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# MIDIRS Search Pack

## PN193 - Coronavirus (COVID-19) in the infant

[Last updated 26 June 2020]

### 20200626-44\*

**Health Visitors: Coronavirus [written answer].** House of Commons, (2020). Hansard , Written question 58040, 10 June 2020.

Jo Churchill responds to a written question from Catherine West to the Secretary of State for Health and Social Care, regarding whether he plans to make an assessment of the effect of the redeployment of health visitors on the wellbeing of babies and families during the covid-19 outbreak. (JSM) (Parliamentary question)

**Available from:** <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2020-06-10/58040/>

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### 20200624-71\*

**Child care: COVID-19 [written answer].** Northern Ireland Assembly, (2020). Hansard , Written question AQW 4364/17-22, 29 May 2020.

The Minister of Health responds to a written question from Paul Frew, asking for clarity on the two key worker family limit on childminders; and when it will be lifted. (JSM) (Parliamentary question)

**Available from:**

<https://www.niassembly.gov.uk/questions/searchresults.aspx?&qf=0&asb=37&tbm=0&anb=9&abp=0&sp=1&qfv=1&asbv=269&tbmv=1&anbv=82&abpv=0&spv=22&ss=CmXa3F4vZ5cobw+je3HkMw==&per=1&fd=&td=&pm=0&asbt=Frew,%20Paul&anbt=the%20Minister%20of%20Health&abpt=All%20Parties&spt=2019-2020>

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### 20200624-4\*

**Delayed umbilical cord clamping and breastfeeding after childbirth in mothers affected by COVID 19: Recommended or not?.** Kohan S; Rahnamaei FA, (2020). European Journal of Obstetrics & Gynecology and Reproductive Biology , 28 May 2020, online.

Short correspondence piece on early cord clamping, isolation of the newborn, lack of skin-to-skin contact and infant feeding practices to reduce the risk of COVID-19 infection in neonates. (LDO) (Correspondence)

**Available from:** [https://www.ejog.org/article/S0301-2115\(20\)30324-9/fulltext](https://www.ejog.org/article/S0301-2115(20)30324-9/fulltext)

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### 20200623-35\*

**Coronavirus: Newborn Mexican triplets test positive in 'unprecedented' case.** Anon, (2020). BBC News , 23 June 2020.

Newborn triplets in Mexico have tested positive for coronavirus in an 'unprecedented' case, according to local health authorities. (Author, edited) (News item)

**Available from:** <https://www.bbc.co.uk/news/world-latin-america-53147483>

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**20200622-29\***

**COVID-19: reflections on childbirth and neonatal care in Italy.** Varsalone FF; Dermyshe E, (2020). *Infant*, vol 16, no 3, May 2020, pp 101-102.

In Italy, the spread of the SARS-CoV-2 infection has hit with an uneven distribution and, fortunately, in the neonatal setting the virus affects fewer patients and with less severity. Nevertheless, the moment of childbirth has turned into a more complex event for healthcare professionals as we have to work with visors, masks and gowns. The continuously increasing number of COVID-19 cases has also given rise to the need for specific protocols to protect pregnant women and newborn babies. (Author) (Overview)

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**20200622-27\***

**Response of UK milk banks to ensure the safety and supply of donor human milk in the COVID-19 pandemic and beyond.** Shenker N; Hughes J; Barnett D; et al, (2020). *Infant*, vol 16, no 3, May 2020, pp 108-121.

The COVID-19 pandemic is presenting several challenges to human milk banks and has highlighted a number of vulnerabilities in service provision that have been long known by those who work in the sector. In recent weeks, milk banks across the UK have worked together to understand any risks posed to infants, milk bank staff and volunteers by COVID-19, and to put in place mitigation strategies to ensure the safeguarded provision and safety of donor human milk. The authors call on policymakers to better support these essential services for vulnerable neonates during the COVID-19 pandemic and minimise the impact of future challenges through greater investment in milk bank infrastructure, research and innovation. (Author) (Overview)

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**20200622-22\***

**COVID-19: the importance of healthcare professionals in protecting human milk and breastfeeding.** Spatz DL, (2020). *Infant*, vol 16, no 3, May 2020, pp 116-117.

It is clear that the world will never be the same since the onset of the COVID-19 pandemic. Our daily routines and the healthcare system will be forever changed. Nonetheless, families will continue to conceive and bring new lives into the world. Now more than ever, families need access to evidence-based lactation care and support. With social distancing there are both opportunities and risks: opportunities to improve breastfeeding outcomes; risks that families may not be able to access much-needed lactation care or lactation technology. (Author) (Editorial)

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**20200622-20\***

**Parents are caregivers not visitors, even during a pandemic.** Anderson J; Lee-Davey C, (2020). *Infant*, vol 16, no 3, May 2020, pp 103-104.

While in most ways, daily life has changed drastically over the last couple of months in response to the unprecedented COVID-19 crisis, some things remain the same. Babies are still being born, and around 300 of them will continue to be admitted to neonatal care every day in the UK. Neonatal services are part of the system-wide response to COVID-19 and have had to make changes to how they operate. But now is not the time to abandon family-centred care on neonatal units – indeed it is more important than ever. (Author) (Editorial)

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**20200622-17\***

**National research to understand and better manage neonatal COVID-19.**

Gale C on behalf of The Neonatal Complications of COVID-19 Surveillance Group, (2020). *Infant*, vol 16, no 3, May 2020, pp 90-91.

The novel coronavirus SARS-CoV-2 was identified in late December 2019 and causes coronavirus disease (COVID-19). This disease has been declared a pandemic by the World Health Organization and is an international public health crisis. So far there is only relatively limited information describing the incidence, clinical course, treatments or outcomes of SARS-CoV-2 infection and COVID-19 in neonates up to 28 days old. (Author) (Editorial)

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**20200622-4\***

**Risks to children during the covid-19 pandemic: some essential epidemiology.** Bhopal SS; Bagaria J; Bhopal R, (2020). *BMJ*, vol 369, no 8250, 10 June 2020, m2290.

Correspondence discussing the risks to children during the covid-19 pandemic. (MB) (Correspondence)

Available from: <https://doi.org/10.1136/bmj.m2290>

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**20200622-3\***

**“Women and children last”—effects of the covid-19 pandemic on reproductive, perinatal, and paediatric health.** von Dadelszen P; Khalil A; Wolfe I; et al, (2020). *BMJ* , vol 369, no 8250, 10 June 2020, m2287.

Correspondence discussing the risks to children during the covid-19 pandemic. (MB) (Correspondence)

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**20200619-37\***

**Critically ill pregnant patient with COVID-19 and neonatal death within two hours of birth.** Li J; Wang Y; Zeng Y; et al, (2020). *International Journal of Gynecology & Obstetrics* , vol 150, no 1, July 2020, pp 126-128.

COVID-19 may lead to a sharp decline in blood oxygen, can cause sudden changes in the fetal intrauterine environment, and could possibly result in neonatal death. (Author) (Original research)

Available from: <https://doi.org/10.1002/ijgo.13189>

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**20200618-59\***

**Novel Coronavirus Infection in Febrile Infants Aged 60 Days and Younger.**

McLaren SH; Dayan PS; Fenster DB; et al, (2020). *Pediatrics* , 11 June 2020, online.

In this case series, we describe the clinical course and outcomes of 7 febrile infants aged  $\leq 60$  days with confirmed SARS-CoV-2 infection. No infant had severe outcomes, including the need for mechanical ventilation or intensive care unit level of care, during hospitalization or at 7-day follow up. Two infants had concurrent urinary tract infections which were treated with antibiotics. While a small sample, our data suggest that febrile infants with SARS-CoV-2 infection often have mild illness. (Author) (Case report)

Available from: <https://doi.org/10.1542/peds.2020-1550>

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**20200617-20\***

**Registration of Births, Deaths, Marriages and Civil Partnerships:**

**Coronavirus [written answer].** House of Lords, (2020). *Hansard* , Written question HL4991, 2 June 2020.

Baroness Williams of Trafford responds to a written question from Baroness Hodgson of Abinger to Her Majesty's Government regarding whether the rule that a baby's birth must be registered within 42 days has been relaxed due to the closure of registry offices to register births caused by COVID-19. (Author) (Parliamentary question)

Available from: <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Lords/2020-06-02/HL4991/>

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**20200617-3\***

**Probable congenital SARS-CoV-2 infection in a neonate born to a woman with active SARS-CoV-2 infection.** Kirtsman M; Diambomba Y; Poutanen SM; et al, (2020). *Canadian Medical Association Journal (CMAJ)* , vol 192, no 24, 15 June 2020, pp E647-E650.

KEY POINTS Neonates born to women with confirmed or suspected severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection should have testing of the nasopharynx, placenta and cord blood as soon as possible after birth, after thorough cleaning of the neonate. Sample timing, collection methods and types of samples should be documented to help differentiate congenital, intrapartum and postpartum acquisition of SARS-CoV-2 infection in neonates. (Author) (Case report)

Available from: <https://doi.org/10.1503/cmaj.200821>

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**20200616-49\***

**Vertical Transmission of SARS-CoV-2: What is the Optimal Definition?**

Blumberg DA; Underwood MA; Hedriana HL; et al, (2020). *American Journal of Perinatology* , 5 June 2020, online.

Izamora et al recently described an interesting report of a neonate born to a mother with severe novel coronavirus 2019 disease (COVID-19) by cesarean section. The infant tested positive for real-time polymerase chain reaction (RT-PCR) for severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) 16 hours after delivery.[1] During the period of limited 5-day follow-up, this baby did not show an increased antibody titer (immunoglobulin [Ig]-M or IgG). Similar positive cases of suspected neonatal SARS-CoV-2 infection during the first 2 postnatal days have been reported.[2] While these patients appear to have acquired infection either by intrauterine or intrapartum transmission, establishment of clear definitions for such transmission is warranted. (Author) (Editorial)

Available from: <https://doi.10.1055/s-0040-1712457>

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**20200616-12\***

**Argentine couple finally meet son born to surrogate mother.** Anon, (2020). BBC News , 11 June 2020.

In Ukraine, efforts are continuing to unite newborn babies born to surrogate mothers with their biological parents. Last month officials said that more than a hundred babies had been left stranded in Kyiv after coronavirus restrictions prevented parents from travelling from around the world to Ukraine. Reporter Jonah Fisher speaks to one couple who have finally made it to Kyiv to meet their son - ten weeks after he was born. (Author, edited) (News item)

**Available from:** <https://www.bbc.co.uk/news/av/world-europe-53000956/argentine-couple-finally-meet-son-born-to-surrogate-mother>

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**20200615-58\***

**National active surveillance to understand and inform neonatal care in COVID-19.** Gale C; Knight M; Ladhani S; et al, (2020). Archives of Disease in Childhood: Fetal and Neonatal Edition , 14 June 2020, online.

Discusses vertical and horizontal transmission of SARS-CoV-2 to infants. Suggests that active population surveillance is the best way to determine true infection rates and inform optimal perinatal and neonatal care. (LDO) (Commentary)

**Available from:** <http://dx.doi.org/10.1136/archdischild-2020-319372>

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**20200611-24\***

**Serious covid-linked condition in children 'now in decline'.** Discombe M, (2020). Health Service Journal , 11 June 2020, online.

A serious coronavirus-linked illness which put up to 100 children in intensive care now appears to be in decline as the number of covid-19 cases also falls, HSJ has been told. (Author) (News item)

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**20200611-22\***

**Effects of the Global COVID-19 Pandemic on Early Childhood Development: Short- and Long-Term Risks and Mitigating Program and Policy Actions.**

Yoshikawa H; Wuermli AJ; Britto PR; et al, (2020). The Journal of Pediatrics , 19 May 2020, online.

In just a matter of weeks, the COVID-19 pandemic has led to huge societal public health and economic challenges worldwide. The clinical effects of COVID-19 on young children are uncertain when compared with older age groups, with lower morbidity and mortality rates and no conclusive evidence supporting transmission during pregnancy, on the one hand, 1,2 but some emerging evidence of rising rates of child hyperinflammatory shock, on the other.3 Research on the effects of prior pandemics and disasters clearly indicates that there will be both immediate and long-term adverse consequences for many children, with particular risks faced during early childhood, when brain architecture is still rapidly developing and highly sensitive to environmental adversity4. Estimates predict a rise in maternal and child mortality in low- and middle-income countries as health services for non-COVID related issues become scarce. For example, a conservative scenario of 15% reduction in coverage of life-saving essential health interventions for 6 months in low- and middle-income countries is associated with a 9.8% increase in under-5 mortality and an 8.3% increase in maternal mortality.5 Before the pandemic, 43 % of all children under 5 years of age in the world were estimated to be at risk of not achieving their developmental potential.6 Unless there is a commitment to support coordinated, multisectoral approaches in which low-and middle-income countries governments receive international support to scale up essential interventions, a much higher percentage of children are at risk of devastating physical, socioemotional, and cognitive consequences over the entire course of their lives. We review the evidence base on short- and long-term risks for children during early childhood development (ECD, defining this from prenatal to 8 years of age). We also present evidence-based mitigating program and policy actions that may reduce these risks. (Author) (Commentary)

**Available from:** <https://doi.org/10.1016/j.jpeds.2020.05.020>

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**20200611-21\***

**Severe neutropenia in infants with severe acute respiratory syndrome caused by the novel coronavirus 2019 infection.** Venturini E; Palmas G; Montagnani C; et al, (2020). The Journal of Pediatrics , vol 222, July 2020, pp 259-261.

Describes the case of 23-day-old and a 39-day-old infants with mild COVID-19 and severe neutropenia. (MB) (Correspondence)

**Available from:** <https://doi.org/10.1016/j.jpeds.2020.04.051>

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**20200610-81\***

**COVID19 and Breastfeeding: Not That Simple .** Berveiller P; Guerby P; Garabedian C, (2020). Journal of Human Lactation , vol 36, no 2, May 2020, pp 369-370 .

Correspondence reviewing the literature and arguing that it is not prudent to discourage mothers with COVID-19 from breastfeeding, given the known advantages of breast milk for the baby, and that there is no evidence

to suggest the virus can be transmitted through breast milk. (JSM) (Correspondence)

**Available from:** <https://doi.org/10.1177%2F0890334420917102>

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### **20200610-8\***

**Vertical transmission of coronavirus disease 2019: severe acute respiratory syndrome coronavirus 2 RNA on the fetal side of the placenta in pregnancies with coronavirus disease 2019–positive mothers and neonates at birth.** Patané L; Morotti D; Giunta MR; et al, (2020). American Journal of Obstetrics & Gynecology MFM , 18 May 2020, online.

The authors present their experience with placental SARS-CoV-2 markers of infection in a series of mothers who received a diagnosis of COVID-19 in their third trimester of pregnancy. This is the first known report of positive polymerase chain reaction (PCR) results for SARS-CoV-2 in the mother, neonate and the placental tissues. (LDO) (Research report)

**Available from:** <https://doi.org/10.1016/j.ajogmf.2020.100145>

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### **20200609-38\***

**An outbreak of severe Kawasaki-like disease at the Italian epicentre of the SARS-CoV-2 epidemic: an observational cohort study.** Verdoni L; Mazza A; Gervasoni A; et al, (2020). The Lancet , vol 365, no 10239, 6 June 2020, pp 1771-1778.

**Background** The Bergamo province, which is extensively affected by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) epidemic, is a natural observatory of virus manifestations in the general population. In the past month we recorded an outbreak of Kawasaki disease; we aimed to evaluate incidence and features of patients with Kawasaki-like disease diagnosed during the SARS-CoV-2 epidemic. **Methods** All patients diagnosed with a Kawasaki-like disease at our centre in the past 5 years were divided according to symptomatic presentation before (group 1) or after (group 2) the beginning of the SARS-CoV-2 epidemic. Kawasaki-like presentations were managed as Kawasaki disease according to the American Heart Association indications. Kawasaki disease shock syndrome (KDSS) was defined by presence of circulatory dysfunction, and macrophage activation syndrome (MAS) by the Paediatric Rheumatology International Trials Organisation criteria. Current or previous infection was sought by reverse-transcriptase quantitative PCR in nasopharyngeal and oropharyngeal swabs, and by serological qualitative test detecting SARS-CoV-2 IgM and IgG, respectively. **Findings** Group 1 comprised 19 patients (seven boys, 12 girls; aged 3·0 years [SD 2·5]) diagnosed between Jan 1, 2015, and Feb 17, 2020. Group 2 included ten patients (seven boys, three girls; aged 7·5 years [SD 3·5]) diagnosed between Feb 18 and April 20, 2020; eight of ten were positive for IgG or IgM, or both. The two groups differed in disease incidence (group 1 vs group 2, 0·3 vs ten per month), mean age (3·0 vs 7·5 years), cardiac involvement (two of 19 vs six of ten), KDSS (zero of 19 vs five of ten), MAS (zero of 19 vs five of ten), and need for adjunctive steroid treatment (three of 19 vs eight of ten; all  $p < 0\cdot01$ ). **Interpretation** In the past month we found a 30-fold increased incidence of Kawasaki-like disease. Children diagnosed after the SARS-CoV-2 epidemic began showed evidence of immune response to the virus, were older, had a higher rate of cardiac involvement, and features of MAS. The SARS-CoV-2 epidemic was associated with high incidence of a severe form of Kawasaki disease. A similar outbreak of Kawasaki-like disease is expected in countries involved in the SARS-CoV-2 epidemic. **Funding** None. (Author) (Original research)

**Available from:** [https://doi.org/10.1016/S0140-6736\(20\)31103-X](https://doi.org/10.1016/S0140-6736(20)31103-X)

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### **20200609-37\***

**Kawasaki-like disease: emerging complication during the COVID-19 pandemic.** Viner RM; Whittaker E, (2020). The Lancet , vol 365, no 10239, 6 June 2020, pp 1741-1743.

Comments on the clusters of cases that have been reported across the world of a Kawasaki disease-like symptoms in children testing positive for COVID-19. (MB) (Commentary)

**Available from:** [https://doi.org/10.1016/S0140-6736\(20\)31129-6](https://doi.org/10.1016/S0140-6736(20)31129-6)

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### **20200609-35\***

**Coronavirus: Children [written answer].** House of Lords, (2020). Hansard , Written question HL4696, 19 May 2020.

Lord Bethell responds to a written question asked by Lord Kennedy of Southwark to Her Majesty's Government, regarding the assessment they have made of the risks posed by any emergence of a Kawasaki-like disease in children who may have been exposed to COVID-19. (LDO) (Parliamentary question)

**Available from:** <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Lords/2020-05-19/HL4696/>

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**20200609-8\***

**BC Perinatal and Neonatal Health Care Provider Speciality Education**

**Guidance during COVID-19 Pandemic: Took Kit.** Perinatal Services BC; Provincial Health Services Authority, (2020). Perinatal Services BC , June 2020, 22 pages.

This tool kit has been developed to support perinatal and neonatal health care provider speciality education instructors, sites, and Health Authorities in gradually resuming perinatal and neonatal health care provider (HCP) education and training activities, while adhering to BCCDC and WorkSafeBC guidelines. The BC COVID-19 epidemiology is different from many provinces and, as such, the education strategies used in British Columbia may differ from strategies being employed in other Canadian provinces or territories. (Author) (Guidelines)

**Available from:** <http://www.perinatalservicesbc.ca/Documents/Resources/Alerts/Covid19-provincial-education-guidance-tool-kit.pdf>

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**20200608-14\***

**Clinical and Transmission Dynamics Characteristics of 406 Children With Coronavirus Disease 2019 in China: A Review.**

Zhen-Dong Y; Gao-Jun Z; Run-Ming J; et al, (2020). Journal of Infection , 28 April 2020, online.

Objective: Chinese pediatricians are working on the front line to fight COVID-19. They have published a great amount of first-hand clinical data. Collecting their data and forming a large sample for analysis is more conducive to the recognition, prevention and treatment of coronavirus disease 2019 in children. The epidemic prevention and control experience of Chinese pediatricians should be shared with the world. Methods: By searching Chinese and English literature, the data of 406 children with COVID-19 in China were analyzed. Results: It was found that the clustered incidence of children's families is a dynamic transmission feature; the incidence is low; asymptomatic infections and mild cases account for 44.8%, with only 7 cases of critical illness; laboratory examination of lymphocyte counts is not reduced, as it is for adults; chest CT findings are less severe than those for adults. These presentations are the clinical features of COVID-19 in children. Only 55 of the 406 cases were tested by anal swab for virus nucleic acid, 45 of which were positive, accounting for 81.8% of stool samples. Conclusion: There are more children than adults with asymptomatic infections, milder conditions, faster recovery, and a better prognosis. Some concealed morbidity characteristics also bring difficulties to the early identification, prevention and control of COVID-19. COVID-19 screening is needed in the pediatric fever clinic, and respiratory and digestive tract nucleic acid tests should be performed. Efforts should be made to prevent children from becoming a hidden source of transmission in kindergartens, schools or families. Furthermore, China's experience in treating COVID-19 in children has led to faster recovery of sick children. (Author) (Review)

**Available from:** [https://www.journalofinfection.com/article/S0163-4453\(20\)30241-3/pdf](https://www.journalofinfection.com/article/S0163-4453(20)30241-3/pdf)

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**20200608-1\***

**The maternity response to COVID-19: an example from one maternity unit in Taiwan.**

Liao S-C; Chang Y-S; Chien L-Y; et al, (2020). Midwifery , 19 May 2020, online.

Discusses the preventative measures introduced in Taiwan at the government and hospital level to minimise the spread of COVID-19. The authors focus on a maternity unit in Taipei city which introduced designated walkways, fever screening, visitor restrictions, negative-pressure birth rooms and personal protective equipment. (LDO) (Overview)

**Available from:** <https://doi.org/10.1016/j.midw.2020.102756>

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**20200605-21\***

**Wet Nurses to Donor Milk Banks and Back Again: The Continuum of Sharing Our Milk to Save Lives .**

Marinelli K, (2020). Journal of Human Lactation , vol 36, no 2, May 2020, pp 213-216.

Editorial discussing the ways in which breastmilk is given to babies whose mothers are unable to feed them themselves, whether this is because of illness, separation, death or lactation insufficiency, or who chose not to. Charts the history of wet-nursing, which is seen as life-saving in circumstances when a mother cannot feed her own child, and donor milk banking. Considers infant feeding in the context of the current COVID-19 pandemic. (JSM) (Editorial)

**Available from:** <https://doi.org/10.1177%2F0890334420927329>

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**20200605-9\***

**The danger indoors.**

Astrup J, (2020). Community Practitioner , vol 93, no 3, May-June 2020, pp 14-17.

Explores the worrying surge in domestic abuse during the Covid-19 lockdown, the concerns for children living in households where domestic violence is taking place, and what is being done to address it. (Author, edited) (Commentary)

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### 20200603-57\*

#### **Ethnic Groups: Coronavirus [written answer].** House of Commons, (2020).

Hansard , Written question 49113, 19 May 2020.

Ms Nadine Dorries responds to a written question asked by Marsha de Cordova to the Secretary of State for Health and Social Care, regarding what assessment the Government has made of the effect of covid-19 on BAME pregnant women. (MB) (Parliamentary question)

**Available from:** <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2020-05-19/49113/>

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### 20200603-55\*

#### **Coronavirus: Babies [written answer].** House of Commons, (2020). Hansard , Written

question 49114, 19 March 2020.

Ms Nadine Dorries responds to a written question asked by Marsha de Cordova to the Secretary of State for Health and Social Care, regarding what estimate he has made of the number of babies born with covid-19. (MB) (Parliamentary question)

**Available from:** <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2020-05-19/49114/>

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### 20200603-39\*

#### **Delivery in pregnant women infected with SARS -CoV-2: A fast review.**

Parazzini F; Bortolus R; Mauri PA; et al, (2020). International Journal of Gynecology & Obstetrics , vol 150, no 1, July 2020, pp 41-46.

Background Few case reports and clinical series exist on pregnant women infected with SARS -CoV-2 who delivered. Objective To review the available information on mode of delivery, vertical/peripartum transmission, and neonatal outcome in pregnant women infected with SARS -CoV-2. Search strategy Combination of the following key words: COVID -19, SARS -CoV-2, and pregnancy in Embase and PubMed databases. Selection criteria Papers reporting cases of women infected with SARS -CoV-2 who delivered. Data collection and analysis The following was extracted: author; country; number of women; study design; gestational age at delivery; selected clinical maternal data; mode of delivery; selected neonatal outcomes. Main results In the 13 studies included, vaginal delivery was reported in 6 cases (9.4%; 95% CI , 3.5–19.3). Indication for cesarean delivery was worsening of maternal conditions in 31 cases (48.4%; 95% CI , 35.8–61.3). Two newborns testing positive for SARS -CoV-2 by real-time RT -PCR assay were reported. In three neonates, SARS -CoV-2 IgG and IgM levels were elevated but the RT -PCR test was negative. Conclusions The rate of vertical or peripartum transmission of SARS -CoV-2 is low, if any, for cesarean delivery; no data are available for vaginal delivery. Low frequency of spontaneous preterm birth and general favorable immediate neonatal outcome are reassuring. (Author) (Review)

**Available from:** <https://doi.org/10.1002/ijgo.13166>

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### 20200601-1\*

#### **Ethnicity and COVID-19 in children with comorbidities.** Harman K; Verma A; Zoica

B; et al, (2020). The Lancet Child & Adolescent Health , 28 May 2020, online.

Describes the effect of COVID-19 on children with underlying health conditions. (MB) (Case report)

**Available from:** [https://doi.org/10.1016/S2352-4642\(20\)30167-X](https://doi.org/10.1016/S2352-4642(20)30167-X)

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### 20200528-10\*

#### **Acute Respiratory Distress Syndrome in a Preterm Pregnant Patient With Coronavirus Disease 2019 (COVID-19).** Blauvelt CA; Chiu C; Donovan AL; et al, (2020).

Obstetrics and Gynecology , 8 May 2020, online.

BACKGROUND: Data suggest that pregnant women are not at elevated risk of acquiring severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection or developing severe disease compared with nonpregnant patients. However, management of pregnant patients who are critically ill with coronavirus disease 2019 (COVID-19) infection is complicated by physiologic changes and other pregnancy considerations and requires balancing maternal and fetal well-being. CASE: We report the case of a patient at 28 weeks of gestation with acute respiratory distress syndrome (ARDS) from COVID-19 infection, whose deteriorating respiratory condition prompted delivery. Our patient's oxygenation and respiratory mechanics improved within hours of delivery, though she required prolonged mechanical ventilation until postpartum day 10. Neonatal swabs for SARS-CoV-2 and COVID-19 immunoglobulin (Ig) G and IgM were negative. CONCLUSION: We describe our multidisciplinary management of a preterm pregnant patient with ARDS from COVID-19 infection and her neonate. (Author) (Case report)

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**20200528-9\***

**Women leaders take action for women and children during COVID-19.** The Partnership for Maternal, Newborn & Child Health, (2020). New York: The Partnership for Maternal, Newborn & Child Health , 28 May 2020.

Reports on the meeting of women leaders to discuss the impact of COVID-19 on women and children. The meeting highlighted access to contraception, women working as health professionals and caregivers, and children under the age of one at risk of diseases such as diphtheria, measles and polio. The leaders included Princess Sarah Zeid of Jordan and Henrietta Fore, Executive Director of UNICEF. (LDO) (News item)

**Available from:** <https://www.who.int/pmnch/media/news/2020/women-leaders-action-on-COVID-19/en/>

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**20200527-52\***

**Women and children will pay for this pandemic – unless we act.** Kaljulaid K; Clark H; Varela JA; et al, (2020). Geneva: The Partnership for Maternal, Newborn & Child Health , 27 May 2020.

Suggests that, in the current coronavirus crisis, we should draw on the knowledge gleaned from past pandemics, such as the Ebola outbreak of 2014-15 in Sierra Leone, to ensure a better outcome for groups such as women, children, adolescents and vulnerable populations, who may have not been given access to sufficient resources and excluded from decision making in the past. (JSM) (Commentary)

**Available from:** <https://www.who.int/pmnch/media/news/2020/paying-for-the-pandemic/en/>

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**20200525-27\***

**Novel Coronavirus in a 15-day-old Neonate With Clinical Signs of Sepsis, a Case Report .** Kamali Aghdam M; Jafari N; Eftekhari K, (2020). Infectious Diseases , vol 52, no 6, June 2020, pp 427-429.

Introduction: Novel coronavirus or coronavirus disease (COVID-19) can affect all age groups. The clinical course of the disease in children and infants is milder than in adults. It should be noted that, although typical symptoms may be present in children, non-specific symptoms could be noted in the neonate. The disease is rare in the neonate, so, its suspicion in this group can help to make a quick diagnose. Case report: A 15-day-old neonate was admitted with fever, lethargy, cutaneous mottling, and respiratory distress without cough. His mother had symptoms of Novel coronavirus. So Reverse-Transcription Polymerase Chain Reaction (RT-PCR) assay was done for the neonate and showed to be positive. The newborn was isolated and subjected to supportive care. Antibiotic and antiviral treatment was initiated. Eventually, the baby was discharged in good general condition. Conclusion: When a newborn presents with non-specific symptoms of infection with an added history of COVID-19 in his/her parents, it indicates the need for PCR testing for Novel coronavirus. (Author) (Case report)

**Available from:** <https://doi.org/10.1080/23744235.2020.1747634>

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**20200525-26\***

**Safety and Efficacy of Different Anesthetic Regimens for Parturients With COVID-19 Undergoing Cesarean Delivery: A Case Series of 17 Patients .**

Chen R; Zhang Y; Huang L; et al, (2020). Canadian Journal of Anaesthesia , vol 67, no 6, June 2020, pp 655-633.

Purpose: To assess the management and safety of epidural or general anesthesia for Cesarean delivery in parturients with coronavirus disease (COVID-19) and their newborns, and to evaluate the standardized procedures for protecting medical staff. Methods: We retrospectively reviewed the cases of parturients diagnosed with severe acute respiratory syndrome coronavirus (SARS-CoV-2) infection disease (COVID-19). Their epidemiologic history, chest computed tomography scans, laboratory measurements, and SARS-CoV-2 nucleic acid positivity were evaluated. We also recorded the patients' demographic and clinical characteristics, anesthesia and surgery-related data, maternal and neonatal complications, as well as the health status of the involved medical staff. Results: The clinical characteristics of 17 pregnant women infected with SARS-CoV-2 were similar to those previously reported in non-pregnant adult patients. All of the 17 patients underwent Cesarean delivery with anesthesia performed according to standardized anesthesia/surgery procedures. Fourteen of the patients underwent continuous epidural anesthesia with 12 experiencing significant intraoperative hypotension. Three patients received general anesthesia with tracheal intubation because emergency surgery was needed. Three of the parturients are still recovering from their Cesarean delivery and are receiving in-hospital treatment for COVID-19. Three neonates were born prematurely. There were no deaths or serious neonatal asphyxia events. All neonatal SARS-CoV-2 nucleic acid tests were negative. No medical staff were infected throughout the patient care period. Conclusions: Both epidural and general anesthesia were safely used for Cesarean delivery in the parturients with COVID-19. Nevertheless, the incidence of hypotension during epidural anesthesia appeared excessive. Proper patient transfer, medical staff access procedures, and effective biosafety precautions are important to protect medical staff from COVID-19. (Author) (Original research)

**Available from:** <https://doi.org/10.1007/s12630-020-01630-7>

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**20200525-25\***

**COVID-19 in Children, Pregnancy and Neonates: A Review of Epidemiologic and Clinical Features** . Zimmermann P; Curtis N, (2020). The Pediatric Infectious Disease

Journal , vol 39, no 6, June 2020, pp 469-477.

The novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has spread rapidly across the globe. In contrast to initial reports, recent studies suggest that children are just as likely as adults to become infected with the virus but have fewer symptoms and less severe disease. In this review, we summarize the epidemiologic and clinical features of children infected with SARS-CoV-2 reported in pediatric case series to date. We also summarize the perinatal outcomes of neonates born to women infected with SARS-CoV-2 in pregnancy. We found 11 case series including a total of 333 infants and children. Overall, 83% of the children had a positive contact history, mostly with family members. The incubation period varied between 2 and 25 days with a mean of 7 days. The virus could be isolated from nasopharyngeal secretions for up to 22 days and from stool for more than 30 days. Co-infections were reported in up to 79% of children (mainly mycoplasma and influenza). Up to 35% of children were asymptomatic. The most common symptoms were cough (48%; range 19%-100%), fever (42%; 11%-100%) and pharyngitis (30%; 11%-100%). Further symptoms were nasal congestion, rhinorrhea, tachypnoea, wheezing, diarrhea, vomiting, headache and fatigue. Laboratory test parameters were only minimally altered. Radiologic findings were unspecific and included unilateral or bilateral infiltrates with, in some cases, ground-glass opacities or consolidation with a surrounding halo sign. Children rarely needed admission to intensive care units (3%), and to date, only a small number of deaths have been reported in children globally. Nine case series and 2 case reports described outcomes of maternal SARS-CoV-2 infection during pregnancy in 65 women and 67 neonates. Two mothers (3%) were admitted to intensive care unit. Fetal distress was reported in 30% of pregnancies. Thirty-seven percent of women delivered preterm. Neonatal complications included respiratory distress or pneumonia (18%), disseminated intravascular coagulation (3%), asphyxia (2%) and 2 perinatal deaths. Four neonates (3 with pneumonia) have been reported to be SARS-CoV-2 positive despite strict infection control and prevention procedures during delivery and separation of mother and neonates, meaning vertical transmission could not be excluded. (Author) (Review)

Available from: <https://doi.org/10.1097/inf.0000000000002700>

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**20200525-24\***

**Clinical Characteristics of 19 Neonates Born to Mothers With COVID-19** . Liu

W; Wang J; Li W; et al, (2020). Frontiers of Medicine , vol 14, no 2, April 2020, pp 193-198.

The aim of this study was to investigate the clinical characteristics of neonates born to SARS-CoV-2 infected mothers and increase the current knowledge on the perinatal consequences of COVID-19. Nineteen neonates were admitted to Tongji Hospital from January 31 to February 29, 2020. Their mothers were clinically diagnosed or laboratory-confirmed with COVID-19. We prospectively collected and analyzed data of mothers and infants. There are 19 neonates included in the research. Among them, 10 mothers were confirmed COVID-19 by positive SARS-CoV-2 RT-PCR in throat swab, and 9 mothers were clinically diagnosed with COVID-19. Delivery occurred in an isolation room and neonates were immediately separated from the mothers and isolated for at least 14 days. No fetal distress was found. Gestational age of the neonates was  $38.6 \pm 1.5$  weeks, and average birth weight was  $3293 \pm 425$  g. SARS-CoV-2 RT-PCR in throat swab, urine, and feces of all neonates were negative. SARS-CoV-2 RT-PCR in breast milk and amniotic fluid was negative too. None of the neonates developed clinical, radiologic, hematologic, or biochemical evidence of COVID-19. No vertical transmission of SARS-CoV-2 and no perinatal complications in the third trimester were found in our study. The delivery should occur in isolation and neonates should be separated from the infected mothers and care givers. (Author) (Original research)

Available from: <https://doi.org/10.1007/s11684-020-0772-y>

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**20200525-23\***

**COVID-19 in Children: Clinical Approach and Management** . Sankar J; Dhochak N;

Kabra SK; et al, (2020). Indian Journal of Pediatrics , vol 87, no 6, June 2020, pp 433-442.

COVID-19 pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a major public health crisis threatening humanity at this point in time. Transmission of the infection occurs by inhalation of infected droplets or direct contact with soiled surfaces and fomites. It should be suspected in all symptomatic children who have undertaken international travel in the last 14 d, all hospitalized children with severe acute respiratory illness, and asymptomatic direct and high-risk contacts of a confirmed case. Clinical symptoms are similar to any acute respiratory viral infection with less pronounced nasal symptoms. Disease seems to be milder in children, but situation appears to be changing. Infants and young children had relatively more severe illness than older children. The case fatality rate is low in children. Diagnosis can be confirmed by Reverse transcriptase - Polymerase chain reaction (RT-PCR) on respiratory specimen (commonly nasopharyngeal and oropharyngeal swab). Rapid progress is being made to develop rapid diagnostic tests, which will help ramp up the capacity to test and also reduce the time to getting test results. Management is mainly supportive care. In severe pneumonia and critically ill children, trial of hydroxychloroquine or lopinavir/ritonavir should be considered. As per current policy, children with mild disease also need to be hospitalized; if this is not feasible, these children may be managed on ambulatory basis with strict home isolation. Pneumonia, severe disease and critical illness require admission and aggressive management for acute lung injury and shock and/or multiorgan dysfunction, if present. An early intubation is preferred over non-invasive ventilation or heated, humidified, high flow nasal cannula oxygen, as these may generate aerosols increasing the risk of infection in health care personnel. To prevent post discharge dissemination of infection, home isolation for 1-2 wk may be advised. As of now, no vaccine or specific chemotherapeutic agents are

approved for children. (Author) (Review)

Available from: <https://doi.org/10.1007/s12098-020-03292-1>

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### **20200525-22\***

#### **Potential Maternal and Infant Outcomes From (Wuhan) Coronavirus 2019-nCoV Infecting Pregnant Women: Lessons From SARS, MERS, and Other Human Coronavirus Infections.**

Schwartz DA; Graham AL, (2020). *Viruses*, vol 12, no 2, February 2020, Article no: 194.

In early December 2019 a cluster of cases of pneumonia of unknown cause was identified in Wuhan, a city of 11 million persons in the People's Republic of China. Further investigation revealed these cases to result from infection with a newly identified coronavirus, termed the 2019-nCoV. The infection moved rapidly through China, spread to Thailand and Japan, extended into adjacent countries through infected persons travelling by air, eventually reaching multiple countries and continents. Similar to such other coronaviruses as those causing the Middle East respiratory syndrome (MERS) and severe acute respiratory syndrome (SARS), the new coronavirus was reported to spread via natural aerosols from human-to-human. In the early stages of this epidemic the case fatality rate is estimated to be approximately 2%, with the majority of deaths occurring in special populations. Unfortunately, there is limited experience with coronavirus infections during pregnancy, and it now appears certain that pregnant women have become infected during the present 2019-nCoV epidemic. In order to assess the potential of the Wuhan 2019-nCoV to cause maternal, fetal and neonatal morbidity and other poor obstetrical outcomes, this communication reviews the published data addressing the epidemiological and clinical effects of SARS, MERS, and other coronavirus infections on pregnant women and their infants. Recommendations are also made for the consideration of pregnant women in the design, clinical trials, and implementation of future 2019-nCoV vaccines. (Author) (Review)

Available from: <https://doi.org/10.3390/v12020194>

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### **20200525-21\***

#### **Psychological Status of Postpartum Women Under the COVID-19 Pandemic in Japan .**

Suzuki S, (2020). *The Journal of Maternal-Fetal and Neonatal Medicine*, 18 May 2020, online.

Under the COVID-19 (Coronavirus Disease 2019) pandemic, limitations are known to cause some psychosocial problems. We compared the results of mental screening of the postpartum women conducted during the COVID-19 epidemic with those at the same period last year. Based on the results, the worse mother-infant bonding was suspected at 1 month after birth under the COVID-19 pandemic. (Author) (Overview)

Available from: <https://doi.org/10.1080/14767058.2020.1763949>

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### **20200525-20\***

#### **Neonatal Coronavirus 2019 (COVID-19) Infection: A Case Report and Review of Literature .**

Dumpa V; Kamity R; Vinci AN; et al, (2020). *Cureus*, vol 12, no 5, 17 May 2020, e8165.

Coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has led to a global pandemic affecting 213 countries as of April 26, 2020. Although this disease is affecting all age groups, infants and children seem to be at a lower risk of severe infection, for reasons unknown at this time. We report a case of neonatal infection in New York, United States, and provide a review of the published cases. A 22-day-old, previously healthy, full-term neonate was hospitalized after presenting with a one-day history of fever and poor feeding. Routine neonatal sepsis evaluation was negative. SARS-CoV-2 polymerase chain reaction (PCR) testing was obtained, given rampant community transmission, which returned positive. There were no other laboratory or radiographic abnormalities. The infant recovered completely and was discharged home in two days once his feeding improved. The family was advised to self-quarantine to prevent the transmission of COVID-19. We believe that the mode of transmission was horizontal spread from his caregivers. This case highlights the milder presentation of COVID-19 in otherwise healthy, full-term neonates. COVID-19 must be considered in the evaluation of a febrile infant. Infants and children may play an important role in the transmission of COVID-19 in the community. Hence, with an understanding of the transmission patterns, parents and caregivers would be better equipped to limit the spread of the virus and protect the more vulnerable population. (Author) (Case report)

Available from: <https://doi.org/10.7759/cureus.8165>

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### **20200525-19\***

#### **Management of the Mother-Infant Dyad With Suspected or Confirmed SARS-CoV-2 Infection in a Highly Epidemic Context.**

Pietrasanta C; Pugni L; Ronchi A; et al, (2020). *Journal of Neonatal-Perinatal Medicine*, 20 May 2020, online.

Addresses a number of aspects of the mother-infant dyad management during SARS-CoV-2 epidemic. Networking among maternity centers and anticipatory planning is essential to organise the assistance to mothers and neonates in maternity and neonatal wards. Early identification of SARS-CoV-2 infected mothers, before delivery, allows their management through dedicated protocols and minimizes the risk of contagion for other patients and healthcare providers. Vertical transmission of SARS-CoV-2 cannot be excluded at present, and should be ruled out as soon as possible after birth. Rooming in of infected mothers and neonates, provided their good clinical conditions, is not contraindicated based on current knowledge. The choice of breastfeeding

should be carefully discussed with parents based on current, evolving scientific evidence. (Author) (Overview)  
**Available from:** <https://doi.org/10.3233/npm-200478>

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### **20200525-18\***

**Lack of viral transmission to preterm newborn from a COVID-19 positive breastfeeding mother at 11 days postpartum.** Perrone S, Giordano M, Meoli A, et al, (2020). *Journal of Medical Virology* , 21 May 2020, online.

In December 2019, novel coronavirus 2019 has appeared in China. On 11 February 2020, the World Health Organization officially names the disease as COVID-19 (1). The new coronavirus is highly contagious. The rapid spread of SARS-CoV-2 lead to declare the pandemic on the 11th March 2020. On 10 May 2020 the number of infected people is 4,132,373 worldwide (2). 1. Hong H et al. Clinical characteristics of novel coronavirus disease 2019 (COVID-19) in newborns, infants and children. *Pediatric Neonatology*, vol 61, no 2, . pp 131-132. 2. Worldometer. Covid-19 coronavirus pandemic. Retrieved from <https://www.worldometers.info/coronavirus/> (Accessed on 10 May 2020) Davanzo R. Breast feeding at the time of COVID-19: do not forget expressed mother's milk, please. *Archives of Disease in Childhood: Fetal Neonatal Edition*. 2020, 6 April 2020, online. (Author) (Review) This article is protected by copyright. All rights reserved.

**Available from:** <https://doi.org/10.1002/jmv.26037>

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### **20200525-16\***

**Near-term Pregnant Women's Attitude Toward, Concern About and Knowledge of the COVID-19 Pandemic .** Yassa M; Birol P; Yirmibes C; et al, (2020). *The Journal of Maternal-Fetal and Neonatal Medicine* , 19 May 2020, online.

Background: COVID-19 is a novel type of the coronavirus family with an incompletely described clinical course. Little is known about the psychological aspects, particularly for vulnerable populations including pregnant women. Objectives: To understand the attitude, concerns, and knowledge of the non-infected pregnant women toward the COVID-19 outbreak in order to constitute base data for detailed counseling and to develop targeted messages. Patients and methods: This cross-sectional survey research presented analysis of prospectively collected data yielded at a single tertiary "Coronavirus Pandemic Hospital" referral center for a ten days period following the first confirmed death due to the COVID-19 pandemic in Turkey. Non-infected women with a confirmed pregnancy over 30th gestational week were consecutively included. A patient-reported non-validated questionnaire formed by the expert committee that includes 15 specific questions was used. Non-infected, pregnant women over 30th gestational week who applied to the outpatient clinic were consecutively included. A total of 213 women were enrolled, 37 were excluded: 7 for being in the first trimester, 3 were illiterate, and 27 were Syrian refugees having difficulties in translation. Results: A total of 172 pregnant women were included. Overall, four women refused to participate to the survey (1.9%). The mean age was 27.5 ± 5.3 years. Median gestational week and parity were 35 ± 11 weeks and 1 ± 2, respectively. Pregnant women were observed to trust the authorities (65%) and the healthcare staff (92.4%), and their respect was increased (82.5%) during the outbreak. Majority of the women (87.2%) comply with the self-quarantine rules. Half of the women (52%) reported that they felt vulnerable and predominantly were concerned (80%). Approximately one-third of the women constantly keep thinking that they may get infected (35.5%) or they might get infected during/after the delivery or their baby might get infected after being born (42%). Half of the women (50%) were reported that they either had no idea about or think the breastfeeding is not safe during the outbreak. About 45% of the women were confused or had doubts about if the mode of delivery may be affected by the pandemic. Greater part of the participants does not know if COVID-19 might cause birth defects (76%) or preterm birth (64.5%). Counseling flow keys helping pregnant women to overcome misleads, regarding the COVID-19 outbreak is proposed. Conclusions: Non-infected pregnant women with a viable pregnancy at near term were observed to have positive attitude and compliance toward the COVID-19 outbreak and frontline healthcare staff; increased concern and vulnerability; and restricted knowledge about the pregnancy-related outcomes. While the clinical evidence was growing rapidly, this data may guide obstetricians and midwives to perceive what accurate information should be provided to the pregnant women. (Author) (Cross-sectional study)

**Available from:** <https://doi.org/10.1080/14767058.2020.1763947>

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### **20200525-15\***

**Management of Newborns Exposed to Mothers With Confirmed or Suspected COVID-19 .** Amatya S, Corr TE, Gandhi CK, et al. , (2020). *Journal of Perinatology* , 21 May 2020, online.

There is limited information about newborns with confirmed or suspected COVID-19. Particularly in the hospital after delivery, clinicians have refined practices in order to prevent secondary infection. While guidance from international associations is continuously being updated, all facets of care of neonates born to women with confirmed or suspected COVID-19 are center-specific, given local customs, building infrastructure constraints, and availability of protective equipment. Based on anecdotal reports from institutions in the epicenter of the COVID-19 pandemic close to our hospital, together with our limited experience, in anticipation of increasing numbers of exposed newborns, we have developed a triage algorithm at the Penn State Hospital at Milton S. Hershey Medical Center that may be useful for other centers anticipating a similar surge. We discuss several care practices that have changed in the COVID-19 era including the use of antenatal steroids, delayed cord clamping (DCC), mother-newborn separation, and breastfeeding. Moreover, this paper provides comprehensive guidance on the most suitable respiratory support for newborns during the COVID-19 pandemic. We also present detailed recommendations about the discharge process and beyond, including providing scales and

home phototherapy to families, parental teaching via telehealth and in-person education at the doors of the hospital, and telehealth newborn follow-up. (Author) (Overview)

Available from: <https://doi.org/10.1038/s41372-020-0695-0>

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### **20200525-14\***

#### **Clinical Course of Coronavirus Disease-2019 (COVID-19) in Pregnancy .**

Pereira A; Cruz-Melguizo S; Adrien M; et al, (2020). *Acta Obstetrica et Gynecologica Scandinavica* , 22 May 2020, online.

Introduction: The aim of this study is to report our clinical experience in the management of pregnant women infected with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) during the first thirty days of the Coronavirus disease (COVID-19) pandemic. Material and methods: We reviewed clinical data from the first 60 pregnant women with COVID-19 whose care was managed at Puerta de Hierro University Hospital, Madrid, Spain from March 14th to April 14th , 2020. Demographic data, clinical findings, laboratory test results, imaging findings, treatment received, and outcomes were collected. An analysis of variance (Kruskal-Wallis test) was performed to compare the medians of laboratory parameters. Fisher's exact test was used to evaluate categorical variables. A correspondence analysis was used to explore associations between variables. Results: A total of 60 pregnant women were diagnosed with COVID-19. The most common symptoms were fever and cough (75.5%, each) followed by dyspnea (37.8%). Forty-one patients (68.6%) required hospital admission (18 due to disease worsening and 23 for delivery) of whom 21 patients (35%) underwent pharmacological treatment, including hydroxychloroquine, antivirals, antibiotics and tocilizumab. No renal or cardiac failures or maternal deaths were reported. Lymphopenia (50%), thrombocytopenia (25%), and elevated C-reactive protein (CRP) (59%) were observed in the early stages of the disease. Median CRP, D-dimer and the neutrophil/lymphocyte ratio were elevated. High CRP and D-dimer levels were the parameters most frequently associated with severe pneumonia. The Neutrophil/lymphocyte ratio was found to be the most sensitive marker for disease improvement (relative risk: 6.65; 95% CI: 4.1-5.9). During the study period, 18 of the women (78%) delivered vaginally. All newborns tested negative for SARS-CoV-2 and none of them were infected during breastfeeding. No SARS-CoV-2 was detected in placental tissue. Conclusions: Most of the pregnant COVID-19 positive patients had a favorable clinical course. However, one-third of them developed pneumonia, of whom 5% presented a critical clinical status. CRP and D-dimer levels positively correlated with severe pneumonia and the neutrophil/lymphocyte ratio decreased as the patients improved clinically. Seventy-eight percent of patients had a vaginal delivery. No vertical or horizontal transmissions were diagnosed in the neonates during labor or breastfeeding. (Author) (Review)

Available from: <https://doi.org/10.1111/aogs.13921>

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### **20200525-13\***

#### **Novel Coronavirus disease (COVID-19) in newborns and infants: what we know so far.**

De Rose DU; Piersigilli F; Ronchetti MP; et al, (2020). *Italian Journal of Pediatrics* , vol 46, no 1, 29 April 2020, Article no: 56.

Recently, an outbreak of viral pneumonitis in Wuhan, Hubei, China successively spread as a global pandemic, led to the identification of a novel betacoronavirus species, the 2019 novel coronavirus, successively designated 2019-nCoV then SARS-CoV-2). The SARS-CoV-2 causes a clinical syndrome designated coronavirus disease 2019 (COVID19) with a spectrum of manifestations ranging from mild upper respiratory tract infection to severe pneumonitis, acute respiratory distress syndrome (ARDS) and death. Few cases have been observed in children and adolescents who seem to have a more favorable clinical course than other age groups, and even fewer in newborn babies. This review provides an overview of the knowledge on SARS-CoV-2 epidemiology, transmission, the associated clinical presentation and outcomes in newborns and infants up to 6 months of life. (Author) (Review)

Available from: <https://doi.org/10.1186/s13052-020-0820-x>

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### **20200525-12\***

#### **Improving the quality of care in pregnancy and childbirth with coronavirus (COVID-19): a systematic review.**

Abdollahpour S; Khadivzadeh T, (2020). *Journal of Maternal-Fetal & Neonatal Medicine* , 14 May 2020, online.

In the context of serious coronavirus epidemic, it is critical that pregnant women not be ignored potentially life-saving interventions. So, this study was designed to improve the quality of care by health providers through what they need to know about coronavirus during pregnancy and childbirth. We conducted a systematic review of electronic databases was performed for published in English, before 25 March 2020. Finally, 29 papers which had covered the topic more appropriately were included in the study. The results of the systematic review of the existing literature are presented in the following nine sections: Symptoms of the COVID-19 in pregnancy, Pregnancy management, Delivery Management, Mode of delivery, Recommendations for health care provider in delivery, Neonatal outcomes, Neonatal care, Vertical Transmission, Breastfeeding. In conclusion, improving quality of care in maternal health, as well as educating, training, and supporting healthcare providers in infection management to be prioritized. Sharing data can help to countries that to prevent maternal and neonatal morbidity associated with the COVID-19. (Author) (Systematic review)

Available from: <https://doi.org/10.1080/14767058.2020.1759540>

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**20200525-11\***

**Vaginal delivery in SARS-CoV-2 infected pregnant women in Northern Italy: a retrospective analysis.** Ferrazzi E; Frigerio L; Savasi V; et al, (2020). BJOG: An International Journal of Obstetrics and Gynaecology , 27 April 2020, online.

Objective: To report mode of delivery and immediate neonatal outcome in COVID-19 infected women. Design: This is a retrospective study. Setting: Twelve hospitals in northern Italy. Participants: Pregnant women with COVID-19 confirmed infection who delivered. Exposure: COVID 19 infection in pregnancy. Methods: SARS-CoV-2 infected women who were admitted and delivered during the period 1-20 March 2020 were eligible. Data were collected from the clinical records using a standardized questionnaire on maternal general characteristics, any medical or obstetric co-morbidity, course of pregnancy, clinical signs and symptoms, treatment of COVID 19 infection, mode of delivery, neonatal data and breastfeeding MAIN OUTCOME AND MEASURE: Data on mode of delivery and neonatal outcome RESULTS: 42 women with COVID-19 delivered at the participating centres: 24(57,1%, 95% CI= 41,0-72,3) delivered vaginally. An elective cesarean section was performed in 18/42 (42,9%, 95%CI 27,7-59,0) cases: in 8 cases the indication was unrelated to COVID-19 infection. Pneumonia was diagnosed in 19/42(45,2%, 95%CI 29,8-61,3) cases: of these 7/19(36,8%,95CI 16,3-61,6) required oxygen support and 4/19(21,1%,95%CI=6,1-45,6) were admitted to a critical care unit. Two women with COVID-19 breastfed without a mask because infection was diagnosed in the post-partum period: their new-borns tested positive for SARS-Cov-2 infection. In one case a new-born had a positive test after a vaginal operative delivery. Conclusions: Although post-partum infection cannot be excluded with 100% certainty, these findings suggest that vaginal delivery is associated with a low risk of intrapartum SARS-Cov-2 transmission to the new-born. (Author) (Original research)

Available from: <https://doi.org/10.1111/1471-0528.16278>

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**20200525-10\***

**SARS-CoV-2 Infection in Pregnancy - a Review of the Current Literature and Possible Impact on Maternal and Neonatal Outcome.** Stumpfe FM; Titzmann A; Schneider MO; et al, (2020). Geburtshilfe und Frauenheilkunde , vol 80, no 4, 2020, pp 380-390.

In December 2019, cases of pneumonia of unknown cause first started to appear in Wuhan in China; subsequently, a new coronavirus was soon identified as the cause of the illness, now known as Coronavirus Disease 2019 (COVID-19). Since then, infections have been confirmed worldwide in numerous countries, with the number of cases steadily rising. The aim of the present review is to provide an overview of the new severe acute respiratory syndrome (SARS) coronavirus 2 (SARS-CoV-2) and, in particular, to deduce from it potential risks and complications for pregnant patients. For this purpose, the available literature on cases of infection in pregnancy during the SARS epidemic of 2002/2003, the MERS (Middle East respiratory syndrome) epidemic ongoing since 2012, as well as recent publications on cases infected with SARS-CoV-2 in pregnancy are reviewed and reported. Based on the literature available at the moment, it can be assumed that the clinical course of COVID-19 disease may be complicated by pregnancy which could be associated with a higher mortality rate. It may also be assumed at the moment that transmission from mother to child in utero is unlikely. Breastfeeding is possible once infection has been excluded or the disease declared cured. (Author) (Review)

Available from: <https://www.thieme-connect.de/products/ejournals/html/10.1055/a-1134-5951?articleLanguage=en>

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**20200525-9\***

**The Impact of the Current SARS-CoV-2 Pandemic on Neonatal Care.** Arnaez J; Montes Mt; Herranz-Rubia N; et al, (2020). Frontiers in Pediatrics , 30 April 2020, online.

Discusses the ways in which the current coronavirus pandemic is affecting care policies in neonatology units and emphasises the importance of contact between mother and newborn baby for bonding. (JSM) (Commentary)

Available from: <https://doi.org/10.3389/fped.2020.00247>

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**20200525-8\***

**Dilemmas and Priorities in the Dilemmas and Priorities in the Neonatal Intensive Care Unit Neonatal Intensive Care Unit during the COVID-19 Pandemic.** Breindahl M; Zachariassen G; Sønnderby Christensen P; et al, (2020). Danish Medical Journal , vol 67, no 4, April 2020, :A205021.

Editorial discussing best practice in caring for families with suspected or confirmed COVID-19 in the NICU. (JSM) (Guidelines)

Available from: [https://ugeskriftet.dk/files/scientific\\_article\\_files/2020-04/a205021\\_web.pdf](https://ugeskriftet.dk/files/scientific_article_files/2020-04/a205021_web.pdf)

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### 20200525-7\*

#### **Current State of Knowledge About SARS-CoV-2 and COVID-19 Disease in Pregnant Women.**

Gujski M; Humeniuk E; Bojar I, (2020). Medical Science Monitor:International Medical Journal of Experimental and Clinical Research , 9 May 2020, online.

During any epidemic of infectious diseases, pregnant women constitute an extremely sensitive group due to altered physiology and immune functions, and thus altered susceptibility to infection. With regard to the management of pregnant COVID-19 patients, in addition to the treatment of the infection itself, which is not that different from generally accepted principles, it is interesting to consider which obstetric procedures should be used to minimize the adverse effects on mother and child. Questions arise concerning the continuation of pregnancy, how to terminate the pregnancy, the possibility of virus transmission through the placenta, isolation of the newborn after birth, and breastfeeding. The aim of this study was to review the current state of knowledge about SARS-CoV-2 infection and COVID-19 disease in pregnant women. Because the epidemic began in China, most of the available literature comes from studies conducted there. The studies used to prepare this review article are the first non-randomized studies containing small groups of examined women. They do not provide clear indications, but show that in an epidemic situation, special care should be taken in pregnancy management, making decisions about termination of pregnancy, and handling of the newborn baby to minimize the risk of subsequent health consequences. Further analysis is needed on the incidence of COVID-19 among pregnant women and its consequences. This will allow us to develop recommendations on how to deal with patients in the future in case of repeated epidemic emergencies. (Author) (Review)

**Available from:** <https://www.medscimonit.com/abstract/index/idArt/924725>

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### 20200525-4\*

#### **Importance of Inclusion of Pregnant and Breastfeeding Women in COVID-19 Therapeutic Trials.**

LaCourse SM; John-Stewart G; Adams Waldorf KM, (2020). Clinical Infectious Diseases , 15 April 2020, online.

Investigators are employing unprecedented innovation in the design of clinical trials to rapidly and rigorously assess potentially promising therapies for COVID-19; this is in stark contrast to the continued near universal regressive practice of exclusion of pregnant and breastfeeding women from these trials. The few trials which allow their inclusion focus on post-exposure prophylaxis or outpatient treatment of milder disease, limiting the options available to pregnant women with severe COVID-19 to compassionate use of remdesivir, or off-label drug use of hydroxychloroquine or other therapies. These restrictions were put in place despite experience with these drugs in pregnant women. In this Viewpoint, we call attention to the need and urgency to engage pregnant women in COVID-19 treatment trials now in order to develop data-driven recommendations regarding the risks and benefits of therapies in this unique but not uncommon population. (Author) (Commentary)

**Available from:** <https://doi.org/10.1093/cid/ciaa444>

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### 20200525-3\*

#### **Remdesivir.**

Anon, (2020). Drugs and Lactation Database , 11 May 2020.

Remdesivir is an investigational antiviral drug that is being tested for use against the novel coronavirus disease, COVID-19. Remdesivir is given intravenously because it is poorly absorbed orally, so infants are not likely to absorb clinically important amounts of the drug from milk. In addition, a newborn infants have received intravenous remdesivir therapy for Ebola with no serious adverse drug reactions. Given this limited information, it does not appear that mothers receiving remdesivir need to avoid nursing, but until more data are available, remdesivir should be used with careful infant monitoring during breastfeeding. The most common adverse effects reported after intravenous infusion include elevated aminotransferase and bilirubin levels and other liver function tests. Diarrhea, rash, renal impairment and hypotension have also been reported. (Author) (Review)

**Available from:** <https://www.ncbi.nlm.nih.gov/books/NBK556881/>

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### 20200525-1\*

#### **Favipiravir .**

Anon, (2020). Drugs and Lactation Database , 11 May 2020.

Favipiravir is an investigational antiviral drug that is being tested for use against the novel coronavirus disease, COVID-19. No information is available on the use of favipiravir during breastfeeding or its excretion into breastmilk. Favipiravir is a small molecule that is about 60% protein bound in plasma, so it would be expected to appear in breastmilk and be absorbed by the infant, probably in small amounts. In clinical trials, favipiravir has been well tolerated, but has caused liver enzyme abnormalities, gastrointestinal symptoms, and serum uric acid elevations.[1-3] If favipiravir is used in a nursing mother, these parameters should be monitored in the breastfed infant. (Author) (Guidelines)

**Available from:** <https://www.ncbi.nlm.nih.gov/books/NBK556878/>

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**20200522-25\***

**Horizontal transmission of severe acute respiratory syndrome coronavirus 2 to a premature infant: multiple organ injury and association with markers of inflammation.** Cook J; Harman K; Zoica B; et al, (2020). *The Lancet Child & Adolescent Health*, vol 4, no 7, July 2020, pp 548-551.

Reports the case of an infant with severe disease caused by SARS-CoV-2 resulting in multiple organ injury. (MB) (Case report)

Available from: [https://doi.org/10.1016/S2352-4642\(20\)30166-8](https://doi.org/10.1016/S2352-4642(20)30166-8)

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**20200521-44\***

**Severe COVID-19 during Pregnancy and Possible Vertical Transmission.**

Alzamora MC; Paredes T; Caceres D; et al, (2020). *American Journal of Perinatology*, 18 April 2020, online.

There are few cases of pregnant women with novel corona virus 2019 (COVID-19) in the literature, most of them with a mild illness course. There is limited evidence about in utero infection and early positive neonatal testing. A 41-year-old G3P2 with a history of previous cesarean deliveries and diabetes mellitus presented with a 4-day history of malaise, low-grade fever, and progressive shortness of breath. A nasopharyngeal swab was positive for COVID-19, COVID-19 serology was negative. The patient developed respiratory failure requiring mechanical ventilation on day 5 of disease onset. The patient underwent a cesarean delivery, and neonatal isolation was implemented immediately after birth, without delayed cord clamping or skin-to-skin contact. The neonatal nasopharyngeal swab, 16 hours after delivery, was positive for severe acute respiratory syndrome-coronavirus 2 (SARS-CoV-2) real-time polymerase chain reaction (RT-PCR), and immunoglobulin (Ig)-M and IgG for SARS-CoV-2 were negative. Maternal IgM and IgG were positive on postpartum day 4 (day 9 after symptom onset). We report a severe presentation of COVID-19 during pregnancy. To our knowledge, this is the earliest reported positive PCR in the neonate, raising the concern for vertical transmission. We suggest pregnant women should be considered as a high-risk group and minimize exposures for these reasons.

(Author) (Case report)

Available from: <https://doi.10.1055/s-0040-1710050>

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**20200521-24\***

**COVID-19 and Neonatal Respiratory Care: Current Evidence and Practical Approach.** Shalish W; Lakshminrusimha S; Manzoni P; et al, (2020). *American Journal of Perinatology*, 2 May 2020, online.

The novel coronavirus disease 2019 (COVID-19) pandemic has urged the development and implementation of guidelines and protocols on diagnosis, management, infection control strategies, and discharge planning. However, very little is currently known about neonatal COVID-19 and severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) infections. Thus, many questions arise with regard to respiratory care after birth, necessary protection to health care workers (HCW) in the delivery room and neonatal intensive care unit (NICU), and safety of bag and mask ventilation, noninvasive respiratory support, deep suctioning, endotracheal intubation, and mechanical ventilation. Indeed, these questions have created tremendous confusion amongst neonatal HCW. In this manuscript, we comprehensively reviewed the current evidence regarding COVID-19 perinatal transmission, respiratory outcomes of neonates born to mothers with COVID-19 and infants with documented SARS-CoV-2 infection, and the evidence for using different respiratory support modalities and aerosol-generating procedures in this specific population. The results demonstrated that to date, neonatal COVID-19 infection is uncommon, generally acquired postnatally, and associated with favorable respiratory outcomes. The reason why infants display a milder spectrum of disease remains unclear. Nonetheless, the risk of severe or critical illness in young patients exists. Currently, the recommended respiratory approach for infants with suspected or confirmed infection is not evidence based but should include all routinely used types of support, with the addition of viral filters, proper personal protective equipment, and placement of infants in isolation rooms, ideally with negative pressure. As information is changing rapidly, clinicians should frequently watch out for updates on the subject. (Author) (Review)

Available from: <https://doi.10.1055/s-0040-1710522>

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**20200520-32\***

**COVID-19 in Newborns and Infants—Low Risk of Severe Disease: Silver Lining or Dark Cloud?.** Rawat M; Chandrasekharan P; Hicar MD; et al, (2020). *American Journal of Perinatology*, 19 April 2020, online.

One hundred years after the 1918 influenza pandemic, we now face another pandemic with the severe acute respiratory syndrome–novel coronavirus-2 (SARS-CoV-2). There is considerable variability in the incidence of infection and severe disease following exposure to SARS-CoV-2. Data from China and the United States suggest a low prevalence of neonates, infants, and children, with those affected not suffering from severe disease. In this article, we speculate different theories why this novel agent is sparing neonates, infants, and young children. The low severity of SARS-CoV-2 infection in this population is associated with a high incidence of asymptomatic or mildly symptomatic infection making them efficient carriers. (Author) (Overview)

Available from: <https://doi.10.1055/s-0040-1710512>

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**20200519-22\***

**Perinatal aspects on the covid-19 pandemic: a practical resource for perinatal–neonatal specialists.** Mimouni F; Lakshminrusimha S; Pearlman SA; et al, (2020).

Journal of Perinatology , vol 40, no 5, May 2020, pp 820–826 .

Background Little is known about the perinatal aspects of COVID-19. Objective To summarize available evidence and provide perinatologists/neonatologists with tools for managing their patients. Methods Analysis of available literature on COVID-19 using Medline and Google scholar. Results From scant data: vertical transmission from maternal infection during the third trimester probably does not occur or likely it occurs very rarely. Consequences of COVID-19 infection among women during early pregnancy remain unknown. We cannot conclude if pregnancy is a risk factor for more severe disease in women with COVID-19. Little is known about disease severity in neonates, and from very few samples, the presence of SARS-CoV-2 has not been documented in human milk. Links to websites of organizations with updated COVID-19 information are provided. Infographics summarize an approach to the pregnant woman or neonate with suspected or confirmed COVID-19. Conclusions As the pandemic continues, more data will be available that could lead to changes in current knowledge and recommendations. (Author) (Overview)

Available from: <https://doi.org/10.1038/s41372-020-0665-6>

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**20200519-8\***

**Corona Virus Disease 2019, a growing threat to children?.** Yang P; Liu P; Li D; et al, (2020). Journal of Infection , vol 80, no 6, June 2020, pp 671-693.

Highlights: • COVID-19 was reported in Wuhan, China and spread rapidly to nationwide and 25 other countries. • Most of children COVID-19 are familial clusters with mild clinical symptoms. • Early isolation should be performed to protect underlying diseases children. • It is necessary to isolate the newborns immediately after delivery. (Author) (Correspondence)

Available from: [https://www.journalofinfection.com/article/S0163-4453\(20\)30105-5/fulltext](https://www.journalofinfection.com/article/S0163-4453(20)30105-5/fulltext)

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**20200519-7\***

**Clinical and CT imaging features of the COVID-19 pneumonia: Focus on pregnant women and children.** Liu H; Liu F; Li J; et al, (2020). Journal of Infection , vol 80, no 5, May 2020, pp E7-E13.

Background The ongoing outbreak of COVID-19 pneumonia is globally concerning. We aimed to investigate the clinical and CT features in the pregnant women and children with this disease, which have not been well reported. Methods 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. The clinical and CT features were analyzed and compared. Findings Compared with the non-pregnant adults group (n = 14), initial normal body temperature (9 [56%] and 16 [64%]), leukocytosis (8 [50%] and 9 [36%]) and elevated neutrophil ratio (14 [88%] and 20 [80%]), and lymphopenia (9 [56%] and 16 [64%]) were more common in the laboratory-confirmed (n = 16) and clinically-diagnosed (n = 25) pregnant groups. Totally 614 lesions were detected with predominantly peripheral and bilateral distributions in 54 (98%) and 37 (67%) patients, respectively. Pure ground-glass opacity (GGO) was the predominant presence in 94/131 (72%) lesions for the non-pregnant adults. Mixed consolidation and complete consolidation were more common in the laboratory-confirmed (70/161 [43%]) and clinically-diagnosed (153/322 [48%]) pregnant groups than 37/131 (28%) in the non-pregnant adults (P = 0.007, P < 0.001). GGO with reticulation was less common in 9/161 (6%) and 16/322 (5%) lesions for the two pregnant groups than 24/131 (18%) for the non-pregnant adults (P = 0.001, P < 0.001). The pulmonary involvement in children with COVID-19 was mild with a focal GGO or consolidation. Twenty-three patients underwent follow-up CT, revealing progression in 9/13 (69%) at 3 days whereas improvement in 8/10 (80%) at 6–9 days after initial CT scans. Interpretation Atypical clinical findings of pregnant women with COVID-19 could increase the difficulty in initial identification. Consolidation was more common in the pregnant groups. The clinically-diagnosed cases were vulnerable to more pulmonary involvement. 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. The exposure history and clinical symptoms were more helpful for screening in children versus chest CT. (Author) (Original research)

Available from: <https://doi.org/10.1016/j.jinf.2020.03.007>

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**20200518-11\***

**Antibodies in Infants Born to Mothers With COVID-19 Pneumonia.** Zeng H; Xu C; Fan J; et al, (2020). JAMA (Journal of the American Medical Association) , vol 323, no 18, 12 May 2020, pp 1848-1849.

This study describes results of IgM and IgG antibody testing from throat swabs of newborns born to mothers with COVID-19 pneumonia. (Author) (Correspondence)

Available from: <https://doi.org/10.1001/jama.2020.4861>

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**20200518-10\***

**Possible Vertical Transmission of SARS-CoV-2 From an Infected Mother to Her Newborn.** Dong L; Tian J; He S; et al, (2020). JAMA (Journal of the American Medical Association) , vol 323, no 18, 12 May 2020, pp 1846-1848.

This case report describes birth of an infant with elevated anti-SARS-CoV-2 IgM antibodies and cytokine levels to a mother with polymerase chain reaction-confirmed coronavirus disease 2019 (COVID-19) despite no physical contact. (Author) (Correspondence)

Available from: <https://doi.org/10.1001/jama.2020.4621>

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**20200515-13\***

**COVID-19 in a 26-week preterm neonate.** Piersigilli F; Carkeek K; Hocq C; et al, (2020). The Lancet Child & Adolescent Health , vol 4, no 6, June 2020, pp 476-478.

Reports the case of an extremely preterm infant with COVID-19. (MB) (Case report)

Available from: [https://doi.org/10.1016/S2352-4642\(20\)30140-1](https://doi.org/10.1016/S2352-4642(20)30140-1)

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**20200515-12\***

**Maintaining safety and service provision in human milk banking: a call to action in response to the COVID-19 pandemic.** Shenker N on behalf of the Virtual Collaborative Network of Human Milk Banks and Associations, (2020). The Lancet Child & Adolescent Health , vol 4, no 7, July 2020, pp 484-485.

Calls for policy makers to ensure that neonatal nutrition is an essential focus during emergencies, for increased funding into research to optimise human milk banking and for investment in innovation across all aspects of milk banking systems during the COVID-19 pandemic. (MB) (Commentary)

Available from: [https://doi.org/10.1016/S2352-4642\(20\)30134-6](https://doi.org/10.1016/S2352-4642(20)30134-6)

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**20200515-10\***

**Probable congenital SARS-CoV-2 infection in a neonate born to a woman with active SARS-CoV-2 infection.** Kirtsman M; Diambomba Y; Poutanen SM; et al, (2020). Canadian Medical Association Journal (CMAJ) , 14 May 2020, online.

KEY POINTS • Neonates born to women with confirmed or suspected severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection should have testing of the nasopharynx, placenta and cord blood as soon as possible after birth, after thorough cleaning of the neonate. • Sample timing, collection methods and types of samples should be documented to help differentiate congenital, intrapartum and postpartum acquisition of SARS-CoV-2 infection in neonates. (Author) (Case report)

Available from: <https://doi.org/10.1503/cmaj.200821>

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**20200515-8\***

**Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study.** Robertson T; Carter ED; Chou VB; et al, (2020). The Lancet Global Health , 12 May 2020, online.

Background While the COVID-19 pandemic will increase mortality due to the virus, it is also likely to increase mortality indirectly. In this study, we estimate the additional maternal and under-5 child deaths resulting from the potential disruption of health systems and decreased access to food. Methods We modelled three scenarios in which the coverage of essential maternal and child health interventions is reduced by 9.8–51.9% and the prevalence of wasting is increased by 10–50%. Although our scenarios are hypothetical, we sought to reflect real-world possibilities, given emerging reports of the supply-side and demand-side effects of the pandemic. We used the Lives Saved Tool to estimate the additional maternal and under-5 child deaths under each scenario, in 118 low-income and middle-income countries. We estimated additional deaths for a single month and extrapolated for 3 months, 6 months, and 12 months. Findings Our least severe scenario (coverage reductions of 9.8–18.5% and wasting increase of 10%) over 6 months would result in 253 500 additional child deaths and 12 200 additional maternal deaths. Our most severe scenario (coverage reductions of 39.3–51.9% and wasting increase of 50%) over 6 months would result in 1 157 000 additional child deaths and 56 700 additional maternal deaths. These additional deaths would represent an increase of 9.8–44.7% in under-5 child deaths per month, and an 8.3–38.6% increase in maternal deaths per month, across the 118 countries. Across our three scenarios, the reduced coverage of four childbirth interventions (parenteral administration of uterotonics, antibiotics, and anticonvulsants, and clean birth environments) would account for approximately 60% of additional maternal deaths. The increase in wasting prevalence would account for 18–23% of additional child deaths and reduced coverage of antibiotics for pneumonia and neonatal sepsis and of oral rehydration solution for diarrhoea would together account for around 41% of additional child deaths. Interpretation Our estimates are based on tentative assumptions and represent a wide range of outcomes. Nonetheless, they show that, if routine health care is disrupted and access to food is decreased (as a result of unavoidable shocks, health system collapse, or intentional choices made in responding to the pandemic), the increase in child and maternal deaths will be devastating. We hope these numbers add context as policy makers establish guidelines and allocate resources in the days and months to come. Funding Bill & Melinda Gates Foundation,

### 20200515-3\*

**Clinical Characteristics and Outcomes of Hospitalized and Critically Ill Children and Adolescents with Coronavirus Disease 2019 (COVID-19) at a Tertiary Care Medical Center in New York City.** Chao JY; Derespina KM; Herold BC; et al, (2020). *The Journal of Pediatrics*, 11 May 2020, online.

**Objective** To describe the clinical profiles and risk factors for critical illness in hospitalized children and adolescents with COVID-19. **Study design** Children 1 month to 21 years with COVID-19 from a single tertiary care children's hospital between March 15-April 13, 2020 were included. Demographic and clinical data were collected. Results 67 children tested positive for COVID-19; 21 (31.3%) were managed as outpatients. Of 46 admitted patients, 33 (72%) were admitted to the general pediatric medical unit and 13 (28%) to the pediatric intensive care unit (PICU). Obesity and asthma were highly prevalent but not significantly associated with PICU admission ( $p=0.99$ ). Admission to the PICU was significantly associated with higher C-reactive protein, procalcitonin, and pro-B type natriuretic peptide levels and platelet counts ( $p<0.05$  for all). Patients in the PICU were more likely to require high-flow nasal cannula ( $p=0.0001$ ) and were more likely to have received Remdesivir through compassionate release ( $p<0.05$ ). Severe sepsis and septic shock syndromes were observed in 7 (53.8%) PICU patients. Acute respiratory distress syndrome (ARDS) was observed in 10 (77%) PICU patients, 6 of whom (46.2%) required invasive mechanical ventilation for a median of 9 days. Of the 13 patients in the PICU, 8 (61.5%) were discharged home, and 4 (30.7%) patients remain hospitalized on ventilatory support at day 14. One patient died after withdrawal of life-sustaining therapy because of metastatic cancer. **Conclusions** We describe a higher than previously recognized rate of severe disease requiring PICU admission in pediatric patients admitted to the hospital with COVID-19. The first reports of novel coronavirus disease 2019 (COVID-19) noted the infrequency of disease in children with one of the earliest studies including only 9 children under 14 years of age among 1,011 total patients (0.89%) (1,2). Since then, multiple reports have described children affected by COVID-19 with varying degrees of severity. (3, 4, 5) Epidemiologic studies have consistently demonstrated that children are at lower risk of developing severe symptoms or critical illness compared with adults. (5,6) In a study of 2,143 pediatric patients in China with confirmed ( $n=731$ ) or suspected ( $n=1412$ ) COVID-19, over one-half had only mild illness, and <1% had severe or critical illness (5). In another study from China describing 36 children, no severe or critically ill case was observed. (6) The only study to describe children requiring admission to a pediatric intensive care unit (PICU) was a study from Spain of 365 children tested for COVID-19. (7) The authors found that 41 (11%) of children tested had virus detected; 25/41 (61%) required hospitalization, and 4/41 (16%) were admitted to the PICU. Details of clinical characteristics were not described. Overall, the incidence of critical illness in children with COVID-19 is not well known, with limited data on possible associated risk factors. The objectives of this study were (1) to describe the clinical profile of critically ill children with SARS-CoV-2 infection admitted to our tertiary care facility, and (2) to study the risk factors associated with critical illness. (Author) (Original research)

Available from: <https://doi.org/10.1016/j.jpeds.2020.05.006>

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### 20200515-2\*

**Delivery Room Preparedness and Early Neonatal Outcomes During COVID19 Pandemic in New York City.** Perlman J; Oxford C; Chang C; et al, (2020). *Pediatrics*, 14 May 2020, online.

Since the initial report of a novel Coronavirus SARS-CoV-2 in Wuhan in December 2019 there has been widespread dissemination of disease worldwide. The impact on the neonatal population has been reported almost exclusively from China. The study goal is to characterize for the first time in the United States, the delivery room (DR) management and early course of infants born to COVID19 positive mothers, during three weeks at the peak of the pandemic in NYC, and to describe the challenges and approaches developed to meet these excessive needs. (Author) (Original research)

Available from: <https://doi.org/10.1542/peds.2020-1567>

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### 20200514-72\*

**Breastfeeding: Donors [written answer].** House of Commons, (2020). Hansard, Written question 37944, 20 April 2020.

Jo Churchill responds to a written question asked by Daisy Cooper to the Secretary of State for Health and Social Care, regarding additional funding to scale up milk banks to help meet demand for donor milk during the COVID-19 outbreak. (LDO) (Parliamentary question)

Available from: <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2020-04-20/37944/>

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**20200514-65\***

**Coronavirus disease 2019 (COVID-19) in pregnant women: A report based on 116 cases.**

Yan J; Guo J; Fan C; et al, (2020). American Journal of Obstetrics & Gynecology (AJOG) , 23 April 2020, online.

Background The coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is a global public health emergency. Data on the effect of COVID-19 in pregnancy are limited to small case series. Objectives To evaluate the clinical characteristics and outcomes in pregnancy and the vertical transmission potential of SARS-CoV-2 infection. Study Design Clinical records were retrospectively reviewed for 116 pregnant women with COVID-19 pneumonia from 25 hospitals in China between January 20 and March 24, 2020. Evidence of vertical transmission was assessed by testing for SARS-CoV-2 in amniotic fluid, cord blood, and neonatal pharyngeal swab samples. Results The median gestational age on admission was 38+0 (IQR 36+0-39+1) weeks. The most common symptoms were fever (50.9%, 59/116) and cough (28.4%, 33/116); 23.3% (27/116) patients presented without symptoms. Abnormal radiologic findings were found in 96.3% (104/108) of cases. There were eight cases (6.9%, 8/116) of severe pneumonia but no maternal deaths. One of eight patients (1/8) that presented in the first- and early-second-trimester had a missed spontaneous abortion. Twenty-one of 99 patients (21.2%, 21/99) that had delivered had preterm birth, including six with preterm premature ruptured of membranes. The rate of spontaneous preterm birth before 37 weeks was 6.1% (6/99). There was one case of severe neonatal asphyxia that resulted in neonatal death. Eighty-six of the 100 neonates that had testing for SARS-CoV-2 had negative results, of these ten neonates had paired amniotic fluid and cord blood samples that were tested negative for SARS-CoV-2. Conclusions SARS-CoV-2 infection during pregnancy is not associated with an increased risk of spontaneous abortion and spontaneous preterm birth. There is no evidence of vertical transmission of SARS-CoV-2 infection when the infection manifests during the third-trimester of pregnancy. (Author) (Case report)

Available from: <https://doi.org/10.1016/j.ajog.2020.04.014>

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**20200514-60\***

**Evidence for and against vertical transmission for SARS-CoV-2 (COVID-19).**

Lamouroux A; Attie-Bitach T; Martinovic J; et al, (2020). American Journal of Obstetrics & Gynecology (AJOG) , 3 May 2020, online.

COVID-19 can severely affect pregnant women and the issue of vertical transmission of sars-cov-2 has also emerged. Sars-cov-2 could be recovered by real-time (RT) PCR from nasal and throat swabs, sputum and feces of symptomatic patients including neonates but not from vaginal swabs, amniotic fluid, placenta, cord blood, neonatal blood or breast milk. Viremia was present in 1% of symptomatic adults. We identified 12 articles published between February 10th and April 4th 2020 reporting on 68 deliveries and 71 neonates with maternal infection in the third trimester of pregnancy. Perinatal exposure, including mode of delivery and time interval from delivery to the diagnosis of neonatal infection are crucial in differentiating congenital from perinatal infection. Neonatal infection is usually asymptomatic. Neonatal infection was diagnosed within 48 hours of life in 4 cases. Detection rates of real-time PCR and the interpretation of IgM and IgG antibodies levels in cord and neonatal blood are discussed in relation with the immaturity of the fetal and neonatal immune system. (Author) (Review)

Available from: <https://doi.org/10.1016/j.ajog.2020.04.039>

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**20200514-36\***

**COVID-19 and Infant Formula Feeding: Frequently Asked Questions.**

Perinatal Services BC, (2020). Perinatal Services BC , 14 May 2020.

This handout is intended to provide families who are using infant formula, or are thinking about doing so, with information on how to safely feed their baby during the COVID-19 pandemic. (Author) (Fact sheet)

Available from: <http://www.perinatalservicesbc.ca/Documents/Resources/Alerts/FAQ-Covid19-Formula-Feeding.pdf>

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**20200514-12\***

**COVID-19 and Breastfeeding: Frequently Asked Questions.**

Perinatal Services BC, (2020). Perinatal Services BC , 14 May 2020.

This handout is intended to provide families with information about breastfeeding their baby / young child during the COVID-19 pandemic. (Author) (Fact sheet)

Available from: <http://www.perinatalservicesbc.ca/Documents/Resources/Alerts/FAQ-Covid19-Breastfeeding.PDF>

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**20200514-10\***

**Coronavirus: Children affected by rare Kawasaki-like disease.**

Anon, (2020). BBC News , 14 May 2020.

Reports on a rare inflammatory disease linked to coronavirus among children in the United Kingdom and United States of America. Symptoms include a rash, swollen glands in the neck and dry and cracked lips. (LDO) (News item)

Available from: <https://www.bbc.co.uk/news/health-52648557>

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**20200514-9\***

**Is there evidence of intra-uterine vertical transmission potential of COVID-19 infection in samples tested by quantitative RT-PCR?**

Cheruiyot I; Henry BM; Lippi G, (2020). *European Journal of Obstetrics & Gynecology and Reproductive Biology* , vol 249, June 2020, pp 100-101.

Systematic review of COVID-19 in pregnant women and the risk of intrauterine vertical transmission. The findings suggest that there is currently no evidence of mother-to-child transmission in the third trimester. The potential of transmission in the first and second trimesters is still unknown. (LDO) (Correspondence)

**Available from:** <https://doi.org/10.1016/j.ejogrb.2020.04.034>

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**20200514-8\***

**Oligohydramnion in COVID19.** Aliji N; Aliu F, (2020). *European Journal of Obstetrics & Gynecology and Reproductive Biology* , vol 249, June 2020, p 102.

Discusses the case of a 27-year-old woman at 34 weeks' gestation who presented with oligohydramnios and symptoms of COVID-19. The patient underwent a caesarean section due to fetal distress. The mother later tested positive and the premature infant tested negative for the virus. (LDO) (Correspondence)

**Available from:** <https://doi.org/10.1016/j.ejogrb.2020.04.047>

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**20200514-7\***

**Obstetric network reorganization during the COVID-19 pandemic:**

**Suggestions from an Italian regional model.** Giannubilo SR; Giannella L; Carpini GD; et al, (2020). *European Journal of Obstetrics & Gynecology and Reproductive Biology* , vol 249, June 2020, pp 103-105.

Discusses the obstetric network model used in Italy during the COVID-19 outbreak. The model includes separate hospital entrances and exits, local protocols for the triage of pregnant women with symptoms, single occupancy rooms, the use of personal protective equipment, restricted numbers of visitors, surgical masks during breastfeeding, the swabbing of all neonates born to positive or high suspicion mothers, and the discharge of asymptomatic women two days after delivery. (LDO)(Correspondence)

**Available from:** <https://doi.org/10.1016/j.ejogrb.2020.04.062>

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**20200514-6\***

**Re: Novel Coronavirus COVID-19 in late pregnancy: Outcomes of first nine cases in an inner city London hospital.**

Govind A; Essien S; Kartikeyan A; et al, (2020). *European Journal of Obstetrics & Gynecology and Reproductive Biology* , 6 May 2020, online.

Discusses the cases of nine mothers with COVID-19 who delivered at an inner-city London hospital. Three women delivered by emergency caesarean section, six women underwent elective caesarean section and one woman delivered vaginally. Only one of the nine infants tested positive for the virus. (LDO) (Correspondence)

**Available from:** <https://doi.org/10.1016/j.ejogrb.2020.05.004>

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**20200514-5\***

**COVID-19 during pregnancy: Potential risk for neurodevelopmental disorders in neonates?.**

Martins-Filho PR; Tanajura DM; Santos Jr HP; et al, (2020). *European Journal of Obstetrics & Gynecology and Reproductive Biology* , 10 May 2020, online.

The authors hypothesise that cytokine storms and hyperinflammation found in pregnant women with SARS-CoV-2 may increase the risk for neurodevelopmental disorders in neonates. (LDO) (Correspondence)

**Available from:** <https://doi.org/10.1016/j.ejogrb.2020.05.015>

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**20200514-2\***

**A Case Series of the 2019 Novel Coronavirus (SARS-CoV-2) in Three Febrile Infants in New York.**

Feld L; Belfer J; Kabra R; et al, (2020). *Pediatrics* , 13 May 2020, online.

No abstract available (Case report)

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**20200514-1\***

**Unfavorable outcomes in pregnant patients with COVID-19 outside Wuhan, China.**

Huang W; Zhao Z; He Z; et al, (2020). *Journal of Infection* , 13 May 2020, online.

Correspondence reporting on 8 cases of SARS-CoV-2 infection during late pregnancy that resulted in severe maternal and neonatal complications. (MB) (Correspondence)

**Available from:** <https://doi.org/10.1016/j.jinf.2020.05.014>

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### 20200513-30\*

**Detection of SARS-CoV-2 in Placental and Fetal Membrane Samples.** Penfield CA; Brubaker SG; Limaye MA; et al, (2020). American Journal of Obstetrics & Gynecology MFM , 8 May 2020, online.

Study on the presence of SARS-CoV-2 in placental and fetal membrane samples in a series of COVID-19 positive mothers. Three out of 11 swabs tested positive for SARS-CoV-2. None of the infants tested positive or displayed symptoms of COVID-19 infection. This is the first study to demonstrate the presence of SARS-CoV-2 RNA in placental or membrane samples. (LDO) (Original research)

**Available from:** <https://doi.org/10.1016/j.ajogmf.2020.100133>

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### 20200513-16\*

**Safe delivery for pregnancies affected by COVID-19.** Qi H; Luo X; Zheng Y; et al, (2020). BJOG: An International Journal of Obstetrics and Gynaecology , vol 127, no 8, July 2020, pp 927-929.

Discusses existing guidelines on the safe delivery of infants in pregnancies affected by COVID-19. Includes the timing of delivery, requirements for caesarean section, prevention of infection in the delivery room, anaesthesia and monitoring the neonate. (LDO) (Overview)

**Available from:** <https://doi.org/10.1111/1471-0528.16231>

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### 20200513-4\*

**Proposal for prevention and control of the 2019 novel coronavirus disease in newborn infants.** Li F; Feng ZC; Shi Y; et al, (2020). Archives of Disease in Childhood: Fetal and Neonatal Edition , 4 March 2020, online.

Proposal for the prevention and control of COVID-19 in newborn infants. Discusses the preparation of the delivery or operating room, clinical manifestations of infected neonates, discharge requirements, the use of personal protective equipment and psychological support for parents and medical staff. This proposal will be continuously modified based on accumulated clinical evidence. (LDO) (Guidelines)

**Available from:** <http://dx.doi.org/10.1136/archdischild-2020-318996>

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### 20200512-11\*

**Characteristics and outcomes of pregnant women admitted to hospital with confirmed SARS-CoV-2 infection in UK: national population based cohort study.** Knight M; Bunch K; Vousden N; et al, (2020). BMJ , 8 June 2020, online.

**Objectives** To describe a national cohort of pregnant women admitted to hospital with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in the UK, identify factors associated with infection, and describe outcomes, including transmission of infection, for mothers and infants. **Design** Prospective national population based cohort study using the UK Obstetric Surveillance System (UKOSS). **Setting** All 194 obstetric units in the UK. **Participants** 427 pregnant women admitted to hospital with confirmed SARS-CoV-2 infection between 1 March 2020 and 14 April 2020. **Main outcome measures** Incidence of maternal hospital admission and infant infection. Rates of maternal death, level 3 critical care unit admission, fetal loss, caesarean birth, preterm birth, stillbirth, early neonatal death, and neonatal unit admission. **Results** The estimated incidence of admission to hospital with confirmed SARS-CoV-2 infection in pregnancy was 4.9 (95% confidence interval 4.5 to 5.4) per 1000 maternities. 233 (56%) pregnant women admitted to hospital with SARS-CoV-2 infection in pregnancy were from black or other ethnic minority groups, 281 (69%) were overweight or obese, 175 (41%) were aged 35 or over, and 145 (34%) had pre-existing comorbidities. 266 (62%) women gave birth or had a pregnancy loss; 196 (73%) gave birth at term. Forty one (10%) women admitted to hospital needed respiratory support, and five (1%) women died. Twelve (5%) of 265 infants tested positive for SARS-CoV-2 RNA, six of them within the first 12 hours after birth. **Conclusions** Most pregnant women admitted to hospital with SARS-CoV-2 infection were in the late second or third trimester, supporting guidance for continued social distancing measures in later pregnancy. Most had good outcomes, and transmission of SARS-CoV-2 to infants was uncommon. The high proportion of women from black or minority ethnic groups admitted with infection needs urgent investigation and explanation. **Study registration** ISRCTN 40092247. (Author) (Original research)

**Available from:** <https://doi.org/10.1136/bmj.m2107>

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### 20200512-3\*

**Hyperinflammatory shock in children during COVID-19 pandemic.** Riphagen S; Gomez X; Gonzalez-Martinez C; et al, (2020). The Lancet , vol 395, no 10237, 23 May 2020, pp 1607-1608.

Describes an unprecedented cluster of eight children with hyperinflammatory shock, which the authors suggest represent a new phenomenon affecting previously asymptomatic children with SARS-CoV-2 infection manifesting as a hyperinflammatory syndrome with multiorgan involvement similar to Kawasaki disease shock syndrome. (MB) (Case report)

**Available from:** [https://doi.org/10.1016/S0140-6736\(20\)31094-1](https://doi.org/10.1016/S0140-6736(20)31094-1)

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**20200511-55\***

**Coronavirus Disease 2019 (COVID-19) and pregnancy: what obstetricians need to know.** Rasmussen SA; Smulian JC; Lednicky JA; et al, (2020). American Journal of Obstetrics & Gynecology (AJOG) , vol 222, no 5, May 2020, pp 415-426.

This expert review is aimed at practising obstetricians and highlights current research on COVID-19, SARS and MERS during pregnancy. The review includes information on infection control, diagnostic testing, in utero transmission and breastfeeding. (LDO) (Review)

**Available from:** <https://doi.org/10.1016/j.ajog.2020.02.017>

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**20200507-9\***

**Coronavirus: Concerns for wellbeing of babies born in lockdown.** Richardson H, (2020). BBC News , 7 May 2020.

Concerns for the wellbeing of babies born in lockdown are being raised, as parents struggle to access regular support services. (Author) (News item)

**Available from:** <https://www.bbc.co.uk/news/education-52560388>

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**20200506-26\***

**Classification system and case definition for SARS-CoV-2 infection in pregnant women, fetuses, and neonates.** Shah PS; Diambomba Y; Acharya G; et al, (2020). Acta Obstetrica et Gynecologica Scandinavica , vol 99, no 5, May 2020, pp 565-568.

The authors develop a classification system and case definition for maternal-fetal-neonatal SARS-CoV-2 infections. The classification system includes five categories for the likelihood of infection: (a) confirmed, (b) probable, (c) possible, (d) unlikely, and (e) not infected. (LDO) (Editorial)

**Available from:** <https://doi.org/10.1111/aogs.13870>

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**20200506-8\***

**Laboratory Findings of COVID-19 Infection are Conflicting in Different Age Groups and Pregnant Women: A Literature Review.** Vakili S; Savardashtaki A; Jamalnia S; et al, (2020). MedRxiv , 29 April 2020, online.

Coronavirus disease 2019 (COVID-19), a new type and rapidly spread viral pneumonia, is now producing an outbreak of pandemic proportions. The clinical features and laboratory results of different age groups are different due to the general susceptibility of the disease. The laboratory findings of COVID-19 in pregnant women are also conflicting. Para-clinical investigations including laboratory tests and radiologic findings play an important role in early diagnosis and treatment monitoring of severe acute respiratory syndrome and coronavirus-2 (SARS-CoV-2). The majority of previous reports on the SARS-CoV-2 laboratory results were based on data from the general population and limited information is available based on age difference and pregnancy status. This review aimed to describe the COVID-19 laboratory findings in neonates, children, adults, elderly and pregnant women altogether for the first time. The most attracting and reliable markers of COVID-19 in patients were: normal C-reactive protein (CRP) and very different and conflicting laboratory results regardless of clinical symptoms in neonates, normal or temporary elevated CRP, conflicting WBC count results and procalcitonin elevation in children, lymphopenia and elevated lactate dehydrogenase (LDH) in adult patients, lymphopenia and elevated CRP and LDH in the elderly people and high CRP, leukocytosis and elevated neutrophil ratio in pregnant women. (Author) (Review) [This article is a preprint and has not been peer-reviewed. It reports new medical research that has yet to be evaluated and so should not be used to guide clinical practice.]

**Available from:** <https://doi.org/10.1101/2020.04.24.20078568>

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**20200506-1\***

**The curious case of COVID-19 in children.** Gupta S; Malhotra N; Gupta N; et al, (2020). The Journal of Pediatrics , vol 222, July 2020, pp 258-259.

Correspondence presenting data on the epidemiological differences in childhood cases of three coronavirus diseases (SARS, MERS and COVID-19) and the H1N1 influenza pandemic (2009). (MB) (Correspondence)

**Available from:** <https://doi.org/10.1016/j.jpeds.2020.04.062>

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**20200505-9\***

**Women's Rights in Childbirth Must be Upheld During the Coronavirus Pandemic.** International Confederation of Midwives, (2020). The Hague, The Netherlands: International Confederation of Midwives , 2020, 3 pages.

Guidance for midwives on how to uphold the rights of women and their newborns during the COVID-19 pandemic. Includes recommendations on consent, birth partners, breastfeeding and reproductive health care. (LDO) (Position statement)

**Available from:** [https://www.internationalmidwives.org/assets/files/news-files/2020/03/icm-statement\\_upholding-womens-rights-during-covid19-5e83ae2ebfe59.pdf](https://www.internationalmidwives.org/assets/files/news-files/2020/03/icm-statement_upholding-womens-rights-during-covid19-5e83ae2ebfe59.pdf)

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**20200505-4\***

**Atypical presentation of COVID-19 in young infants.** Nathan N; Prevost B; Corvol H; et al, (2020). The Lancet , vol 395, no 10235, 9 May 2020, p 1481.

Describes the cases of five infants diagnosed with COVID-19 who were admitted to hospital with fever but no respiratory symptoms. (MB) (Case report)

**Available from:** [https://doi.org/10.1016/S0140-6736\(20\)30980-6](https://doi.org/10.1016/S0140-6736(20)30980-6)

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**20200505-2\***

**Interim Guidance for Basic and Advanced Life Support in Children and Neonates With Suspected or Confirmed COVID-19.** Topjian A; Aziz K; Kamath-Rayne BD; et al, (2020). Pediatrics , 4 May 2020, online.

Interim guidance from the American Heart Association (AHA), produced in collaboration with the American Academy of Pediatrics, American Association for Respiratory Care, American College of Emergency Physicians, The Society of Critical Care Anesthesiologists, and American Society of Anesthesiologists, and with the support of the American Association of Critical Care Nurses and National EMS Physicians, for the treatment of victims of cardiac arrest with suspected or confirmed COVID-19. (MB) (Guidelines)

**Available from:** <https://doi.org/10.1542/peds.2020-1405>

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**20200505-1\***

**Early Neonatal SARS-CoV-2 Infection Manifesting With Hypoxemia**

**Requiring Respiratory Support.** Sinelli MT; Paterlini G; Citterio M; et al, (2020). Pediatrics , 4 May 2020, online.

We describe a case of neonatal SARS-CoV-2 infection, diagnosed 3 days after birth, and manifesting with silent hypoxemia, requiring respiratory support. (Author) (Case report)

**Available from:** <https://doi.org/10.1542/peds.2020-1121>

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**20200504-2\***

**Coronavirus: Parents urged to keep up child vaccinations.** Kleinman Z, (2020). BBC News , 2 May 2020.

NHS England says it is still offering essential vaccinations and is appealing to parents not to miss appointments for their children during the pandemic. (Author) (News item)

**Available from:** <https://www.bbc.co.uk/news/health-52499701>

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**20200501-5\***

**Coronavirus: high-risk pregnancies could be missed due to pandemic, experts warn.** Cowburn A, (2020). The Independent , 1 May 2020.

Reports that Gill Walton, CEO of the Royal College of Midwives, has warned of a potential rise in stillbirths and neonatal deaths because high-risk pregnancies may be missed owing to a reluctance among pregnant women to present themselves to maternity services during the current coronavirus pandemic. However, she added that technology has meant that follow-ups on women who missed scans and appointments has improved through virtual contact between women and midwives and maternity services. Her comments were made during a session of Westminster's health and social care committee. (JSM) (News item)

**Available from:** <https://www.independent.co.uk/news/uk/politics/coronavirus-concerns-raised-highrisk-pregnancies-could-be-missed-due-to-pandemic-a9493856.html>

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**20200501-1\***

**Vaccine Update.** Public Health England, (2020). London: PHE , no 307, April 2020, pp 1-14.

A special edition of Vaccine Update to mark World Immunization Week (WIW), which this year runs from 26th-30th April, and is the World Health Organization's annual celebration of immunisation, best practice, new advances and the work of immunisers, held with the aim of promoting the use of vaccines to protect people of all ages from disease, reflected in the name of this year's theme #VaccinesWork for All. In this, The International Year of the Nurse and Midwife, WHO and Public Health England acknowledge the crucial role played by nurses and midwives as advocates of vaccination throughout the life course. Includes sections on the delivery of immunisation services during the coronavirus pandemic, and vaccinations offered during the antenatal and postnatal periods. (JSM) (Overview)

**Available from:**

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/882560/PHE\\_11652\\_VU\\_307\\_April\\_2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/882560/PHE_11652_VU_307_April_2020.pdf)

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**20200430-3\***

**US NICUs and donor milk banks brace for COVID-19.** Furlow B, (2020). The Lancet Child & Adolescent Health , vol 4, no 5, May 2020, p 355.

Reports on preparations being made by neonatal intensive care units (NICUs) and donor human milk programmes across the United States to continue to provide services during the coronavirus disease 2019 (COVID-19) pandemic. (MB) (Commentary)

**Available from:** [https://doi.org/10.1016/S2352-4642\(20\)30103-6](https://doi.org/10.1016/S2352-4642(20)30103-6)

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**20200429-37\***

**Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Vertical Transmission in Neonates Born to Mothers With Coronavirus Disease 2019 (COVID-19) Pneumonia.** Hu X; Gao J; Luo X; et al , (2020). Obstetrics & Gynecology , 24 April 2020, online.

Research letter reporting on seven cases of Covid-19 during late pregnancy and subsequent neonatal outcomes. (MB) (Original research)

**Available from:** <https://doi.org/10.1097/AOG.0000000000003926>

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**20200429-9\***

**Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected. Interim guidance .** World Health Organization, (2020). Geneva: WHO , 13 March 2020.

This is the second edition (version 1.2) of this document, which was originally adapted from Clinical management of severe acute respiratory infection when MERS-CoV infection is suspected (WHO, 2019). It is intended for clinicians involved in the care of adult, pregnant, and paediatric patients with or at risk for severe acute respiratory infection (SARI) when infection with the COVID-19 virus is suspected. Considerations for paediatric patients and pregnant women are highlighted throughout the text. It is not meant to replace clinical judgment or specialist consultation but rather to strengthen clinical management of these patients and to provide up-to-date guidance. Best practices for infection prevention and control (IPC), triage and optimized supportive care are included. (Author) (Guidelines)

**Available from:** [https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected)

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**20200429-7\***

**Frequently asked questions: Breastfeeding and COVID-19 for health care workers.** World Health Organization, (2020). Geneva: World Health Organization , 28 April 2020.

This FAQ complements the WHO interim guidance: Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected (13 March 2020 [www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-\(ncov\)-infection-is-suspected](http://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected) ) and provides responses to questions that have arisen about the recommendations. The interim guidance and FAQ reflect: i. the available evidence regarding transmission risks of COVID-19 through breastmilk; ii. the protective effects of breastfeeding and skin-to-skin contact, and, iii. the harmful effects of inappropriate use of infant formula milk. The FAQ also draws on other WHO recommendations on Infant and Young Child Feeding and the Interagency Working Group Operational Guidance on Infant and Young Child Feeding in Emergencies. A decision tree shows how these recommendations may be implemented by health workers in maternity services and community settings, as part of daily work with mothers and families. [www.who.int/news-room/q-a-detail/q-a-on-covid-19-and-breastfeeding](http://www.who.int/news-room/q-a-detail/q-a-on-covid-19-and-breastfeeding). (Author) (Fact sheet)

**Available from:** [https://www.who.int/docs/default-source/maternal-health/faqs-breastfeeding-and-covid-19.pdf?sfvrsn=d839e6c0\\_1](https://www.who.int/docs/default-source/maternal-health/faqs-breastfeeding-and-covid-19.pdf?sfvrsn=d839e6c0_1)

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**20200429-5\***

**A call for action for COVID-19 surveillance and research during pregnancy.**

Buekens P; Alger J; Bréart G; et al, (2020). The Lancet Global Health , 22 April 2020, online.

Calls for cooperation between countries in order to address the gaps in knowledge about COVID-19 and its effect on pregnant women and their babies. (MB) (Commentary)

**Available from:** [https://doi.org/10.1016/S2214-109X\(20\)30206-0](https://doi.org/10.1016/S2214-109X(20)30206-0)

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**20200428-26\***

**Coronavirus alert: Rare syndrome seen in UK children.** Roberts M, (2020). BBC News , 27 April 2020.

Reports on severe and unusual symptoms in children that may be linked to COVID-19. Features include a high temperature, low blood pressure, inflammation of the heart and abnormal blood test results. 20 cases in England have been noted by clinicians so far. (LDO) (News item)

**Available from:** <https://www.bbc.co.uk/news/health-52439005>



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**20200428-2\***

**SARS-CoV-2 Infection in Children.** Lu X; Zhang L; Du H; et al, (2020). New England Journal of Medicine , 23 April 2020, online.

Correspondence describing a spectrum of illness in 1391 children with SARS-CoV-2 infection. (MB) (Correspondence)

**Available from:** <http://dx.doi.org/10.1056/NEJMc2005073>

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**20200427-37\***

**Neurosurgery in an infant with COVID-19.** Carrabba G; Tariciotti L; Guez S; et al, (2020). The Lancet , vol 395, no 10234, 2 May 2020, p E76.

Case report of an 8-month-old baby with a complex hydrocephalus who had a shunt malfunction during the COVID-19 pandemic. (MB) (Correspondence)

**Available from:** [https://doi.org/10.1016/S0140-6736\(20\)30927-2](https://doi.org/10.1016/S0140-6736(20)30927-2)

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**20200427-7\***

**Exclusive: National alert as 'coronavirus-related condition may be emerging in children'.** West D, (2020). Health Service Journal , 27 April 2020, online.

A serious coronavirus-related syndrome may be emerging in the UK, according to an "urgent alert" issued to doctors, following a rise in cases in the last two to three weeks, HSJ has learned. (Author) (News item)

**Available from:** <https://www.hsj.co.uk/>

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**20200427-4\***

**Managing COVID-19-Positive Maternal–Infant Dyads: An Italian**

**Experience.** Salvatori G; De Rose DU; Concato C; et al, (2020). Breastfeeding Medicine , vol 15, no 5, May 2020, pp 347-348.

Describes the management and breastfeeding experience of 32 COVID-19 positive mothers and their newborns. (MB) (Correspondence)

**Available from:** <https://doi.org/10.1089/bfm.2020.0095>

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**20200424-8\***

**Novel Coronavirus Infection in Hospitalized Infants Under 1 Year of Age in**

**China.** Wei M; Yuan J; Liu Y; et al, (2020). JAMA (Journal of the American Medical Association) , vol 323, no 13, 7 April 2020, pp 1313-1314.

This study characterizes the demographic, epidemiologic, and clinical characteristics of hospitalized infants diagnosed with coronavirus disease 2019 infection between December 8, 2019, and February 6, 2020, in China. (Author) (Correspondence)

**Available from:** <https://doi.org/10.1001/jama.2020.2131>

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**20200424-5\***

**Experience of Clinical Management for Pregnant Women and Newborns with Novel Coronavirus Pneumonia in Tongji Hospital, China..** Wang S; Zhou X; Lin X; et al, (2020). Current Medical Science , 26 March 2020, online.

Based on the New Diagnosis and Treatment Scheme for Novel Coronavirus Infected Pneumonia (Trial Edition 5), combined with our current clinical treatment experience, we recently proposed a revision of the first edition of "Guidance for maternal and fetal management during pneumonia epidemics of novel coronavirus infection in the Wuhan Tongji Hospital". This article focused on the issues of greatest concern of pregnant women including severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection diagnostic criteria, inspection precautions, drug treatment options, indications and methods of termination of pregnancy, postpartum fever, breastfeeding considerations, mode of mother-to-child transmission, neonatal isolation and advice on neonatal nursing, to provide valuable experience for better management of SARS-CoV-2 infection in pregnant women and newborns. (Author) (Review)

**Available from:** <https://link.springer.com/article/10.1007/s11596-020-2174-4>

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**20200424-4\***

**International Perspectives Concerning Donor Milk Banking During the SARS-CoV-2 (COVID-19) Pandemic**. Marinelli KA, (2020). Journal of Human Lactation , 30 March 2020, online.

Reviews current information on donor milk banking during the current COVID-19 pandemic. (JSM) (Review)

**Available from:** <https://journals.sagepub.com/doi/10.1177/0890334420917661>

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**20200424-2\***

**Using the coronavirus pandemic as an opportunity to address the use of human milk and breastfeeding as lifesaving medical interventions.** Spatz DL, (2020). JOGNN: Journal of Obstetric, Gynecologic and Neonatal Nursing , vol 49, no 3, May 2020, pp 225-226.

Editorial aiming to provide guidance regarding breastfeeding and COVID-19 and stressing the importance of promoting and protecting the use of human milk and breastfeeding. (JSM) (Editorial)

**Available from:** [https://www.jognn.org/article/S0884-2175\(20\)30042-3/pdf](https://www.jognn.org/article/S0884-2175(20)30042-3/pdf)

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**20200424-1\***

**COVID-19 vaginal delivery – A case report.** Lowe B; Bopp B, (2020). Australian and New Zealand Journal of Obstetrics and Gynaecology , vol 60, no 3, June 2020, pp 465-466.

The novel coronavirus termed SARS-CoV-2 is a major public health challenge. Many maternity units around the country are currently considering management protocols for these patients. We report a case from a tertiary Australian hospital describing an uncomplicated vaginal birth in a SARS-CoV-2 positive mother. To our knowledge this is also the first case described of a mother with COVID-19 not separated from her infant. Management provided supports the current Royal College of Obstetricians and Gynaecologists and World Health Organization guidelines suggesting that it is possible to consider rooming in post delivery for COVID-19 positive parents. Encouragement of breast feeding appears possible and safe when viral precautions are observed. (Author) (Correspondence)

**Available from:** <https://obgyn.onlinelibrary.wiley.com/doi/epdf/10.1111/ajo.13173>

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**20200423-76\***

**Baby Friendly Initiative Statement on infant feeding during the COVID-19 outbreak.** UNICEF UK Baby Friendly Initiative, (2020). UNICEF UK Baby Friendly Initiative , 17 March 2020. 2 pages.

The Unicef UK Baby Friendly Initiative has received a number of queries regarding best practice for infant feeding during the Covid-19 outbreak. We suggest that all practitioners follow latest updates from the UK governments and the World Health Organization (WHO) as these could change as more information becomes available. (Author) (Position statement)

**Available from:** <https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/03/Unicef-UK-Baby-Friendly-Initiative-statement-on-infant-feeding-during-the-Covid-19-outbreak-2.pdf>

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**20200423-75\***

**Milk for your baby during the coronavirus pandemic.** Joyce J, (2020). Nottingham: La Leche League GB , 26 March 2020.

Gives information to parents on feeding their babies in the current COVID-19 pandemic using several different methods: exclusive formula feeding; partial breastfeeding; and exclusive breastfeeding. Addresses the issue of insufficient milk supply, which may be of concern. (JSM) (Guidelines)

**Available from:** <https://www.laleche.org.uk/milk-for-your-baby-during-the-coronavirus-pandemic/>

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**20200423-74\***

**Breastfeeding and Coronavirus Disease-2019. Ad interim indications of the Italian Society of Neonatology endorsed by the Union of European Neonatal & Perinatal Societies.** Davanzo R; Moro G; Sandri F; et al, (2020). Maternal & Child Nutrition , 3 April 2020.

The recent COVID-19 pandemic has spread to Italy with heavy consequences on public health and economics. Besides the possible consequences of COVID-19 infection on a pregnant woman and the fetus, a major concern is related to the potential effect on neonatal outcome, the appropriate management of the mother-newborn dyad and finally the compatibility of maternal COVID-19 infection with breastfeeding. The Italian Society on Neonatology (SIN) after reviewing the limited scientific knowledge on the compatibility of breastfeeding in the COVID-19 mother and the available statements from Health Care Organizations, has issued the following indications that have been endorsed by the Union of European Neonatal & Perinatal Societies (UENPS). If a mother previously identified as COVID-19 positive or under investigation for COVID-19 is asymptomatic or paucisymptomatic at delivery, rooming-in is feasible and direct breastfeeding is advisable, under strict measures of infection control. On the contrary, when a mother with COVID-19 is too sick to care for the newborn, the neonate will be managed separately and fed fresh expressed breast milk, with no need to

pasteurize it, as human milk is not believed to be a vehicle of COVID-19. We recognize that this guidance might be subject to change in the future when further knowledge will be acquired about the COVID-19 pandemic, the perinatal transmission of SARS-CoV-2 and clinical characteristics of cases of neonatal COVID-19. (Author) (Guidelines)

**Available from:** <https://doi.org/10.1111/mcn.13010>

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### **20200423-73\***

**Update on coronavirus and breastfeeding.** The Breastfeeding Network, (2020). The Breastfeeding Network , 22 April 2020.

The information about coronavirus and breastfeeding on this page is being checked regularly and will develop in response to guidelines and evidence. This page was last updated on 22nd April 2020. Coronavirus 2019-nCoV or COVID-19 is a new respiratory illness that has not previously been seen in humans. The first coronavirus cases have been confirmed in the UK and the rising death toll worldwide is causing alarm and concern. This can be especially worrying for all parents with new babies and young children, including those who are worried about coronavirus and breastfeeding. (Author) (Guidelines)

**Available from:** <https://www.breastfeedingnetwork.org.uk/coronavirus/>

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### **20200422-43\***

**SOGC Committee Opinion – COVID-19 in Pregnancy.** Elwood C; Boucoiran I; VanSchalkwyk J; et al, (2020). JOGC [Journal of Obstetrics and Gynaecology Canada] , 31 March 2020, online.

Society of Obstetricians and Gynaecologists of Canada (SOGC) guidelines on COVID-19 in pregnancy. Includes recommendations on the antepartum, intrapartum and postpartum periods. Discusses appointments, protective equipment, fetal monitoring, caesarean delivery, skin-to-skin contact and breastfeeding. (LDO) (Guidelines)

**Available from:** <https://doi.org/10.1016/j.jogc.2020.03.012>

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### **20200422-38\***

**In-Hospital Telehealth Supports Care for Neonatal Patients in Strict**

**Isolation.** Umoren RA; Gray MM; Handley S; et al, (2020). American Journal of Perinatology , 8 April 2020, online.

The aim of this study is to determine the feasibility of "in-hospital" inpatient telemedicine within a children's referral hospital to facilitate inpatient care activities such as interprofessional rounding and the provision of supportive services such as lactation consultations to pediatric patients in strict isolation. To test the feasibility of in-hospital video telemedicine, a dedicated telemedicine device was set up in the patient's room. This device and the accompanying Bluetooth stethoscope were used by the health care team located just outside the room for inpatient rounding and consultations from supportive services. Video telemedicine facilitated inpatient care and interactions with support services, reducing the number of health care providers with potential exposure to infection and decreasing personal protective equipment use. In the setting of strict isolation for highly infectious viral illness, telemedicine can be used for inpatient care activities such as interprofessional rounding and provision of supportive services. (Author) (Original research)

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### **20200422-37\***

**Neonatal Resuscitation and Postresuscitation Care of Infants Born to Mothers with Suspected or Confirmed SARS-CoV-2 Infection.** Chandrasekharan P; Vento M; Trevisanuto D; et al, (2020). American Journal of Perinatology , 8 April 2020, online.

The first case of novel coronavirus disease of 2019 (COVID-19) caused by severe acute respiratory syndrome-coronavirus 2 (SARS-CoV-2) was reported in November 2019. The rapid progression to a global pandemic of COVID-19 has had profound medical, social, and economic consequences. Pregnant women and newborns represent a vulnerable population. However, the precise impact of this novel virus on the fetus and neonate remains uncertain. Appropriate protection of health care workers and newly born infants during and after delivery by a COVID-19 mother is essential. There is some disagreement among expert organizations on an optimal approach based on resource availability, surge volume, and potential risk of transmission. The manuscript outlines the precautions and steps to be taken before, during, and after resuscitation of a newborn born to a COVID-19 mother, including three optional variations of current standards involving shared-decision making with parents for perinatal management, resuscitation of the newborn, disposition, nutrition, and postdischarge care. The availability of resources may also drive the application of these guidelines. More evidence and research are needed to assess the risk of vertical and horizontal transmission of SARS-CoV-2 and its impact on fetal and neonatal outcomes. · The risk of vertical transmission is unclear; transmission from family members/providers to neonates is possible. · Optimal personal-protective-equipment (airborne vs. droplet/contact precautions) for providers is crucial to prevent transmission. · Parents should be engaged in shared decision-making with options for rooming in, skin-to-skin contact, and breastfeeding. (Author) (Position statement)

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### **20200421-28\***

#### **The profile of peripheral blood lymphocyte subsets and serum cytokines in children with 2019 novel coronavirus pneumonia.** Li H; Chen K; Liu M; et al, (2020).

Journal of Infection , 20 April 2020, online.

**Objectives** The study was aimed at investigating the characteristics of peripheral blood lymphocyte subsets and serum cytokines in children with 2019 novel coronavirus (2019-nCoV) pneumonia. **Methods** Children with 2019-nCoV pneumonia or with respiratory syncytial virus (RSV) pneumonia were included. Data including lymphocyte subsets and serum cytokines were collected and analyzed. **Results** : 56 patients were included in the study, 40 children with 2019-nCoV pneumonia and 16 children with RSV pneumonia. Compared with children with RSV pneumonia, patients with 2019-nCoV pneumonia had higher count of CD3+8+ lymphocyte, higher percentages of CD3+, CD3+8+ lymphocytes and a lower percentage of CD19+ lymphocyte. The serum IL-10 level was significantly higher in children with RSV pneumonia. One 2019-nCoV pneumonia child who was with an obvious increase of IL-10 developed severe pneumonia. **Conclusions** Immune response played a very important role in the development of 2019-nCoV pneumonia. The effective CD8+ T cell response might influence the severity of 2019-nCoV pneumonia. The adaptable change in IL-10 level might contribute to the relatively mild pneumonia symptoms in children with 2019-nCoV pneumonia and bacterial co-infection might be a risk factor of severe 2019-nCoV pneumonia. (Author) (Original research)

**Available from:** <https://doi.org/10.1016/j.jinf.2020.04.001>

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### **20200421-21\***

#### **COVID-19 - guidance for neonatal settings [Last updated 12 May 2020].**

Royal College of Paediatrics and Child Health, (2020). London: RCPCH , 9 April 2020.

Provides guidance for neonatal settings during the coronavirus (COVID-19) outbreak. It has been produced with the British Association of Perinatal Medicine (BAPM). (Author, edited) (Guidelines)

**Available from:** <https://www.rcpch.ac.uk/resources/covid-19-guidance-neonatal-settings#postnatal-contact-on-nnu-with-confirmed-covid-19-case>

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### **20200421-20\***

#### **The tiny premature baby who fought off coronavirus.** Anon, (2020). BBC News , 21 April 2020.

Reports on the case of Peyton Maguire who was born prematurely at 3lbs 5oz and was diagnosed with Covid-19 at three weeks old. (LDO) (News item)

**Available from:** <https://www.bbc.co.uk/news/uk-scotland-glasgow-west-52369708>

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### **20200421-8\***

#### **Vitamin D, Covid-19 and Children.** Molloy EJ; Murphy N, (2020). Irish Medical Journal , vol 113, no 4, April 2020, P59.

Discusses the link between vitamin D deficiency and respiratory infections in children. The authors make particular reference to the benefits of vitamin D supplementation in preterm infants. (LDO) (Overview)

**Available from:** <http://imj.ie/wp-content/uploads/2020/04/Vitamin-D-Covid-19-and-Children.pdf>

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### **20200421-5\***

#### **COVID-19: How is Congress Addressing the Needs of Babies and Families?**

• Zero to Three, (2020). Zero to Three , 30 March 2020.

In the past two weeks, United States Congress has considered two major funding packages to begin to address the spreading economic impact of COVID-19. H.R. 6201 the Families First Coronavirus Response Act (FFCRA) was signed into law on March 18, 2020 and H.R. 748 the Coronavirus Aid, Relief, and Economic Security Act (CARES) was signed by the president on March 27, 2020. This analysis from Zero to Three highlights components of the two packages that affect early care and learning, family economic needs, basic family needs, and community supports for families under stress. (Author, edited) (Commentary)

**Available from:** <https://www.zerotothree.org/resources/3357-covid-19-how-is-congress-addressing-the-needs-of-babies-and-families>

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### **20200421-4\***

#### **Coronavirus (COVID-19) information.** Bliss, (2020). London: Bliss , 20 April 2020.

The latest evidence and guidance from Bliss for parents of sick or premature babies, about how changes during the coronavirus (COVID-19) pandemic may affect their baby and their stay in neonatal care. (JSM) (Guidelines)

**Available from:** <https://www.bliss.org.uk/parents/support/coronavirus-covid-19-information>

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**20200420-27\***

**Breast feeding at the time of COVID-19: do not forget expressed mother's milk, please.** Davanzo R, (2020). Archives of Disease in Childhood: Fetal and Neonatal Edition , 6 April 2020, online.

This letter discusses mother to child transmission of COVID-19 and the safety of expressed mother's milk. The author recommends that breastfeeding should be promoted where possible, with basic preventive measures such as face masks and hand washing. In cases where breastfeeding is not recommended, it is suggested that expressed mother's milk should be considered due to its nutritional benefits. (LDO) (Correspondence)

**Available from:** <http://dx.doi.org/10.1136/archdischild-2020-319149>

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**20200417-60\***

**Why is COVID-19 so mild in children?** Brodin P, (2020). Acta Paediatrica , 25 March 2020, online.

This editorial highlights the reasons for mild COVID-19 symptoms in children and infants. The author discusses immune systems, expression of enzyme receptors and the likelihood respiratory tract infections in children. (LDO) (Editorial)

**Available from:** <https://doi.org/10.1111/apa.15271>

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**20200417-55\***

**Systematic review of COVID-19 in children shows milder cases and a better prognosis than adults.** Ludvigsson JF, (2020). Acta Paediatrica , 23 March 2020, online.

**Aim** The coronavirus disease 2019 (COVID-19) pandemic has affected hundreds of thousands of people. Data on symptoms and prognosis in children are rare. **Methods** A systematic literature review was carried out to identify papers on COVID-19, which is caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), using the MEDLINE and Embase databases between January 1 and March 18, 2020. **Results** The search identified 45 relevant scientific papers and letters. The review showed that children have so far 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. **Conclusions** The coronavirus disease 2019 has occurred in children, but they seemed to have a milder disease course and better prognosis than adults. Deaths were extremely rare. (Author) (Systematic review)

**Available from:** <https://doi.org/10.1111/apa.15270>

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**20200417-9\***

**Novel corona virus disease (COVID-19) in pregnancy: What clinical recommendations to follow?** Liang H; Acharya G, (2020). Acta Obstetrica et Gynecologica Scandinavica , vol 99, no 4, April 2020, pp 439-442.

This editorial discusses the prevention, diagnosis and management of COVID-19 in pregnancy. The authors also highlight the importance of mode of delivery and care of the newborn. (LDO) (Editorial)

**Available from:** <https://doi.org/10.1111/aogs.13836>

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**20200416-13\***

**Pre-labor anorectal swab for SARS-CoV-2 in COVID-19 patients: is it time to think about it?** Carosso A; Cosma S; Borella F; et al, (2020). European Journal of Obstetrics & Gynecology and Reproductive Biology , vol 249, June 2020, pp 98-99.

The authors report the first case of potential vertical transmission of SARS-CoV-2 from a pregnant woman to a newborn. Maternal and rectal stool swabs tested positive for SARS-CoV-2 which suggests the virus may enter the neonatal nasopharynx during vaginal delivery. It is suggested that pre-labour anorectal swabs should be taken from pregnant patients with COVID-19 in order to identify newborns at risk of perinatal infection. (LDO) (Correspondence)

**Available from:** <https://doi.org/10.1016/j.ejogrb.2020.04.023>

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**20200416-10\***

**Specialty guides for patient management during the coronavirus pandemic: Safeguarding infants during the coronavirus pandemic: the ICON programme .** NHS England; NHS Improvement, (2020). London: NHS England , 2 April 2020. 2 pages.

Joint correspondence from NHS England and NHS Improvement, to all maternity units and neonatal operational delivery networks, produced with the aim of preventing non-accidental injuries to infants during the COVID-19 pandemic. (JSM)

(Correspondence)

**Available from:** [https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/C0097-Specialty-guides-and-coronavirus-Final-ICON-letter-for-midwives\\_v1-27-March.pdf](https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/C0097-Specialty-guides-and-coronavirus-Final-ICON-letter-for-midwives_v1-27-March.pdf)

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### **20200416-9\***

**The first case of COVID-19 infection in a 75-day-old infant in Jahrom City, south of Iran.** Mogharab V; Pasha AMK; Javdani F; et al, (2020). Journal of the Formosan Medical Association , 13 April 2020, online.

Correspondence reporting the case of a 75-day-old baby referred to a pediatric emergency department with severe dry cough, noisy breathing sounds (audible through stethoscope) and had displayed a high fever seven days previously, but this was responding well to treatment. This is the first known case of COVID-19 infection in an infant in Jahrom City. Fars Province, Iran. (JSM) (Case report)

**Available from:** <https://doi.org/10.1016/j.jfma.2020.03.015>

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### **20200416-3\***

**Keeping children emotionally healthy during the covid-19 pandemic .** Rider EK, (2020). BMJ Opinion , 14 April 2020, online.

We must not lose sight of children and adolescents during and after the covid-19 pandemic, says Elizabeth A Rider. (Author) (Commentary)

**Available from:** <https://blogs.bmj.com/bmj/2020/04/14/elizabeth-rider-keeping-children-emotionally-healthy-covid-19-pandemic/>

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### **20200415-34\***

**Guidance for virtual infant feeding support and coronavirus (COVID-19). Guidance sheet 3: Postnatal conversations.** Unicef UK Baby Friendly Initiative, (2020). Baby Friend Initiative , April 2020. 2 pages.

Guidance from the Unicef UK Baby Friendly Initiative on holding conversations in the postnatal period, for healthcare professionals delivering Baby Friendly services during the COVID-19 pandemic. (JSM) (Guidelines)

**Available from:** [https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/04/Unicef-UK-Baby-Friendly-Initiative-Guidance-document-3-Postnatal-conversations.pdf?utm\\_source=Unicef\\_UK&utm\\_medium=Email&utm\\_campaign=bfi\\_AprilCovid19\\_uukloyalty](https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/04/Unicef-UK-Baby-Friendly-Initiative-Guidance-document-3-Postnatal-conversations.pdf?utm_source=Unicef_UK&utm_medium=Email&utm_campaign=bfi_AprilCovid19_uukloyalty)

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### **20200415-33\***

**Guidance for virtual infant feeding support during the COVID-19 outbreak. Guidance sheet 2: Antenatal conversations.** Unicef UK Baby Friendly Initiative, (2020). Baby Friendly Initiative , April 2020. 1 page.

Guidance from the Unicef UK Baby Friendly Initiative on holding antenatal conversations, for healthcare professionals delivering Baby Friendly services during the COVID-19 pandemic. (JSM) (Guidelines)

**Available from:** [https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/03/Unicef-UK-Baby-Friendly-Initiative-Guidance-Sheet-2-Antenatal-Conversations.pdf?utm\\_source=Unicef\\_UK&utm\\_medium=Email&utm\\_campaign=bfi\\_AprilCovid19\\_uukloyalty](https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/03/Unicef-UK-Baby-Friendly-Initiative-Guidance-Sheet-2-Antenatal-Conversations.pdf?utm_source=Unicef_UK&utm_medium=Email&utm_campaign=bfi_AprilCovid19_uukloyalty)

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### **20200415-32\***

**Guidance for virtual infant feeding support during the COVID-19 outbreak. Guidance sheet 1: Planning a virtual conversation.** Unicef UK Baby Friendly Initiative, (2020). Baby Friendly Initiative , April 2020. 1 page.

Guidance from the Unicef UK Baby Friendly Initiative on planning a virtual conversation, for healthcare professionals delivering Baby Friendly services during the COVID-19 pandemic. (JSM) (Guidelines)

**Available from:** [https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/03/Unicef-UK-Baby-Friendly-Guidance-Sheet-1-Planning-A-Virtual-Conversation.pdf?utm\\_source=Unicef\\_UK&utm\\_medium=Email&utm\\_campaign=bfi\\_AprilCovid19\\_uukloyalty](https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/03/Unicef-UK-Baby-Friendly-Guidance-Sheet-1-Planning-A-Virtual-Conversation.pdf?utm_source=Unicef_UK&utm_medium=Email&utm_campaign=bfi_AprilCovid19_uukloyalty)

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### **20200415-26\***

**Care of the Pregnant Woman with COVID-19 in Labor and Delivery: Anesthesia, Emergency cesarean delivery, Differential diagnosis in the acutely ill parturient, Care of the newborn, and Protection of the healthcare personnel.** Ashokka B; Loh M-H; Tan CH; et al, (2020). American Journal of Obstetrics & Gynecology (AJOG) , 10 April 2020, online.

COVID-19 in pregnancy can cause severe maternal morbidity in up to 9% of affected gravidae. Chest imaging is helpful in pregnant women who have a high pretest probability of COVID-19, but are RT-PCR negative.

Vertical transmission is unlikely, but active measures are needed to prevent neonatal infection. We present an

algorithm of care for the acutely ill parturient and a protocol for intrapartum care of the pregnant woman in labor. (Author, edited) (Protocol)

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#### **20200415-24\***

**Baby friendly assessments during the COVID-19 outbreak.** Unicef UK Baby Friendly Initiative, (2020). The Baby Friendly Initiative , 30 March 2020. 2 pages.

This document is intended to support Infant Feeding Leads/teams and senior staff to plan work related to Baby Friendly accreditation during the Covid-19 outbreak. (Author) (Guidelines)

**Available from:** [https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/03/Baby-Friendly-assessments-during-the-Covid-19-outbreak.pdf?utm\\_source=Unicef\\_UK&utm\\_medium=Email&utm\\_campaign=bfi\\_AprilCovid19\\_uukloyalty](https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/03/Baby-Friendly-assessments-during-the-Covid-19-outbreak.pdf?utm_source=Unicef_UK&utm_medium=Email&utm_campaign=bfi_AprilCovid19_uukloyalty)

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#### **20200415-23\***

**Statement on infant feeding on neonatal units during the coronavirus (COVID-19) outbreak [Last updated: 14 May 2020].** Unicef UK Baby Friendly Initiative, (2020). The Baby Friendly Initiative , 2 April 2020. 3 pages.

Position statement from the Unicef UK Baby Friendly Initiative on breastfeeding and bottle feeding in neonatal intensive care units, for healthcare professionals looking after mothers and their babies during the coronavirus (COVID-19) outbreak. (JSM) (Position statement)

**Available from:** <https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/04/Unicef-UK-Baby-Friendly-Initiative-statement-on-infant-feeding-on-neonatal-units-during-the-Covid-19-outbreak.pdf>

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#### **20200415-22\***

**Statement on infant feeding during the coronavirus (COVID-19) outbreak [Last updated 14 May 2020].** Unicef UK Baby Friendly Initiative, (2020). The Baby Friendly Initiative , 2 April 2020. 3 pages.

Position statement from the Unicef UK Baby Friendly Initiative on breastfeeding and bottle feeding, for health professionals caring for mothers and their babies during the current coronavirus (COVID-19) outbreak. (JSM) (Position statement)

**Available from:** <https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2020/04/Unicef-UK-Baby-Friendly-Initiative-statement-on-infant-feeding-during-the-Covid-19-outbreak.pdf>

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#### **20200414-6\***

**Coronavirus and your maternity care.** AIMS, (2020). AIMS , 11 April 2020.

Information from the Association for Improvements in the Maternity Services (AIMS) for pregnant women concerned about their maternity care in the current coronavirus (COVID-19) pandemic. (JSM) (Consumer information)

**Available from:** <https://www.aims.org.uk/information/item/coronavirus>

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#### **20200414-2\***

**Should Infants Be Separated from Mothers with COVID-19? First, Do No Harm.** Stuebe A, (2020). Breastfeeding Medicine , vol 15, no 5, May 2020, pp 351-352.

Discusses the implications for breastfeeding of temporarily separating infants from mothers with suspected or confirmed COVID-19 in order to reduce the risk of transmission from mother to baby. (MB) (Commentary)

**Available from:** <https://doi.org/10.1089/bfm.2020.29153.ams>

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#### **20200413-1\***

**Coronavirus while pregnant or giving birth: here's what you need to know.**

Dahlen H; Ellwood D, (2020). The Conversation , 16 March 2020, online.

Summarises the key messages for pregnant women in the current coronavirus (COVID-19) pandemic, from trusted health sources such as the World Health Organization, the Royal College of Obstetricians and Gynaecologists etc. (JSM) (Consumer information)

**Available from:** <https://theconversation.com/coronavirus-while-pregnant-or-giving-birth-heres-what-you-need-to-know-133619>

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#### **20200409-10\***

**Epidemiology of COVID-19 Among Children in China.** Dong Y; Mo X; Hu Y; et al, (2020). Pediatrics , 8 April 2020, online.

OBJECTIVE: To identify the epidemiological characteristics and transmission patterns of pediatric patients with the 2019 novel coronavirus disease (COVID-19) in China. METHODS: Nationwide case series of 2135 pediatric

patients with COVID-19 reported to the Chinese Center for Disease Control and Prevention from January 16, 2020, to February 8, 2020, were included. The epidemic curves were constructed by key dates of disease onset and case diagnosis. Onset-to-diagnosis curves were constructed by fitting a log-normal distribution to data on both onset and diagnosis dates. RESULTS: There were 728 (34.1%) laboratory-confirmed cases and 1407 (65.9%) suspected cases. The median age of all patients was 7 years (interquartile range: 2–13 years), and 1208 case patients (56.6%) were boys. More than 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). There was a rapid increase of disease at the early stage of the epidemic, and then there was 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. CONCLUSIONS: Children of all ages appeared susceptible to COVID-19, and there was no significant sex difference. 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, and most of the cases were concentrated in Hubei province and surrounding areas. Furthermore, this study provides strong evidence of human-to-human transmission. (Author) (Original research)

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## 20200407-14\*

**Coronavirus Disease 2019 (COVID-19) Pandemic and Pregnancy.** Dashraath P; Wong JL; Lim MXK; et al, (2020). American Journal of Obstetrics & Gynecology (AJOG) , vol 222, no 6, June 2020, pp 521-531 .

The current coronavirus disease 2019 (COVID-19) pneumonia pandemic, caused by the severe acute respiratory syndrome 2 (SARS-CoV-2) virus, is spreading globally at an accelerated rate, with a basic reproduction number (R0) of 2 – 2.5, indicating that 2 – 3 persons will be infected from an index patient. A serious public health emergency, it is particularly deadly in vulnerable populations and communities in which healthcare providers are insufficiently prepared to manage the infection. As of March 16, 2020, there are more than 180,000 confirmed cases of COVID-19 worldwide, with over 7,000 related deaths. The SARS-CoV-2 virus has been isolated from asymptomatic individuals, and affected patients continue to be infectious two weeks after cessation of symptoms. The substantial morbidity and socioeconomic impact have necessitated drastic measures across all continents, including nationwide lockdowns and border closures. Pregnant women and their fetuses represent a high-risk population during infectious disease outbreaks. To date, the outcomes of 55 pregnant women infected with COVID-19 and 46 neonates have been reported in the literature, with no definite evidence of vertical transmission. Physiological and mechanical changes in pregnancy increase susceptibility to infections in general, particularly when the cardiorespiratory system is affected, and encourage rapid progression to respiratory failure in the gravida. Furthermore, the pregnancy bias towards T-helper 2 (Th2) system dominance which protects the fetus, leaves the mother vulnerable to viral infections, which are more effectively contained by the Th1 system. These unique challenges mandate an integrated approach to pregnancies affected by SARS-CoV-2. Here we present a review of COVID-19 in pregnancy, bringing together the various factors integral to the understanding of pathophysiology and susceptibility, diagnostic challenges with real-time reverse transcriptase polymerase chain reaction (RT-PCR) assays, therapeutic controversies, intrauterine transmission and maternal-fetal complications. We discuss the latest options in antiviral therapy and vaccine development, including the novel use of chloroquine in the management of COVID-19. Fetal surveillance, in view of the predisposition to growth restriction and special considerations during labor and delivery are addressed. Additionally, we focus on keeping frontline obstetric care providers safe while continuing to provide essential services. Our clinical service model is built around the principles of workplace segregation, responsible social distancing, containment of cross-infection to healthcare providers, judicious use of personal protective equipment and telemedicine. Our aim is to share a framework which can be adopted by tertiary maternity units managing pregnant women in the flux of a pandemic while maintaining the safety of the patient and healthcare provider at its core. (Author) (Review)

Available from: [https://www.ajog.org/article/S0002-9378\(20\)30343-4/pdf](https://www.ajog.org/article/S0002-9378(20)30343-4/pdf)

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## 20200406-5\*

**Neonatal Early-Onset Infection With SARS-CoV-2 in 33 Neonates Born to Mothers With COVID-19 in Wuhan, China.** Zeng L; Xia S; Yuan W; et al, (2020). JAMA Pediatrics , 26 March 2020, online.

The coronavirus disease 2019 (COVID-19) has spread rapidly across the world. With the sharp increase in the number of infections, the number of pregnant women and children with COVID-19 is also on the rise. However, only 19 neonates born to affected mothers have been investigated, and to our knowledge, no information on early-onset infection in newborns has been published in previous studies. Methods In this cohort study, all neonates born to mothers with COVID-19 were recruited from Wuhan Children's Hospital, in Wuhan, Hubei Province, China. This study was approved by the local medical ethics committee. Written informed consent was obtained from the neonates' parents. The diagnosis and management of newborns with or at risk of COVID-19 were in accordance with guidelines provided by the National Health Commission and the Chinese Perinatal-Neonatal SARS-CoV-2 Committee. Data regarding demographic, epidemiologic, and clinical features were obtained from the medical records system. In addition, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) real-time reverse transcriptase-polymerase chain reaction tests (Novel Coronavirus PCR Fluorescence Diagnostic Kit [BGI]) were conducted using nasopharyngeal and anal swab samples. Data were collected from January 2020 to February 2020. All statistical analyses were performed in Stata version 15.0 (StataCorp). Results Thirty-three neonates born to mothers with COVID-19, including 3 neonates with COVID-19, were identified (Table). The most common symptom was shortness of breath (4 of 33 neonates). Radiographic findings were nonspecific. No deaths were reported. We provide details of the 3 infected neonates (Figure). Patient 1 was born at 40 weeks' gestation. The delivery was by cesarean delivery because of meconium-stained amniotic fluid and confirmed maternal COVID-19 pneumonia. On day 2 of life, the infant



experienced lethargy and fever, with unremarkable physical examination results, and was moved to the neonatal intensive care unit. A chest radiographic image showed pneumonia, but other laboratory tests (except procalcitonin) were normal. Nasopharyngeal and anal swabs were positive for SARS-CoV-2 on days 2 and 4 of life and negative on day 6. Patient 2 was born at 40 weeks' and 4 days' gestation by cesarean delivery because of confirmed maternal COVID-19 pneumonia. He presented with lethargy, vomiting, and fever. A physical examination was unremarkable. Laboratory tests showed leukocytosis, lymphocytopenia, and an elevated creatine kinase-MB fraction. A chest radiographic image showed pneumonia. Nasopharyngeal and anal swabs were positive for SARS-CoV-2 on days 2 and 4 of life and negative on day 6. Patient 3 was born at 31 weeks' and 2 days' gestation by cesarean delivery because of fetal distress and confirmed maternal COVID-19 pneumonia. Resuscitation was required. The infant's Apgar scores were 3, 4, and 5 at 1, 5, and 10 minutes after birth. Neonatal respiratory distress syndrome and pneumonia confirmed by chest radiographic image on admission resolved on day 14 of life after treatment with noninvasive ventilation, caffeine, and antibiotics. He also had suspected sepsis, with an Enterobacter agglomerates-positive blood culture, leukocytosis, thrombocytopenia (11 cells  $\times$  10<sup>3</sup>/ $\mu$ L; to convert to cells  $\times$  10<sup>9</sup>/L, multiply by 1.0), and coagulopathy (prothrombin time, 21 seconds; activated partial thromboplastin time, 81.9 seconds), which improved with antibiotic treatment. Nasopharyngeal and anal swabs were positive for SARS-CoV-2 on days 2 and 4 of life and negative on day 7. Discussion Consistent with previous studies, the clinical symptoms from 33 neonates with or at risk of COVID-19 were mild and outcomes were favorable. Of the 3 neonates with symptomatic COVID-19, the most seriously ill neonate may have been symptomatic from prematurity, asphyxia, and sepsis, rather than SARS-CoV-2 infection. In this cohort, 3 of 33 infants (9%) presented with early-onset SARS-CoV-2 infection. Because strict infection control and prevention procedures were implemented during the delivery, it is likely that the sources of SARS-CoV-2 in the neonates' upper respiratory tracts or anuses were maternal in origin. Although 2 recent studies have shown that there were no clinical findings or investigations suggestive of COVID-19 in neonates born to affected mothers, and all samples, including amniotic fluid, cord blood, and breast milk, were negative for SARS-CoV-2, the vertical maternal-fetal transmission cannot be ruled out in the current cohort. Therefore, it is crucial to screen pregnant women and implement strict infection control measures, quarantine of infected mothers, and close monitoring of neonates at risk of COVID-19. (Author, edited) (Original research)

**Available from:** <http://jamanetwork.com/article.aspx?doi=10.1001/jamapediatrics.2020.0878>

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#### **20200403-5\***

**'I just had a baby - now I'm going to the frontline'.** Kwon T, (2020). BBC News , 3 April 2020.

Presents the personal experience of Tre Kwon, a nurse fighting to save lives in New York, the epicenter of the US' fight against COVID-19. She tells how, as coronavirus overwhelmed hospitals, she ended her maternity leave early and has had to forgo her plans to breastfeed her daughter for as long as she intended, in order to return to work and join her co-workers in the fight against this disease. She expresses concern about the lack of personal protective equipment (PPE) and describes her working conditions. Includes audio-visual footage. (JSM) (Personal experience)

**Available from:** <https://www.bbc.co.uk/news/av/world-us-canada-52137166/i-just-had-a-baby-now-i-m-going-to-the-frontline>

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#### **20200402-32\***

**Pregnancy and coronavirus: information for pregnant women and new mums.** Anon, (2020). Tommy's Pregnancy Hub , 1 April 2020.

Consumer information from Tommy's presented in a question and answer format, aimed at pregnant women and new mothers, based on the latest guidance on coronavirus (COVID-19), from the Royal College of Obstetricians and Gynaecologists (RCOG). (JSM) (Consumer information)

**Available from:** <https://www.tommys.org/pregnancy-information/im-pregnant/pregnancy-and-coronavirus-information-pregnant-women-and-new-mums>

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#### **20200331-21\***

**The first infant case of COVID-19 acquired from a secondary transmission in Vietnam.** Le HT; Nguyen LV; Tran DM; et al, (2020). The Lancet Child & Adolescent Health , vol 4, no 5, May 2020, pp 405-406.

Reports the first infant case of COVID-19 acquired from a secondary transmission in Vietnam. (MB) (Case report)

**Available from:** [https://doi.org/10.1016/S2352-4642\(20\)30091-2](https://doi.org/10.1016/S2352-4642(20)30091-2)

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#### **20200330-2\***

**Anxiety, anger and hope as women face childbirth during coronavirus pandemic.** Kahn M; Cristoferi C, (2020). Reuters , 27 March 2020, online.

Pregnant women share their fears about giving birth and caring for their newborn during the coronavirus pandemic. (MB) (News item)

**Available from:** <https://www.reuters.com/article/us-health-coronavirus-europe-childbirth/anxiety-anger-and-hope-as-women-face-childbirth-during-coronavirus-pandemic->

### **20200327-1\***

#### **Coronavirus: Infant Foods [written answer].** House of Commons, (2020).

Hansard , Written question 30064, 16 March 2020.

Jo Churchill responds to a written question asked by Alison Thewliss to the Secretary of State for Health and Social Care, regarding what plans he has to ensure the maintenance of the supply of infant formula during the covid-19 outbreak. (MB) (Parliamentary question)

**Available from:** <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2020-03-16/30064/>

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### **20200326-3\***

#### **Clinical and epidemiological features of 36 children with coronavirus disease 2019 (COVID-19) in Zhejiang, China: an observational cohort study.** Qiu H; Wu J; Long L; et al, (2020). *The Lancet Infectious Diseases* , 25 March 2020, online.

**Background** Since December, 2019, an outbreak of coronavirus disease 2019 (COVID-19) has spread globally. Little is known about the epidemiological and clinical features of paediatric patients with COVID-19. **Methods** We retrospectively retrieved data for paediatric patients (aged 0–16 years) with confirmed COVID-19 from electronic medical records in three hospitals in Zhejiang, China. We recorded patients' epidemiological and clinical features. **Findings** From Jan 17 to March 1, 2020, 36 children (mean age 8·3 [SD 3·5] years) were identified to be infected with severe acute respiratory syndrome coronavirus 2. The route of transmission was by close contact with family members (32 [89%]) or a history of exposure to the epidemic area (12 [33%]); eight (22%) patients had both exposures. 19 (53%) patients had moderate clinical type with pneumonia; 17 (47%) had mild clinical type and either were asymptomatic (ten [28%]) or had acute upper respiratory symptoms (seven [19%]). Common symptoms on admission were fever (13 [36%]) and dry cough (seven [19%]). Of those with fever, four (11%) had a body temperature of 38·5°C or higher, and nine (25%) had a body temperature of 37·5–38·5°C. Typical abnormal laboratory findings were elevated creatine kinase MB (11 [31%]), decreased lymphocytes (11 [31%]), leucopenia (seven [19%]), and elevated procalcitonin (six [17%]). Besides radiographic presentations, variables that were associated significantly with severity of COVID-19 were decreased lymphocytes, elevated body temperature, and high levels of procalcitonin, D-dimer, and creatine kinase MB. All children received interferon alfa by aerosolisation 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. By Feb 28, 2020, all patients were cured. **Interpretation** Although all paediatric patients in our cohort had mild or moderate type of COVID-19, the large proportion of asymptomatic children indicates the difficulty in identifying paediatric patients who do not have clear epidemiological information, leading to a dangerous situation in community-acquired infections. **Funding** Ningbo Clinical Research Center for Children's Health and Diseases, Ningbo Reproductive Medicine Centre, and Key Scientific and Technological Innovation Projects of Wenzhou. (Author) (Original research)

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### **20200325-3\***

#### **Clinical features and obstetric and neonatal outcomes of pregnant patients with COVID-19 in Wuhan, China: a retrospective, single-centre, descriptive study.** Yu N; Li W; Kang Q; et al, (2020). *The Lancet Infectious Diseases* , vol 20, no 5, May 2020, pp 559-564.

**Background** In December, 2019, coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) emerged in Wuhan, China. The number of affected pregnant women is increasing, but scarce information is available about the clinical features of COVID-19 in pregnancy. This study aimed to clarify the clinical features and obstetric and neonatal outcomes of pregnant patients with COVID-19. **Methods** In this retrospective, single-centre study, we included all pregnant women with COVID-19 who were admitted to Tongji Hospital in Wuhan, China. Clinical features, treatments, and maternal and fetal outcomes were assessed. **Findings** Seven patients, admitted to Tongji Hospital from Jan 1, to Feb 8, 2020, were included in our study. The mean age of the patients was 32 years (range 29–34 years) and the mean gestational age was 39 weeks plus 1 day (range 37 weeks to 41 weeks plus 2 days). Clinical manifestations were fever (six [86%] patients), cough (one [14%] patient), shortness of breath (one [14%] patient), and diarrhoea (one [14%] patient). All the patients had caesarean section within 3 days of clinical presentation with an average gestational age of 39 weeks plus 2 days. The final date of follow-up was Feb 12, 2020. The outcomes of the pregnant women and neonates were good. Three neonates were tested for SARS-CoV-2 and one neonate was infected with SARS-CoV-2 36 h after birth. **Interpretation** The maternal, fetal, and neonatal outcomes of patients who were infected in late pregnancy appeared very good, and these outcomes were achieved with intensive, active management that might be the best practice in the absence of more robust data. The clinical characteristics of these patients with COVID-19 during pregnancy were similar to those of non-pregnant adults with COVID-19 that have been reported in the literature. **Funding** National Natural Science Foundation of China, Hubei Provincial Natural Science Foundation of China. (Author) (Original research)

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**20200318-5\***

**Infants Born to Mothers With a New Coronavirus (COVID-19).** Chen Y; Peng H; Wang L; et al, (2020). *Frontiers in Pediatrics* , 16 March 2020, online.

A novel viral respiratory disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is responsible for an epidemic of the coronavirus disease 2019 (COVID-19) in cases in China and worldwide. Four full-term, singleton infants were born to pregnant women who tested positive for COVID-19 in the city of Wuhan, the capital of Hubei province, China, where the disease was first identified. Of the three infants, for whom consent to be diagnostically tested was provided, none tested positive for the virus. None of the infants developed serious clinical symptoms such as fever, cough, diarrhea, or abnormal radiologic or hematologic evidence, and all four infants were alive at the time of hospital discharge. 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. This case report describes the clinical course of four live born infants, born to pregnant women with the COVID-19 infection. (13 references) (Author) (Case report)

**Available from:** <https://doi.org/10.3389/fped.2020.00104>

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**20200311-48\***

**Coronavirus (COVID-19) infection in pregnancy: Information for healthcare professionals [Last updated 17 April 2020].** Royal College of

Obstetricians and Gynaecologists; Royal College of Midwives; Royal College of Paediatrics and Child Health; et al, (2020). Royal College of Obstetricians and Gynaecologists (RCOG) , 9 March 2020.

Guidance for healthcare professionals on Coronavirus (COVID-19) infection in pregnancy, published by the RCOG, Royal College of Midwives, Royal College of Paediatrics and Child Health, Public Health England and Health Protection Scotland. The guidance, which will be updated on a regular basis, covers: epidemiology; transmission; effect of COVID-19 on pregnant women; effect of COVID-19 on the fetus; travel advice for pregnant women; advice for women who may have been exposed; diagnosis; advice for women who have been advised to self-isolate; management of pregnant women with confirmed COVID-19; postnatal management: neonatal care and infant feeding; admissions flowchart; information for women and their families (18 references) (Publisher) (Briefing paper)

**Available from:** <https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-26-covid19-pregnancy-guidance.pdf>

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**20200309-71\***

**Breastfeeding and Respiratory Antivirals: Coronavirus and Influenza.**

Anderson PO, (2020). *Breastfeeding Medicine* , vol 15, no 3, March 2020, p 128.

Provides an overview of the options for antiviral drugs to treat influenza and coronavirus and their safety for use in women who are breastfeeding. (MB) (Overview)

**Available from:** <https://doi.org/10.1089/bfm.2020.29149.poa>

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**20200305-163\***

**'No evidence' coronavirus can be passed to child late in pregnancy.** Ford S, (2020). *Nursing Times* , 17 February 2020 .

There is currently no evidence that the novel coronavirus disease causes severe adverse outcomes in neonates or that it can pass to the child while in the womb, according to preliminary studies. (Author) (News item)

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**20200210-29\***

**A contingency plan for the management of the 2019 novel coronavirus outbreak in neonatal intensive care units.** Wang J; Qi H; Bao L; et al, (2020). *The Lancet Child & Adolescent Health* , 7 February 2020, online.

The authors present a contingency plan for the 2019-nCoV outbreak in NICUs, focussing mainly on diagnostic and discharge criteria, treatment, prevention, and control strategies. (MB) (Commentary)

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**20200206-32\***

**Coronavirus: Newborn becomes youngest person diagnosed with virus.**

Anon, (2020). *BBC News* , 6 February 2020.

Reports that a 30-hour-old baby in China has been diagnosed with coronavirus, the youngest case recorded so far. States that the baby's mother had tested positive for the illness while still pregnant. It is not known if the baby became infected in the womb or after birth. (JSM) (News item)

**Available from:** <https://www.bbc.co.uk/news/world-asia-china-51395655>

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