Tegucigalpa, Honduras, with intermittent fever, dry cough, headache and myalgias for three days. She had a history of travelling in Madrid, Spain, where she had lived for the past six months. Given the patient's travel history and fever, a nasopharyngeal aspirate sample was collected and tested following WHO guidelines for real-time RT-PCR, and results were positive. On admission, she presented bilateral conjunctival hyperemia. An obstetric ultrasound revealed a fetus with a dysplastic and multi-cystic right kidney with no other alterations. After ten days of hospitalization, she was stable, remaining under observation until delivery. On March 19, 2020, at 32 weeks of gestation, she delivered a male newborn by spontaneous vaginal delivery. The neonate's nasopharyngeal and blood samples tested by SARS-CoV-2 rRT-PCR were negative. Although asymptomatic, the mother's nasopharyngeal sample remained positive at the time of birth.	This case report describes a pregnant woman with confirmed COVID-19 in Honduras, who gave birth to a male newborn by vaginal delivery. The neonate's nasopharyngeal and blood samples tested negative for SARS-CoV-2 following birth.	Zambrano LI, Fuentes-Barahona IC, Bejarano-Torres DA, et al. A pregnant woman with COVID-19 in Central America [published online, 2020 Mar 25]. Travel Med Infect Dis. 2020;101639. doi:10.1016/j.tmaid.2020.101639
Children, epidemiology, viral transmission, antiviral therapy, immunomodulatory drugs	25-Mar-20	<a href="#">COVID-19 in Children: The Link in the Transmission Chain</a>	The Lancet Infectious Diseases	Comment	Evidence has shown that children are susceptible to SARS-CoV-2 infection but frequently do not have notable disease, raising the possibility that children could be facilitators of viral transmission. In terms of treatment, it is unclear which children should be targeted for antiviral and immunomodulatory therapy, particularly in view of the high proportion of asymptomatic infected contacts. Together, these results could suggest that children have specific mechanisms regulating the interaction between the immune system and respiratory machinery, which could be contributing to milder disease.	This article reviews the clinical report from Qiu et al. on pediatric patients with confirmed COVID-19, and discusses questions that remain to be answered, especially related to immune mechanisms and treatment.	Kelvin AA, Halperin S. COVID-19 in children: the link in the transmission chain [published online, 2020 Mar 25]. Lancet Infect Dis. 2020. doi:10.1016/S1473-3099(20)30236-X
Children vs. adults, family cluster, clinical characteristics, China	25-Mar-20	<a href="#">The different clinical characteristics of corona virus disease cases between children and their families in China – the character of</a>	Emerging Microbes & Infections	Article	Clinical data from 9 children and their 14 adult family members were collected. All children tested positive after the onset of illness in their family members. Three children had fever (22.2%) or cough (11.2%) symptoms and 6 (66.7%) children had no symptoms. Among the 14 adult patients, major symptoms included fever (57.1%), cough (35.7%), chest tightness/pain (21.4%), fatigue (21.4%) and sore throat (7.1%). There were 10 adults (71.4%) who showed abnormal imaging. The main manifestations were pulmonary consolidation (70%), nodular shadow (50%), and ground glass opacity (50%). Five	Consistent with other reports, COVID-19 in children is mainly caused by household transmission, and their symptoms are mild with better prognosis than adults. However, stool samples showed positive viral testing	Su L, Ma X, Yu H, et al. The different clinical characteristics of corona virus disease cases between children and their families in China - the character of children with COVID-19. Emerg Microbes Infect. 2020;9(1):707–713. doi:10.1080/22221751.2020.1744483

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		<a href="#">children with COVID-19</a>			discharged children were admitted again because their stool showed positive results in SARS-CoV-2 PCR.	results that lasted longer than their family members.	
Children, observational cohort, epidemiology, aerosolized interferon alpha, China	25-Mar-20	<a href="#">Clinical and epidemiological features of 36 children with coronavirus disease 2019 (COVID-19) in Zhejiang, China: an observational cohort study</a>	The Lancet Infectious Diseases	Article	From January 17 to March 1, 2020, 36 children with confirmed SARS-CoV-2 were identified at three hospitals in Zhejiang, China. The route of transmission was by close contact with family members or history of exposure to the epidemic area. The majority presented with mild pneumonia or were asymptomatic. Decreased lymphocytes, elevated body temperature, and high levels of procalcitonin, D-dimer, and creatine kinase MB were associated with greater severity of disease. All children received interferon alpha by aerosolization twice a day, 14 (39%) received lopinavir–ritonavir syrup twice a day, and six (17%) needed oxygen inhalation. Mean time in hospital was 14 (SD: 3) days.	The large proportion of asymptomatic children indicates the difficulty in identifying pediatric patients without clear epidemiological information, leading to a potentially dangerous situations in community acquired infections.	Qiu H, Wu J, Hong L, Luo Y, Song Q, Chen D. Clinical and epidemiological features of 36 children with coronavirus disease 2019 (COVID-19) in Zhejiang, China: an observational cohort study [published online, 2020 Mar 25]. Lancet Infect Dis. 2020. doi:10.1016/S1473-3099(20)30198-5
Children, epidemiology, coronaviruses, cross-protection, Norway	24-Mar-20	<a href="#">COVID-19 – A Mild Disease in Children</a>	Tidsskriftet Den Norske Nor Laegeforening	Opinion	In Norway, 65 children in the 0–19 age group were reported to have been infected with COVID-19 as of March 20, 2020. This number is approximately 3.3% of all COVID-19 cases in Norway. The fact that very few children have tested positive in this outbreak is consistent with other coronavirus outbreaks in recent history, such as SARS and MERS. The reasons why children are relatively unaffected by COVID-19 remain unclear. Do children have absolute protection against infection or only against the risk of developing the disease after being infected? Do children develop cross-protection from having encountered other types of coronavirus? This article explores potential reasons and concludes that children have minimal risk of developing COVID-19 as well as experiencing a fatal outcome.	Reported cases of COVID-19 in the 0–19 age group in Norway have been low; this article considers why children are relatively spared by COVID-19.	Devulapalli CS. COVID-19 – a mild disease in children. Tidsskr Nor Laegeforen. 2020;140(6). doi:10.4045/tidsskr.20.0231
Children, age-specificity, clinical severity, susceptibility, mathematical model	24-Mar-20	<a href="#">Age-dependent effects in the transmission and control of COVID-19 epidemics</a>	medRxiv	Original Article	The COVID-19 pandemic has shown a markedly low proportion of cases among children. Age disparities in observed cases could be explained by assortative mixing patterns and reactive school closures which decrease mixing between children, or by children exhibiting lower susceptibility to infection, or by children having a lower propensity to show clinical symptoms. Authors formally tested these hypotheses by fitting an age-structured mathematical model to epidemic data from six countries, finding strong age dependence in the probability of developing clinical symptoms, rising from around 20% in patients under 10 years old to over 70% in older adults. Authors found that interventions aimed at halting transmission in children may have minimal effects on preventing cases depending on the relative transmissibility of subclinical infections. Estimated age-specific clinical fraction has implications for the expected global burden of clinical cases because of demographic differences across settings. In younger populations, the expected clinical attack rate would be lower, although it is likely that comorbidities in low-income countries will affect disease severity. Without effective control measures, regions with older populations may see disproportionately more clinical cases, particularly in the later stages of the pandemic.	Based on age-structured mathematical models, this study determined that the plausibility of age-specific severity of COVID-19 disease is higher than age-specific susceptibility to COVID-19 infection.	Davies N, Klepac P, Lui Y et al. Age dependent effects in the transmission and control of COVID-19 epidemics [available online, 24 Mar 2020]. medRxiv. doi:10.1101/2020.03.24.20043018

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Pregnancy, maternal & neonatal outcomes, methyl-prednisolone, China	24-Mar-20	<a href="#">Clinical Features and Obstetric and Neonatal Outcomes of Pregnant Patients With COVID-19 in Wuhan, China: A Retrospective, Single-Centre, Descriptive Study</a>	The Lancet Infectious Diseases	Article	This retrospective, single-center study includes seven pregnant women with COVID-19 who were admitted to Tongji Hospital in Wuhan, China from January 1 to February 8, 2020. Patients received oxygen, antiviral, antibiotic, and traditional Chinese therapy. Five were treated with methylprednisolone after cesarean section. All patients had cesarean section within three days of clinical presentation of symptoms, with good maternal and neonatal outcomes, without ICU admissions. Three neonates were tested for SARS-CoV-2, and one neonate was found infected 36 hours after birth. Favorable maternal, fetal, and neonatal outcomes of patients infected late in pregnancy were achieved with intensive, active management.	One neonate was infected with SARS-CoV-2 after birth. Limitations include lack of follow-up on long-term outcomes, and effects of infection in the first or second trimester remain unknown.	Yu N, Li W, Kang Q, et al. Clinical features and obstetric and neonatal outcomes of pregnant patients with COVID-19 in Wuhan, China: a retrospective, single-centre, descriptive study [published online, 2020 Mar 24]. Lancet Infect Dis. 2020. doi:10.1016/S1473-3099(20)30176-6
Children, clinical characteristics, multicenter study, China	24-Mar-20	<a href="#">Clinical Characteristics of Children with Coronavirus Disease 2019 in Hubei, China.</a>	Current Medical Science	Article	A cross-sectional multicenter study was carried out in 10 hospitals across Hubei province. A total of 25 confirmed pediatric cases of COVID-19 were collected. The boy to girl ratio was 1.27:1 and the median age was 3 years. The most common symptoms at onset of illness were fever (13 [52%]), and dry cough (11 [44%]). Chest CT images showed essential normal in 8 cases (33.3%), unilateral involvement of lungs in 5 cases (20.8%), and bilateral involvement in 11 cases (45.8%). Clinical diagnoses included upper respiratory tract infection (n=8), mild pneumonia (n=15), and critical cases (n=2). Two critical cases (8%) were given invasive mechanical ventilation, corticosteroids, and immunoglobulin. The symptoms in 24 (96%) of 25 patients were alleviated and one patient had been discharged. It was concluded that children were susceptible to COVID-19 like adults, while the clinical presentations and outcomes were more favorable in children. However, children less than 3 years old accounted for the majority of critical cases.	This article reinforces that clinical presentation and outcomes are more favorable in children than adults. Younger children (<3 years old) accounted for the majority of cases and critical cases, which warrants further attention.	Zheng F, Liao C, Fan QH, et al. Clinical Characteristics of Children with Coronavirus Disease 2019 in Hubei, China [published online, 2020 Mar 24]. Curr Med Sci. 2020. doi:10.1007/s11596-020-2172-6
Pregnancy, newborns, literature review, vertical transmission	23-Mar-20	<a href="#">Risks of Novel Coronavirus Disease (COVID-19) in Pregnancy; A Narrative Review</a>	Archives of Academic Emergency Medicine	Review	This narrative review of published literature on vertical transmission of COVID-19 from mother to fetus searched in databases including PubMed, Scopus, Embase, Science Direct, and Web of Science. Authors used MeSH-compliant keywords (COVID-19, Pregnancy, Vertical transmission, Coronavirus 2019, SARS-CoV-2 and 2019-nCoV) from Dec 2019 to Mar 18, 2020. A review of 13 articles showed that COVID-19 can cause fetal distress, miscarriage, respiratory distress, and preterm delivery in pregnant women but does not infect newborns.	To date, there have been no reports of vertical transmission in pregnancy. Clinical symptoms of COVID-19 in pregnant women are not different from those of non-pregnant women.	Panahi L, Amiri M, Pouy S. Risks of Novel Coronavirus Disease (COVID-19) in Pregnancy; a Narrative Review. Arch Acad Emerg Med. 2020;8(1):e34. Published 2020 Mar 23. PMID: 32232217
Pregnancy, patho-physiology, vertical transmission, breastfeeding, skin-to-skin contact	23-Mar-20	<a href="#">Coronavirus Disease 2019 (COVID-19) Pandemic and Pregnancy</a>	American Journal of Obstetrics & Gynecology	Special Report	To date, the outcomes of 55 pregnant women and 46 neonates infected with COVID-19 have been reported in the literature, with no concrete evidence of vertical transmission. Physiological and mechanical changes in pregnancy increase susceptibility to infections in general, particularly when the cardiorespiratory system is affected. Pregnancy bias towards Th2 system dominance, which protects the fetus, leaves the mother vulnerable to viral infections, which are more effectively contained by the Th1 system. Although data doesn't suggest risk of vertical transmission, delayed clamping of the umbilical cord and skin-to-skin contact should be avoided following	There is no definitive evidence of vertical transmission, but skin-to-skin contact should be avoided following delivery. Breastfeeding is not contraindicated, but a face mask should be worn.	Dashraath P, Jing Lin Jeslyn W, Mei Xian Karen L, et al. Coronavirus Disease 2019 (COVID-19) Pandemic and Pregnancy [published online, 2020 Mar 23]. Am J Obstet Gynecol. 2020. doi:10.1016/j.ajog.2020.03.021

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					delivery. Breastfeeding is not contraindicated based on retrospective analysis of COVID-19 in pregnancy that showed absence of detectable viral loads of SARS-CoV-2 in breastmilk. Regardless, a face mask should be worn due to the close proximity between mother and child to reduce the risk of droplet transmission. The presence of coronavirus antibodies in breastmilk depends on the gestation at which maternal infection occurred and if there was any preceding use of high-dose corticosteroids which could suppress maternal antibody responses.		
Infant, secondary transmission, Vietnam	23-Mar-20	<a href="#">The first infant case of COVID-19 acquired from a secondary transmission in Vietnam</a>	The Lancet Child & Adolescent Health	Case Report	A 3-month-old, female patient presented with mild upper respiratory symptoms and fever. Her nasopharyngeal swab samples tested positive for SARS-CoV-2 by RT-PCR. She was exclusively breastfed, and her immunizations were up to date. The infection was transmitted secondarily from a close contact with confirmed COVID-19 in the family. However, unlike reported family clusters where the youngest child was not infected or asymptomatic, this patient was the youngest member in the family who acquired the disease with symptoms.	Unlike earlier reported cases in China, this patient was the youngest member in her family cluster to acquire disease.	Le HT, Nguyen LV, Tran DM, et al. The first infant case of COVID-19 acquired from a secondary transmission in Vietnam [published online, 2020 Mar 23]. Lancet Child Adolesc Health. 2020. doi:10.1016/S2352-4642(20)30091-2
Children, epidemiology, clinical characteristics, prognosis, nutritional support	23-Mar-20	<a href="#">Systematic review of COVID-19 in children shows milder cases and a better prognosis than adults.</a>	Acta Paediatrica	Review Article	A systematic literature review identified 45 relevant scientific papers and letters on COVID-19, using the Medline and EMBASE databases between January 1 and March 18, 2020. So far, children have accounted for 1-5% of diagnosed COVID-19 cases. They often have milder disease than adults, and deaths have been extremely rare. Diagnostic findings have been similar to adults, with fever and respiratory symptoms being prevalent, but fewer children seem to have developed severe pneumonia. Elevated inflammatory markers were less common in children and lymphocytopenia seemed rare. Newborn infants have developed symptomatic COVID-19, but evidence of vertical intrauterine transmission was scarce. Suggested treatment included providing oxygen, inhalations, nutritional support and maintaining fluids and electrolyte balances.	Nutritional support is included in recommendations for treatment.	Ludvigsson JF. Systematic review of COVID-19 in children shows milder cases and a better prognosis than adults [published online, 2020 Mar 23]. Acta Paediatr. 2020. doi:10.1111/apa.15270
Children, recovery, interferon alpha, China	22-Mar-20	<a href="#">Three children who recovered from novel coronavirus 2019 pneumonia</a>	Journal of Pediatrics and Child Health	Brief Communication	Three children (aged 6 months, 6 years, and 8 years) were hospitalized with confirmed COVID-19 pneumonia at the children's hospital affiliated with Zhengzhou University. All 3 patients had fever, and 2 had nasal congestion and rhinitis, associated with fatigue, diarrhea and headache. Figures of CT imaging are included. None of the children required intensive care or mechanical ventilation or had any severe complications. All children belonged to family cluster cases. The two sisters were treated with nebulized interferon- $\alpha$ 2b 100 000 IU/kg, twice daily for 7 days. The children were discharged after 10 days, when they had two consecutive negative tests of respiratory specimens at least 1 day apart.	The three children were the first children to be managed in Henan Province, outside of Wuhan.	Lou XX, Shi CX, Zhou CC, Tian YS. Three children who recovered from novel coronavirus 2019 pneumonia [published online, 2020 Mar 22]. J Paediatr Child Health. 2020. doi:10.1111/jpc.14871
Children, clinical characteristics, close contact	20-Mar-20	<a href="#">Clinical Features in Pediatric COVID-19</a>	Pediatric Pulmonology	Letter to Editor	This letter responds to the article by Xia et al. on clinical characteristics of COVID-19 in children and presents observations from Thailand, which was the second country to experience an outbreak of COVID-19. There are currently 48 patients with COVID-19 in Thailand. Of these, two cases are pediatric (3-year-old female and	Early diagnosis of pediatric COVID-19 in two patients, based on screening of at-risk close contacts, may	Yasri S, Wiwanitkit V. Clinical features in pediatric COVID-19. Pediatr Pulmonol. 2020;55(5):1097. doi:10.1002/ppul.24737

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history, Thailand					7-year-old male). Both cases presented with fever and had a history of close contact with infected patients in their families. Both cases were hospitalized and experienced complete recovery, without any serious lung abnormalities observed on chest CT.	have resulted in mild clinical presentation in this brief case report from Thailand.	
Pediatrics, pregnancy, pneumonia, clinical characteristics, CT imaging	20-Mar-20	<a href="#">Clinical and CT imaging features of the COVID-19 pneumonia: Focus on pregnant women and children.</a>	Journal of Infection	Original Article	Clinical and CT data of 59 patients with COVID-19 from January 27 to February 14, 2020 were retrospectively reviewed, including 14 laboratory-confirmed non-pregnant adults, 16 laboratory-confirmed and 25 clinically diagnosed pregnant women, and 4 laboratory-confirmed children. Pulmonary involvement in children with COVID-19 was mild with a focal ground glass opacity or consolidation. CT was the modality of choice for early detection, severity assessment, and timely therapeutic effects evaluation for the cases with epidemic and clinical features of COVID-19 with or without laboratory confirmation. Exposure history and clinical symptoms were more helpful for screening in children vs. chest CT.	Exposure history, clinical symptoms were more helpful for screening in children rather than chest CT.	Liu H, Liu F, Li J, Zhang T, Wang D, Lan W. Clinical and CT imaging features of the COVID-19 pneumonia: Focus on pregnant women and children [published online, 2020 Mar 20]. J Infect. 2020. doi:10.1016/j.jinf.2020.03.007
Children, clinical severity, symptomatic case fatality risk, China	19-Mar-20	<a href="#">Estimating clinical severity of COVID-19 from the transmission dynamics in Wuhan, China</a>	Nature Medicine	Letter	As of February 29, 2020, there were 79,394 confirmed cases and 2,838 deaths due to COVID-19 in mainland China. Of these, 48,557 cases and 2,169 deaths occurred in the epicenter, Wuhan. A key public health priority during the emergence of a novel pathogen is estimating clinical severity, which requires properly adjusting for the case ascertainment rate and the delay between symptoms onset and death. Using public and published information, the overall symptomatic case fatality risk (sCFR, the probability of dying after developing symptoms) of COVID-19 in Wuhan is estimated at 1.4% (0.9-2.1%). The sCFR for ages 0-9 is 0.3% (0.1-0.7%), and for ages 10-19 is 0.5% (0.3-0.8%). Compared to those aged 30-59 years, those aged <30 and >59 years were 0.6 (0.3-1.1) and 5.1 (4.2-6.1) times more likely to die after developing symptoms.	Children with COVID-19 in Wuhan, China experience lower symptomatic case fatality risk, compared to adults 30 years old and above.	Wu JT, Leung K, Bushman M, et al. Estimating clinical severity of COVID-19 from the transmission dynamics in Wuhan, China. Nat Med. 2020;26(4):506–510. doi:10.1038/s41591-020-0822-7
Pediatrics, critically ill cases, ICU management, cytokine storm, China	19-Mar-20	<a href="#">Clinical features of severe pediatric patients with coronavirus disease 2019 in Wuhan: a single center's observational study.</a>	World Journal of Pediatrics	Original Article	This study identified eight severe or critically ill patients with COVID-19 who were treated at the ICU, Wuhan Children's Hospital from January 24 to February 24, 2020. The onset age ranged from 2 months to 15 years; six were boys. The most common symptoms were polypnea (8/8), followed by fever (6/8) and cough (6/8). Chest imaging showed multiple patch-like shadows in seven patients and ground-glass opacity in six. Laboratory findings revealed normal or increased whole blood counts (7/8), increased C-reactive protein, procalcitonin and lactate dehydrogenase (6/8), and abnormal liver function (4/8). Treatment modalities were focused on symptomatic and respiratory support. Two critically ill patients underwent invasive mechanical ventilation.	Polypnea was the most common symptom in children with confirmed COVID-19, followed by fever and cough. Common imaging changes included multiple patch-like shadows and ground-glass opacity. A cytokine storm was found in these patients.	Sun D, Li H, Lu XX, et al. Clinical features of severe pediatric patients with coronavirus disease 2019 in Wuhan: a single center's observational study [published online, 2020 Mar 19]. World J Pediatr. 2020. doi:10.1007/s12519-020-00354-4
Fecal viral shedding, stool samples, children, recovery phase	19-Mar-20	<a href="#">Do children need a longer time to shed SARS-CoV-2 in stool than adults?</a>	Journal of Microbiology, Immunology, and Infection	Short Communication	SARS-CoV-2 viral nucleic acid can be shed in the stool of patients in the recovery phase. Although nucleic acid positive PCR results cannot confirm the presence of live viruses in stool, given the novel nature of this virus, it would be wise to treat such results as evidence of continued infection. Children show a longer shedding time than adults (3 weeks in this study). Authors analyzed the possible causes of this finding, for example poorer hand hygiene practices that can lead	Authors present possible reasons for prolonged shedding of viral nucleic acid in feces of children, which does not confirm the presence of live viruses	Ma X, Su L, Zhang Y, Zhang X, Gai Z, Zhang Z. Do children need a longer time to shed SARS-CoV-2 in stool than adults? [published online, 2020 Mar 19]. J Microbiol Immunol Infect.

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					to gastrointestinal contamination, expression of ACE2 in the intestines, and silent aspiration, as opposed to coughing, causing sputum or saliva to enter the gastrointestinal tract through swallowing. They recommend that a negative stool sample be included in a patient's discharge criteria.	in stool but raises suspicion of a fecal-oral route of infectivity.	2020. doi:10.1016/j.jmii.2020.03.010
Children, pediatrics, clinical characteristics, Wuhan, China	18-Mar-20	<a href="#">The clinical and epidemiological features and hints of 82 confirmed COVID-19 pediatric cases aged 0-16 in Wuhan, China</a>	medRxiv	Preprint (not peer-reviewed)	This retrospective study from February 1-20, 2020 at Wuhan Children's Hospital in China evaluated the epidemiological, clinical, and laboratory outcomes for 82 confirmed cases of COVID-19 in children ages 0-16 years. During the study period, 812 children received SARS-CoV-2 nucleic acid detection and 82 (10.99 %) tested positive. 74 of those (90.24%) had a history of exposure to confirmed or suspected family members. Children over 6 years of age had the highest infection rate (42.68%). On admission, the most common symptoms were fever or cough. Most children had mild clinical symptoms and 8 were asymptomatic. There were 8 critically ill cases which included 4 infants. On admission, leucocytes were above normal in 21 (25.61%) of patients and lymphocytes were above normal range in 48 (58.54%) of patients. On chest imaging (CT or X-ray), 30 (36.59%), 38 (46.34%) and 18 (21.95%) of patients showed bilateral, unilateral, or multiple mottling and groundglass opacity pneumonia, respectively. All patients were treated in isolation and with interferon atomization therapy. Most were also given antibiotic or antiviral treatment. 8 required ICU care and 3 had serious complications. By February 20, 60 (73.17%) patients had been discharged and the mean hospital stay was 11.2 days.	The authors present the epidemiologic and clinical features of 82 cases of COVID-19 in pediatric patients in Wuhan, China. Children over 6 had the highest infection rate. Most had mild infections and were discharged after an average of 11.2 hospital days.	Yu H, Cai Q, Dai X, Liu X, Sun H. The clinical and epidemiological features and hints of 82 confirmed COVID-19 pediatric cases aged 0-16 in Wuhan, China. MedRxiv. 2020 Mar 18.
Pregnancy, childbirth, neonates, ground-glass opacity, chest CT	18-Mar-20	<a href="#">Pregnancy and Perinatal Outcomes of Women With Coronavirus Disease (COVID-19) Pneumonia: A Preliminary Analysis</a>	American Journal of Roentgenology	Original Research	Fifteen pregnant women with COVID-19 pneumonia in Union Hospital in Wuhan, China were hospitalized between January 20 and February 10, 2020. Eleven patients had successful delivery (10 cesarean deliveries and one vaginal delivery) during the study period, and four patients were still pregnant (three in the second trimester and one in the third trimester) at the end of the study period. No cases of neonatal asphyxia, neonatal death, stillbirth, or abortion were reported. The most common early finding on chest CT was ground-glass opacity. With disease progression, crazy paving pattern and consolidations were seen on CT. The abnormalities showed absorptive changes at the end of the study period for all patients. The most common onset symptoms of COVID-19 pneumonia in pregnant women were fever (13/15 patients) and cough (9/15 patients). The most common abnormal laboratory finding was lymphocytopenia (12/15 patients). CT images obtained before and after delivery showed no signs of pneumonia aggravation after delivery.	Pregnancy and childbirth did not aggravate the course of symptoms or CT features of COVID-19 pneumonia. No cases of neonatal asphyxia, neonatal death, stillbirth, or abortion were reported.	Liu D, Li L, Wu X, et al. Pregnancy and Perinatal Outcomes of Women With Coronavirus Disease (COVID-19) Pneumonia: A Preliminary Analysis [published online, 2020 Mar 18]. AJR Am J Roentgenol. 2020;1–6. doi:10.2214/AJR.20.23072
Children, epidemiology, South Korea	18-Mar-20	<a href="#">Coronavirus disease-19: The First 7,755 Cases in the Republic of Korea</a>	medRxiv	Report	As of March 13, 2020, 7,755 patients with confirmed COVID-19 and 66 deaths have been identified in the Republic of Korea, resulting in a case fatality proportion of 0.9%. 75 (1%) confirmed cases of COVID-19 were identified in the 0-9 years age group, and 405 (5.2%) confirmed cases of COVID-19 were identified in the 10-19 years age group. No deaths were reported in patients under 20 years.	1% of confirmed COVID-19 cases in Korea are in patients 0-9 years old, and 5.2% of confirmed cases are in patients 10-19 years old. No deaths	Choe YJ, COVID-19 National Emergency Response Center. Coronavirus disease-19: The First 7,755 Cases in the Republic of Korea. medRxiv. 2020. doi:

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						were reported in these age groups.	<a href="https://doi.org/10.1101/2020.03.15.20036368">https://doi.org/10.1101/2020.03.15.20036368</a>
Children, clinical characteristics, coexisting conditions, China	18-Mar-20	<a href="#">SARS-CoV-2 Infection in Children</a>	New England Journal of Medicine	Correspondence	Of the 1391 children tested from January 28 to February 26, 2020 at Wuhan Children's Hospital, 171 (12.3%) were confirmed with SARS-CoV-2 infection (median age: 6.7 years). Fever, cough, and pharyngeal erythema were common symptoms. 27 patients (15.8%) did not have any symptoms of infection or radiologic features of pneumonia. Three patients required intensive care support and invasive mechanical ventilation; all had coexisting conditions. Lymphopenia was present in 6 patients (3.5%). The most common radiologic finding was bilateral ground-glass opacity (32.7%). As of March 8, there was one death—a 10-month-old child with intussusception had multiorgan failure and died 4 weeks after admission.	This paper describes the spectrum of illness in primarily asymptomatic or mild cases of COVID-19 in children. One death was reported in a 10-month-old with coexisting intussusception.	Lu X, Zhang L, Du H, et al. SARS-CoV-2 Infection in Children [published online, 2020 Mar 18]. N Engl J Med. 2020. doi:10.1056/NEJMc2005073
Children, case fatality rate, Italy	17-Mar-20	<a href="#">Coronavirus Disease 2019 (COVID-19) in Italy</a>	JAMA	Infographic	This Infographic shows the most recent statistics emerging from Italy regarding the country's experience with COVID-19. As of March 15, 2020, 22,512 cases of COVID-19 in Italy were reported. 1.2% of cases were in children 0-18 years old. No deaths and a case fatality rate of 0% were reported in children 0-19 years old.	1.2% of total cases of COVID-19 in Italy are in children 0-19 years old. No deaths in children have been reported.	Livingston E, Bucher K. Coronavirus Disease 2019 (COVID-19) in Italy. JAMA Published Online First: 17 March 2020. doi:10.1001/jama.2020.4344
Perinatal transmission, breastmilk samples, breastfeeding, neutralizing antibodies	17-Mar-20	<a href="#">Perinatal Transmission of COVID-19 Associated SARS-CoV-2: Should We Worry?</a>	Clinical Infectious Diseases	Brief Report	This paper presents two cases of COVID-19 associated SARS-CoV-2 infection during the third trimester of pregnancy. Newborns showed no abnormalities at birth, and mothers had excellent outcomes. It is possible that mothers developed sufficient neutralizing antibodies, without developing serious conditions. These antibodies may have a passively protective effect on children through breastfeeding. Despite the fact that SARS-CoV-2 was not detected in consecutive breastmilk or neonatal specimens, breastfeeding was still discouraged.	Authors bring up the potential protective effect of neutralizing antibodies transmitted to newborns through breastmilk, however breastfeeding was still discouraged for the mothers with COVID-19 in this report.	Cuifang Fan, Di Lei, Congcong Fang et al., Perinatal Transmission of COVID-19 Associated SARS-CoV-2: Should We Worry?, Clinical Infectious Diseases, 17 March 2020, ciaa226, <a href="https://doi.org/10.1093/cid/ciaa226">https://doi.org/10.1093/cid/ciaa226</a>
Neonatal infection, pneumonia, liver injury, heart damage, breastmilk sample	17-Mar-20	<a href="#">A 55-Day-Old Female Infant infected with COVID 19: presenting with pneumonia, liver injury, and heart damage</a>	The Journal of Infectious Diseases	Brief Report	A 55-day-old, otherwise healthy, female infant that received mixed feeding became ill January 28, 2020. The infant and her parents had contact with relatives who had symptoms like cough and fever 10 days before. The child's parents were diagnosed with COVID-19 on January 31, and three consecutive tests of SARS-CoV-2 RNA in the breast milk of the mother were negative between February 2 to February 4.	In line with previous studies, breastmilk samples from a mother with SARS-CoV-2 infection tested negative.	Cui, Y, Tian M, Huang D et al. A 55-Day-Old Female Infant infected with COVID 19: presenting with pneumonia, liver injury, and heart damage, The Journal of Infectious Diseases, 17 March 2020, jiaa113, <a href="https://doi.org/10.1093/infdis/jiaa113">https://doi.org/10.1093/infdis/jiaa113</a>
Pregnancy, neonatal infection, vertical transmission, placenta sample, China	17-Mar-20	<a href="#">An Analysis of 38 Pregnant Women With COVID-19, Their Newborn Infants, and Maternal-Fetal Transmission of</a>	Archives of Pathology & Laboratory Medicine	Review	This article reviews the effects of previous SARS and MERS infections on pregnancy outcomes and analyzes literature describing 38 pregnant women with COVID-19 and their newborns in China (from 5 different published studies). Unlike infections caused by SARS and MERS, COVID-19 did not lead to maternal deaths in these women. Similar to pregnancies with SARS and MERS, there were no confirmed cases of intrauterine transmission of SARS-CoV-2. All neonatal	Pregnant women with SARS or MERS experienced worse clinical outcomes, including maternal death, compared to COVID-19. However, maternal-fetal	Schwartz DA. An Analysis of 38 Pregnant Women with COVID-19, Their Newborn Infants, and Maternal-Fetal Transmission of SARS-CoV-2: Maternal Coronavirus Infections and Pregnancy Outcomes [published online, 2020 Mar 17]. Arch

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		<a href="#">SARS-CoV-2: Maternal Coronavirus Infections and Pregnancy Outcomes</a>			specimens tested, including placentas in some cases, were negative by RT-PCR.	transmission has not been shown to occur with infection of these 3 pathogenic coronaviruses.	Pathol Lab Med. 2020. doi:10.5858/arpa.2020-0901-SA
Pregnancy, preterm delivery, neonatal death, literature review	17-Mar-20	<a href="#">Coronavirus in Pregnancy and Delivery: Rapid Review</a>	Ultrasound Obstetrics & Gynecology	Review	Searches conducted in PubMed and MedRxiv identified 23 relevant case reports/series, describing 32 women affected by COVID-19 in pregnancy. 7 (22%) were asymptomatic, and 2 (6%) were admitted to the ICU with severe morbidity. Preterm delivery affected 47% of women hospitalized with COVID-19. There was one stillbirth and one neonatal death.	The Royal College of Obstetricians and Gynecologists recommends against routine separation of affected mothers and their infants.	Mullins E, Evans D, Viner RM, O'Brien P, Morris E. Coronavirus in pregnancy and delivery: rapid review [published online, 2020 Mar 17]. Ultrasound Obstet Gynecol. 2020. doi:10.1002/uog.22014
SARS-CoV-2, COVID-19, epidemiology, children, adolescents, China	16-Mar-20	<a href="#">Epidemiology of COVID-19 Among Children in China</a>	Pediatrics	Article	To identify the epidemiological characteristics and transmission patterns of SARS-CoV-2 in children, the authors conducted a retrospective study of 2135 pediatric patients (<18 years old) in China with laboratory-confirmed and suspected SARS-CoV-2 infection from January 16 - February 8, 2020. The epidemic curves were constructed by key dates of disease onset and case diagnosis. There were 728 (34.1%) laboratory-confirmed cases and 1407 (65.9%) suspected cases. The median age of patients was 7 years (IQR: 2-13 years), and 1208 case patients (56.6%) were boys. Over 90% of all patients had asymptomatic, mild, or moderate cases. The median time from illness onset to diagnoses was 2 days (range: 0-42 days). The proportions of severe and critical cases were 10.6%, 7.3%, 4.2%, 4.1%, and 3.0% for the age groups <1, 1-5, 6-10, 11-15, and ≥16 years, respectively. There was a rapid increase of disease at the early stage of the epidemic, followed by a gradual and steady decrease. The disease rapidly spread from Hubei province to surrounding provinces over time. More children were infected in Hubei province than any other province. Although clinical manifestations of children's COVID-19 cases were generally less severe than those of adult patients, young children, particularly infants, were vulnerable to infection.	This retrospective study reported the epidemiological characteristics of 2135 pediatric patients (<18 years old) with suspected or confirmed SARS-CoV-2 infection in China between January 16 - February 8, 2020. Although clinical manifestations of children's COVID-19 cases were generally less severe than those of adult patients, young children, particularly infants, were vulnerable to infection. The distribution of children's COVID-19 cases varied with time and space, with most cases concentrated in Hubei province and surrounding areas.	Dong Y, Mo X, Hu Y, et al. Epidemiology of COVID-19 Among Children in China. Pediatrics. 2020 Jun;145(6):e20200702. doi: 10.1542/peds.2020-0702. Epub 2020 Mar 16. PMID: 32179660.
Children, clinical characteristics, China	16-Mar-20	<a href="#">Clinical Characteristics of 34 Children with Coronavirus Disease-2019 in the West of China: a</a>	medRxiv	Case Series	This retrospective, observational study was performed at 4 hospitals in western China. Thirty-four pediatric patients (aged 1 to 144 months, median: 33 months, IQR: 10-94.25) with COVID-19 were included from January 1 to February 25, 2020. The final follow-up visit was completed by February 28, 2020. Among 34 pediatric patients, 14 males (41.18%) were included. The median incubation period was 10.50 (7.75 - 25.25) days. Infections of other respiratory pathogens were reported in 16 patients (47.1%). The most common initial	This case series reports the clinical and imaging features of 34 pediatric patients with COVID-19 from western China.	Zhang C, Gu J, Chen Q, et al. Clinical Characteristics of 34 Children with Coronavirus Disease-2019 in the West of China: a Multiple-center Case Series. doi:10.1101/2020.03.12.20034686



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		<a href="#">Multiple-center Case Series</a>			symptoms were fever (76.5%), cough (58.8%), and expectoration (20.7%). Vomiting (11.8%) and diarrhea (11.8%) were also reported in a considerable portion of cases. A remarkable increase was detected in serum amyloid A for 17 patients (85.0%) and high-sensitivity C-reactive protein for 17 patients (58.6%), while a decrease of prealbumin was noticed in 25 patients (78.1%). In addition, levels of lactate dehydrogenase were increased significantly in 28 patients (82.4%), as well as $\alpha$ -hydroxybutyrate dehydrogenase in 25 patients (73.5%). Patchy lesions in lobules were detected by chest computed tomographic scans in 28 patients (82.4%). The typical feature of ground-glass opacity for adults was rare in pediatric patients (2.9%). A late-onset pattern of lesions in lobules were also noticed. Stratified analysis of the clinical features was not performed due to relatively limited samples.		
Pediatrics, family cluster, China	16-Mar-20	<a href="#">Clinical Features of Pediatric Patients With COVID-19: A Report of Two Family Cluster Cases</a>	World Journal of Pediatrics	Brief Report	This report presents a retrospective review of two confirmed pediatric cases from two family clusters. The children presented with mild respiratory or gastrointestinal symptoms. Both had normal chest CT images. After general and symptomatic treatments, both children recovered quickly. Both families had travel histories to Hubei Province.	Pediatric infection with COVID-19 is mostly due to family clusters or close contact history. Infected children have relatively milder clinical symptoms than infected adults.	Ji LN, Chao S, Wang YJ, et al. Clinical features of pediatric patients with COVID-19: a report of two family cluster cases [published online, 2020 Mar 16]. World J Pediatr. 2020. doi:10.1007/s12519-020-00356-2
Pregnancy, neonatal infection, formula feeding, vertical transmission, China	16-Mar-20	<a href="#">Infants Born to Mothers With a New Coronavirus (COVID-19).</a>	Frontiers in Pediatrics	Case Report Article	This case report describes the birth of four full-term infants born to pregnant women with laboratory-confirmed COVID-19 in Wuhan, Hubei province, China. Of three infants with test results, none tested positive for the virus. None developed serious clinical symptoms. Two infants had rashes of unknown etiology at birth, and one had facial ulcerations. One infant had tachypnea and was supported by non-invasive mechanical ventilation for 3 days. One had rashes at birth but was discharged without parental consent for a diagnostic test. All four infants are doing well and have been formula feeding since birth.	Consistent with growing literature, there is no evidence of vertical transmission. Placenta, amniotic fluid, neonatal blood, gastric fluid, and anal swabs tested negative for viral RNA.	Chen Y, Peng H, Wang L, Zhao Y, Zeng L, Gao H and Liu Y. Infants Born to Mothers With a New Coronavirus (COVID-19). 2020. Front. Pediatr. 8:104. doi: 10.3389/fped.2020.00104
Pediatrics, epidemiology, China	16-Mar-20	<a href="#">Epidemiological Characteristics of 2143 Pediatric Patients With 2019 Coronavirus Disease in China</a>	Pediatrics	Original Article	This study retrospectively analyzed the epidemiological characteristics and transmission patterns of 2143 pediatric patients with COVID-19, reported to the Chinese Center for Disease Control and Prevention from January 16 to February 8, 2020. Approximately 34% were laboratory-confirmed cases, and 66% were suspected cases. Children at all ages were susceptible to COVID-19, but no significant gender difference was found. Over 90% of patients were asymptomatic, mild, or moderate cases. It is speculated that the maturity and function, i.e. binding ability, of the ACE2 receptor in children may be lower than that in adults. Infants were at the highest risk of severe disease (10.6%), compared with older children (4.1% for those aged 11 to 15 years; 3.0% in those 16 years and older).	This is the first retrospective study on the epidemiological characteristics of children with COVID-19 in China. There were more severe and critical cases in the suspected than confirmed group; whether suspected cases were caused by 2019-nCoV or other pathogens remains to be determined.	Dong Y, Mo X, Hu Y, Qi X, Jiang F, Jiang Z, et al. Epidemiological Characteristics of 2143 Pediatric Patients With 2019 Coronavirus Disease in China. Pediatrics. 2020. doi:10.1542/peds.2020-0702
Pediatrics, clinical	16-Mar-20	<a href="#">COVID-19 in Children: Initial</a>	Pediatrics	Commentary	This commentary reviews the findings of Dong et al. from the same issue of <i>Pediatrics</i> . There are subpopulations of children with an	This article reviews current understanding	Cruz AT, Zeichner, SL. COVID-19 in Children: Initial

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characteristics, virologic testing, viral shedding, community-based transmission		<a href="#">Characterization of the Pediatric Disease.</a>			increased risk for more significant illness, related to factors of younger age, underlying pulmonary pathology, and immunocompromising conditions. Testing for other viruses in the study by Dong et al. was not standardized, and not all COVID-19 cases were virologically confirmed. Children may play a major role in community-based viral transmission, based on evidence that children may have more upper, rather than lower, respiratory tract involvement, as well as prolonged viral shedding in stool and nasal secretions.	of epidemiological, virological, and clinical characteristics of disease in children. Authors note that virological testing in the Dong et al. study was not standardized.	Characterization of the Pediatric Disease [published online, 2020 Mar 16]. <i>Pediatrics</i> . 2020. doi:10.1542/peds.2020-0834
Children, age specificity, domestically acquired infection, attack rate, Japan	13-Mar-20	<a href="#">Age specificity of cases and attack rate of novel coronavirus disease (COVID-19)</a>	medRxiv	Report	Age distribution of the cases with COVID-19 is rather different from that of influenza. As of March 7, 2020, a total of 313 domestically acquired cases have been confirmed by positive RT-PCR results in Japan. Of 173 male domestically acquired cases, seven were aged 0-19 years. Of 121 female cases, three were aged 0-19 years. Attack rate estimates were 7.2% and 3.8%, respectively, among male and female children (aged 0-19 years). In contrast, peak attack rates, 22.2% for males and 21.9% for females, were observed in patients aged 50-59 years. This age distribution of COVID-19 cases in Japan revealed that the risk of disease given exposure among children appears to be low. Both the overall and conditional risk of disease given exposure are likely to be the highest among adults aged from 50-69 years.	This report of domestically acquired cases of COVID-19 in Japan revealed that children (0-19 years old) experience low risk of disease.	Mizumoto K, Omori R, Nishiura H. Age specificity of cases and attack rate of novel coronavirus disease (COVID-19). doi:10.1101/2020.03.09.20033142
Children, fecal viral shedding, convalescent phase, China	13-Mar-20	<a href="#">Prolonged presence of SARS-CoV-2 in feces of pediatric patients during the convalescent phase.</a>	medRxiv	Case Report	From January 17 to March 6, 2020, three pediatric cases of COVID-19 were reported in Qingdao, Shandong Province, China. Real-time fluorescence RT-PCR was performed to detect SARS-CoV-2 RNA in throat swabs and fecal specimens. All three pediatric cases were household contacts of adults whose symptoms developed earlier. There has been no evidence showing the virus was transmitted from the children to others. Severity of disease of these children was mild to moderate, and fever was the most consistent and predominant symptom at onset of illness. All children showed increased lymphocytes with normal white blood cell counts on admission. One child had elevated serum levels of procalcitonin and C-reaction protein. Radiological changes were not typical for COVID-19. All children showed good response to supportive treatment. Clearance of SARS-CoV-2 in respiratory tract samples occurred within two weeks after abatement of fever, whereas persistent presence of viral RNA was found in stools of all children. In one child, fecal samples turned negative 8 days after throat swabs turned negative, while fecal samples of another child lagged behind for 20 days. At the time of writing, one child still had positive results for RT-PCR analysis in stools after negative conversion of viral RNA in respiratory samples (over 19 days behind).	Prolonged shedding of SARS-CoV-2 viral RNA in stools of three infected children in this report indicates the potential for viral transmission through fecal excretion.	Xing Y, Ni W, Wu Q, et al. Prolonged presence of SARS-CoV-2 in feces of pediatric patients during the convalescent phase. doi:10.1101/2020.03.11.20033159

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Children, fecal viral shedding, stool samples, China	13-Mar-20	<a href="#">Characteristics of pediatric SARS-CoV-2 infection and potential evidence for persistent fecal viral shedding.</a>	Nature Medicine	Brief Communication	This single-center, prospective, observational study reports epidemiological and clinical data on 10 pediatric, RT-PCR confirmed SARS-CoV-2 infection cases at Guangzhou Women and Children's Medical Center. Symptoms were nonspecific, and no children required respiratory support or intensive care. Chest X-rays lacked definite signs of pneumonia, a defining feature of the infection in adult cases. Notably, eight children persistently tested positive on rectal swabs even after nasopharyngeal testing was negative, raising the possibility of fecal-oral transmission that lasts longer and carries greater viral load than viral shedding from the respiratory tract.	Similar to other studies, shedding of viral nucleic acid in stool samples of children lasted longer than viral shedding detected in nasopharyngeal testing.	Xu, Y., Li, X., Zhu, B. et al. Characteristics of pediatric SARS-CoV-2 infection and potential evidence for persistent fecal viral shedding. Nat Med. 2020. <a href="https://doi.org/10.1038/s41591-020-0817-4">https://doi.org/10.1038/s41591-020-0817-4</a>
Pregnancy, neonates, infection control	13-Mar-20	<a href="#">What are the risks of COVID-19 infection in pregnant women?</a>	The Lancet	Review	This article reviews a small number of published cases that have analyzed COVID-19 in pregnant women and neonates, discussing expert recommendations for infection control among confirmed cases.	This article re-states the findings from other case studies on COVID-19 in pregnant women and neonates.	Qiao J. What are the risks of COVID-19 infection in pregnant women?. Lancet. 2020;395(10226):760–762. doi:10.1016/S0140-6736(20)30365-2
Neonatal infection	12-Mar-20	<a href="#">A case report of neonatal COVID-19 infection in China.</a>	Clinical Infectious Diseases	Brief Report	A neonate tested positive for COVID-19 infection by RT-PCR assay, using pharyngeal samples, 36 hours after delivery via emergency cesarean section. The mother was wearing an N95 mask throughout the operation, and the infant had no contact with the mother after birth. Breastfeeding was discouraged, while emptying her breasts of milk was encouraged to avoid mastitis. The mother's breast milk sample, which was collected 36 hours after birth, tested negative for the virus.	In line with previous studies, there was no concrete evidence of vertical transmission, and the breast milk samples from a mother with confirmed COVID-19 tested negative.	Wang, S., Guo, L., Chen, L., Liu, W., Cao, Y., Zhang, J., & Feng, L. (2020). A case report of neonatal COVID-19 infection in China. Clinical Infectious Diseases, 12 March 2020, ciaa225, <a href="https://doi.org/10.1093/cid/ciaa225">https://doi.org/10.1093/cid/ciaa225</a>
Children, chest CT, ground-glass opacities, China	11-Mar-20	<a href="#">Chest computed tomography in children with COVID-19 respiratory infection</a>	Pediatric Radiology	Original Article	Five children were identified with positive RT-PCR results for COVID-19, at a large tertiary-care hospital in China, during the period from January 28, 2019 to February 8, 2020. Ages ranged from 10 months to 6 years of age (mean 3.4 years). All had at least one CT scan after admission. Three children had CT abnormalities on their first CT scan (at 2 days, 4 days and 9 days, respectively, after onset of symptoms) in the form of patchy ground-glass opacities; all normalized during treatment.	Similar but more modest lung abnormalities on CT were found in this small cohort of children with COVID-19, compared to adults with COVID-19 reported in the literature.	Li W, Cui H, Li K, Fang Y, Li S. Chest computed tomography in children with COVID-19 respiratory infection [published online, 2020 Mar 11]. Pediatr Radiol. 2020. doi:10.1007/s00247-020-04656-7
Vertical transmission, pregnancy	11-Mar-20	<a href="#">Lack of maternal-fetal SARS-CoV-2 transmission</a>	Nature Medicine	Research Highlight	The risk of vertical transmission to unborn children is unknown. Chen et al. (Lancet) found that clinical symptoms of 9 pregnant women with lab-confirmed COVID-19 were similar to those of non-pregnant adults. Findings need to be confirmed in a larger study.	This review highlights findings from the Chen et al. study in The Lancet.	Stower H. Lack of maternal-fetal SARS-CoV-2 transmission. Nat Med. 2020;26(3):312. doi:10.1038/s41591-020-0810-y
Pediatrics, outpatient clinic, emergency department, screening, China	10-Mar-20	<a href="#">A Quickly, Effectively Screening Process of Novel Corona Virus Disease 2019 (COVID-19) in</a>	Annals of Translational Medicine	Original Article	The Children's Hospital of Fudan University developed a procedure for the identification of pediatric cases of COVID-19. Between January 19 and February 8, 2020, 45,889 pediatric patients visited the outpatient clinic and emergency department. Of these, 18,432 patients presented with symptoms of fever or respiratory infection. 124 patients were identified with significant epidemiology. 56 cases were classified as suspected COVID-19, and 10 cases (7 months – 11 years) were confirmed by positive nucleic acid test. 6 cases had mild	The Children's Hospital of Fudan University in Shanghai, China developed a successful screening procedure for the identification of pediatric cases of COVID-19 in their	Shi Y, Wang X, Liu G, et al. A quickly, effectively screening process of novel corona virus disease 2019 (COVID-19) in children in Shanghai, China. Ann Transl Med. 2020;8(5):241. doi:10.21037/atm.2020.03.22

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		<a href="#">Children in Shanghai, China</a>			pneumonia, and 4 cases had upper respiratory tract infection. The sensitivity of this method is 100%; the specificity is 71.3%.	outpatient clinic and emergency department.	
Neonatology, infants, children, clinical characteristics	10-Mar-20	<a href="#">Clinical characteristics of novel coronavirus disease 2019 (COVID-19) in newborns, infants and children</a>	Pediatric Neonatology	Perspectives	Pediatric cases are mainly family cluster cases, and most of them have epidemiological links to adult patients. Pediatric clinical manifestations are atypical and present relatively milder, compared to adult patients.	Authors review current understanding of epidemiological, clinical characteristics of SARS-CoV-2 infection in children, infants, and newborns.	Hong H, Wang Y, Chung HT, Chen CJ. Clinical characteristics of novel coronavirus disease 2019 (COVID-19) in newborns, infants and children [published online 2020 Mar 10]. <i>Pediatr Neonatol</i> . 2020. doi:10.1016/j.pedneo.2020.03.001
Child, family cluster, pre-symptomatic transmission, China	9-Mar-20	<a href="#">Potential Presymptomatic Transmission of SARS-CoV-2, Zhejiang Province, China, 2020</a>	Emerging Infectious Diseases	Research Letter	In January 2020, authors investigated a 2-family cluster of persons infected with RT-PCR confirmed SARS-CoV-2, in the city of Zhoushan in Zhejiang Province, China. The infections were attributed to contact between two individuals and an infected but potentially pre-symptomatic traveler from the city of Wuhan in Hubei Province. These two individuals transmitted SARS-CoV-2 infections to three family members, including an asymptomatic 12-year-old male.	This report describes a cluster of SARS-CoV-2 infection, comprised of two families, including an asymptomatic 12-year-old male.	Tong Z, Tang A, Li K, et al. Potential Presymptomatic Transmission of SARS-CoV-2, Zhejiang Province, China, 2020. <i>Emerging Infectious Diseases</i> . 2020;26(5):1052-1054. doi:10.3201/eid2605.200198.
Asymptomatic child, stool sample, fecal viral shedding, China	9-Mar-20	<a href="#">Detection of Novel Coronavirus by RT-PCR in Stool Specimen from Asymptomatic Child, China.</a>	Emerging Infectious Diseases	Research Letter	Authors report an asymptomatic child who was positive for 2019 novel coronavirus by RT-PCR in a stool specimen 17 days after the last virus exposure. The child was virus positive in stool specimens for at least an additional 9 days. Respiratory tract specimens were negative by RT-PCR.	An asymptomatic child displayed prolonged shedding of viral nucleic acid (17 days after exposure) in stool samples.	Tang A, Tong ZD, Wang HL, et al. Detection of Novel Coronavirus by RT-PCR in Stool Specimen from Asymptomatic Child, China [published online, 2020 Jun 17]. <i>Emerg Infect Dis</i> . 2020;26(6). doi:10.3201/eid2606.200301
Breastfeeding, remdesivir, antiviral therapy, influenza, Ebola	9-Mar-20	<a href="#">Breastfeeding and Respiratory Antivirals: Coronavirus and Influenza.</a>	Lactation Medicine	Commentary	Remdesivir shows promising activity against COVID-19. Nothing is known about the passage of remdesivir into breast milk, but one infant with Ebola was treated with IV remdesivir following treatment with the monoclonal antibody ZMapp and a buffy coat transfusion from an Ebola survivor. The infant experienced no adverse effects and was virus free on day 20 of life.	Little is known about the passage of antivirals (including those suggested to treat COVID-19) into breastmilk.	Anderson, P. O. Breastfeeding and Respiratory Antivirals: Coronavirus and Influenza. <i>Breastfeeding Medicine</i> . 2020. doi:10.1089/bfm.2020.29149.poa
Pregnancy, neonatal infection, China	8-Mar-20	<a href="#">Analysis of the Pregnancy Outcomes in Pregnant Women With COVID-19 in Hubei Province</a>	Chinese Journal of Obstetrics & Gynecology	Original Research	This study presents retrospective comparison of pregnancy outcomes between 16 women with COVID-19 and 45 women without COVID-19. There were no significant differences in fetal distress, meconium-stained amniotic fluid, preterm birth, neonatal asphyxia, intraoperative blood loss, and birth weight of newborns between the two groups. The 2019-nCoV nucleic acid test was negative for all 10 cases of neonates delivered by pregnant women with COVID-19.	2019-nCoV infection was not found in neonates delivered by pregnant women with COVID-19.	Zhang L, Jiang Y, Wei M, et al. [Analysis of the Pregnancy Outcomes in Pregnant Women With COVID-19 in Hubei Province.] <i>Zhonghua Fu Chan Ke Za Zhi</i> . 2020;55(0):E009. doi:10.3760/cma.j.cn112141-20200218-00111
Neonatal infection, respiratory failure, NICU management, resource use	6-Mar-20	<a href="#">Managing Neonates With Respiratory Failure Due to SARS-CoV-2</a>	The Lancet Child & Adolescent Health	Correspondence	This article criticizes a plan set forth by Wang et al. to manage neonates with SARS-CoV-2 in NICUs. 1) Tests should be performed for infants from families infected by or exposed to SARS-CoV-2, rather than all NICU admitted neonates, to avoid wasteful use of resources. 2) Isolation and monitoring of infants do not necessarily require NICU admission. 3) There is no evidence-based data for surfactant, inhaled NO, various ventilation methods, and extracorporeal life support for	This commentary replies to Wang et al. who discussed contingency plans for managing COVID-19 in NICUs in a recent publication.	De Luca D. Managing neonates with respiratory failure due to SARS-CoV-2. <i>Lancet Child Adolesc Health</i> . 2020;4(4):e8. doi:10.1016/S2352-4642(20)30073-0

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					every patient. 4) Antiviral drugs can be considered as compassionate treatment. 5) Steroid therapy could be considered for refractory respiratory failure.		
Children, procalcitonin, chest CT, age-related difference, China	5-Mar-20	<a href="#">Clinical and CT features in pediatric patients with COVID-19 infection: Different points from adults</a>	Pediatric Pulmonology	Original Article	The clinical, laboratory, and chest CT features of 20 pediatric inpatients with COVID-19 infection, confirmed by pharyngeal swab nucleic acid test, were retrospectively analyzed between January 23 and February 8, 2020. Thirteen pediatric patients (65%) had an identified history of close contact with COVID-19 diagnosed family members. Fever (12/20, 60%) and cough (13/20, 65%) were the most common symptoms. For laboratory findings, procalcitonin elevation (16/20, 80%), which is not common in adults, was noted. Co-infection (8/20, 40%) is common in pediatric patients. A total of 6 patients presented with unilateral pulmonary lesions (30%), 10 with bilateral pulmonary lesions (50%), and 4 cases showed no abnormality on chest CT (20%). Consolidation with surrounding halo sign was observed in 10 patients (50%), ground-glass opacities were observed in 12 patients (60%), fine mesh shadow was observed in 4 patients (20%), and tiny nodules were observed in 3 patients (15%).	Procalcitonin elevation and consolidation with surrounding halo signs on chest CT are not common in adults with COVID-19 but were common in pediatric patients with COVID-19 in this study.	Xia W, Shao J, Guo Y, Peng X, Li Z, Hu D. Clinical and CT features in pediatric patients with COVID-19 infection: Different points from adults [published online, 2020 Mar 5]. <i>Pediatr Pulmonol.</i> 2020. doi:10.1002/ppul.24718
Vertical transmission, pregnancy, breastmilk sample, placenta sample, China	5-Mar-20	<a href="#">Lack of vertical transmission of severe acute respiratory syndrome coronavirus 2, China.</a>	Emerging Infectious Diseases	Research Letter	A 30-year-old pregnant woman, confirmed positive for SARS-CoV-2 infection, delivered an infant by cesarean section at 35 weeks' gestation, in a negative-pressure operating room. An oropharyngeal swab specimen, obtained immediately after the infant was taken from the uterus, indicated that the infant was negative for SARS-CoV-2, and was sent to the negative-pressure ward. On the delivery day, although the woman's sputum was positive, serum, urine, feces, amniotic fluid, umbilical cord blood and placenta, and breast milk samples were negative.	Sputum samples from a woman with confirmed COVID-19 tested positive following delivery, while amniotic fluid, umbilical cord blood, placenta, and breast milk samples tested negative.	Li Y, Zhao R, Zheng S, Chen X, Wang J, Sheng X, et al. Lack of vertical transmission of severe acute respiratory syndrome coronavirus 2, China. <i>Emerging infectious diseases</i> , 26(6). 5 March 2020. <a href="https://doi.org/10.3201/eid2606.200287">https://doi.org/10.3201/eid2606.200287</a>
Pregnancy, neonatal infection	5-Mar-20	<a href="#">Novel coronavirus infection and pregnancy.</a>	Ultrasound in Obstetrics & Gynecology	Opinion	This paper discusses the current guidelines in China that recommend newborn separation from their infected mothers for at least 14 days following birth. These restrictions make direct breastfeeding unfeasible; however, the mothers are advised to express their breastmilk in order to maintain milk production. Once they test negative for COVID-19, they should be encouraged to breastfeed their infant.	As noted in other protocols from China, breastfeeding is discouraged while breastmilk expression is encouraged in order to maintain milk production.	Yang, H., Wang, C., & Poon, L. C. (2020). Novel coronavirus infection and pregnancy. <i>Ultrasound in Obstetrics &amp; Gynecology</i> . 5 March 2020. <a href="https://doi.org/10.1002/uog.22006">https://doi.org/10.1002/uog.22006</a>
Pregnancy, WHO, CDC, expert guidance, China	5-Mar-20	<a href="#">Novel coronavirus disease (COVID-19) in pregnancy: What clinical recommendations to follow?</a>	Acta Obstetrica et Gynecologica Scandinavica	Special Editorial	This editorial presents a set of recommendations based on WHO, CDC, and expert Chinese guidance, with regard to prevention, diagnosis, management, timing and mode of delivery, and care of infants born to mothers with COVID-19. Limited data suggests that transplacental transmission is unlikely in late pregnancy, but infection can occur in neonates via close contact. Early cord clamping and temporary separation of the newborn for at least 2 weeks is recommended. During this period, direct breast feeding is not recommended, but a mother can pump her breast milk, which can be used to feed the neonate by a healthy caregiver.	The guidelines in this editorial fall in line with previously stated Chinese guidance on breastfeeding but contradict the WHO's recommendations to allow mothers with COVID-19 to choose to continue to breastfeed.	Liang H, Acharya G. Novel coronavirus disease (COVID-19) in pregnancy: What clinical recommendations to follow? <i>Acta Obstet Gynecol Scand.</i> 2020;99(4):439–442. doi:10.1111/aogs.13836

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Pregnancy, neonates, clinical characteristics, emergency cesarean section, preterm labor, vertical transmission, China	4-Mar-20	<a href="#">Clinical manifestations and outcome of SARS-CoV-2 infection during pregnancy</a>	Journal of Infection	Letter to Editor	Given the maternal physiologic and immune function changes in pregnancy, pregnant individuals might face greater risk of getting infected by SARS-CoV-2 and might have more complicated clinical events. This letter identified 13 hospitalized pregnant patients with laboratory-confirmed SARS-CoV-2 infection between December 8, 2019 and February 25, 2020 officially reported by the central government, in areas outside Wuhan, China. Two women were less than 28 weeks of gestation and the other 11 patients were in their third trimesters at presentation. None of the patients had an underlying medical disease. Three of the patients (23%) improved after hospitalization and were discharged with an uncomplicated ongoing pregnancy. The other 10 patients (77%) underwent cesarean section. Five of the 10 patients delivered by emergency cesarean section due to pregnancy complications including fetal distress (3/10), premature rupture of the membrane (1/10) and stillbirth (1/10). The stillbirth occurred in a patient who developed severe pneumonia requiring ICU care with multiple organ dysfunction syndrome in the third trimester. Six patients (46%) had preterm labor between 32- 36 weeks of gestation. Nine newborn infants received a 1-minute Apgar score of 10. There was no clinical or serologic evidence suggestive of vertical transmission of SARS-CoV-2.	Perinatal complications, including preterm labor and emergency cesarean section, were noted in this study of 13 hospitalized pregnant women with COVID-19 in China. Of nine live births, there was no clinical or serological evidence of SARS-CoV-2 infection in the neonates.	Liu Y, Chen H, Tang K, Guo Y. Clinical manifestations and outcome of SARS-CoV-2 infection during pregnancy [published online, 2020 Mar 4]. J Infect. 2020;. doi:10.1016/j.jinf.2020.02.028
Neonates, prevention, infection control, breastfeeding	4-Mar-20	<a href="#">Proposal for prevention and control of the 2019 novel coronavirus disease in newborn infants</a>	Archives of Disease in Childhood - Fetal and Neonatal Edition	Letter	This article outlines recommendations regarding newborns: Infants with highly suspected or confirmed COVID-19 should be referred to the designated neonatal ward. All medical staff involved should wear protective equipment. The neonatal department should be strictly stratified into transitional, quarantine, living and work areas. Infants with suspected infections should be isolated in a single room, while confirmed patients should be moved into separate rooms. After admission, avoiding breastfeeding from COVID-19 mother until recovery should be adequately performed.	Recommendations outlined in this letter discourage breastfeeding until after recovery.	Li F, Feng ZC, Shi Y. Proposal for prevention and control of the 2019 novel coronavirus disease in newborn infants Archives of Disease in Childhood - Fetal and Neonatal Edition Published Online First: 04 March 2020. doi: 10.1136/archdischild-2020-318996
Children, clinical characteristics, China	3-Mar-20	<a href="#">Coronavirus Disease-19 Among Children outside Wuhan, China</a>	The Lancet Child & Adolescent Health	Original Research	Authors prospectively followed 31 confirmed cases (<18 years) with SARS-CoV-2 infection in Shenzhen Third People's Hospital between January 16, 2020, and February 19, 2020. All 31 cases were confirmed as having SARS-CoV-2 in upper respiratory tract specimens by real-time RT-PCR. None of the cases had Hunan seafood market exposure. 29 (93.5%) children belong to family clusters. 12 (38.7%) children had no symptoms. Fever was observed in 14 (45.2%) children, with a duration of 1–9 days (median:2 [IQR 1-3]). 13 (41.9%) cases had cough. Lymphocytes above the normal range were seen in 17 children. 12 (38.7%) children exhibited elevated lactate dehydrogenase levels. Increased erythrocyte sedimentation rate was seen in 10 (32.3%) patients. Chest CT images were normal in 20 (64.5%) cases. 8 (25.8%) patients showed unilateral pneumonia, and 1 patient showed progress for bilateral pneumonia (Table 4.). 3 (9.7%) patients had bilateral pneumonia. 23 (74.2%) children had been discharged, at the time of this study.	This prospective cohort of 31 confirmed cases of SARS-CoV-2 infection in children <18 years found a milder clinical course of disease, compared to adults.	Chen, Chuming and Cao, Mengli and Peng, Ling and Guo, Xiaoyan and Yang, Fangji and Wu, Weibo and Chen, Li and Yang, Yang and Yingxia, Liu and Wang, Fuxiang, Coronavirus Disease-19 Among Children Outside Wuhan, China (2/25/2020). doi:10.2139/ssrn.3546071

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Pregnancy, viral shedding, breastfeeding	3-Mar-20	<a href="#">Guidelines for pregnant women with suspected SARS-CoV-2 infection.</a>	The Lancet Infectious Diseases	Correspondence	This guideline points out that newborns of mothers confirmed positive for SARS-CoV-2 should be isolated for at least 14 days or until viral shedding clears, during which time direct breastfeeding is not recommended.	Authors do not recommend direct breastfeeding for newborns of mothers confirmed positive for SARS-CoV-2.	Favre, G., Pomar, L., Qi, X., Nielsen-Saines, K., Musso, D., & Baud, D. (2020). Guidelines for pregnant women with suspected SARS-CoV-2 infection. The Lancet Infectious Diseases. 03 March 2020. <a href="https://doi.org/10.1016/S1473-3099(20)30157-2">https://doi.org/10.1016/S1473-3099(20)30157-2</a>
Neonatology, newborns, children vertical transmission, pediatric treatment	2-Mar-20	<a href="#">Coronavirus disease (COVID-19) and neonate: What neonatologist need to know.</a>	Journal of Medical Virology	Review	Three neonates and more than 230 children with COVID-19 are reported. Children presented with mild conditions. There is currently no evidence that SARS-CoV-2 can be transmitted trans-placentally from mother to the newborn. The treatment strategy for children with COVID-19 is based on adult experience. Thus far, no deaths have been reported in the pediatric age group.	This review describes the current understanding of COVID-19 infection in newborns and children, as well as treatment strategies based on adult experience.	Lu Q, Shi Y. Coronavirus disease (COVID-19) and neonate: What neonatologist need to know [published online, 2020 Mar 1]. J Med Virol. 2020. doi:10.1002/jmv.25740