

South-East Asia Network for Newborn & Birth Defects

Monthly E-blast



**WHO Collaborating Centre for Training and Research in Newborn Care
Collaborating Centre for Training in Clinical Laboratory Genetics in Developing
Countries Department of Pediatrics
AIIMS, New Delhi, India**

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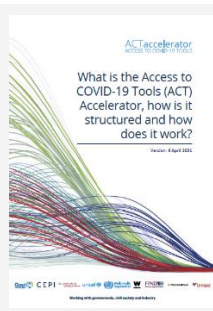
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Media centre



What is the Access to COVID-19 Tools (ACT) Accelerator, how is it structured and how does it work?

This 'How it works' document gives an overview of the ACT Accelerator's structure, detailing which organizations co-lead each of the pillars: vaccines (COVAX), diagnostics, therapeutics, health systems connector and access & allocation. It outlines the coordination mechanisms and technical workstream structure and schedule of regular meetings for collaboration.

Workstreams and leads within each of the pillars are also noted. The document also runs through the mechanisms for cross-pillar strategic alignment: Principals Coordination Group, WHO Special Envoys for the ACT-Accelerator and ACT-Accelerator Executive Hub. Information is also provided on the ACT-Accelerator Facilitation Council and how donors can contribute to the agencies that make up the ACT-Accelerator.

[Read full information](#)

Birth Defects

Congenital abnormalities associated with Zika virus infection-Dengue as potential co-factor? A systematic review

Stephanie Petzold, Nisreen Agbaria, Andreas Deckert, Peter Dambach, Volker Winkler, Jan Felix Drexler, Olaf Horstick, Thomas Jaenisch
PubMed: January 2021

Abstract

Zika virus (ZIKV) emerged in Brazil during 2013-2014 causing an epidemic of previously unknown congenital abnormalities. The frequency of severe congenital abnormalities after maternal ZIKV infection revealed an unexplained geographic variability, especially between the Northeast and the rest of Brazil. Several reasons for this variability have been discussed. Prior immunity against Dengue virus (DENV) affecting ZIKV seems to be the most likely explanation. Here we summarise the current evidence regarding this prominent co-factor to potentially explain the geographic variability. This systematic review followed the PRISMA guidelines. The search was conducted up to May 15th, 2020, focussing on immunological interactions from Zika virus with previous Dengue virus infections as potential teratogenic effect for the foetus. Eight out of 339 screened studies reported on the association between ZIKV, prior DENV infection and microcephaly, mostly focusing on antibody-dependent enhancement (ADE) as potential pathomechanism. Prior DENV infection was associated with enhancement for ZIKV infection and increased neurovirulence in one included in vitro study only. Interestingly, the seven in vivo studies exhibited a heterogeneous picture with three studies showing a protective effect of prior DENV infections and others no effect at all. According to several studies, socio-economic factors are associated with increased risk for microcephaly. Very few studies addressed the question of unexplained variability of infection-related microcephaly. Many studies focussed on ADE as mechanism without measuring microcephaly as endpoint. Interestingly, three of the included studies reported a protective effect of prior DENV infection against microcephaly. This systematic review strengthens the hypothesis that immune priming after recent DENV infection is the crucial factor for determining protection or enhancement activity. It is of high importance that the currently ongoing prospective studies include a harmonised assessment of the potential candidate co-factors.

COVID-19 in Children, Pregnancy and Neonates: A Review of Epidemiologic and Clinical Features.

Petra
PubMed: June 2020

Zimmermann,

Nigel

Curtis

Abstract

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.

Stillbirth

Counting stillbirths and COVID 19—there has never been a more urgent time

Caroline S E Homer, Susannah Hopkins Leisher, Neelam Aggarwal, Joseph Akuze, Delly Babona, Hannah Blencowe, John Bolgna, Richard Chawana, Aliko Christou, Miranda Davies-Tuck, Rakhi Dandona, Sanne Gordijn, Adrienne Gordon, Rafat Jan, Fleurisca Korteweg, Salome Maswime, Margaret M Murphy, Paula Quigley, Claire Storey, Lisa M Vallely, Peter Waiswa, Clare Whitehead, Jennifer Zeitlin, Vicki Flenady

The Lancet: November 2020

Abstract

We welcome the global stillbirth estimates published by UNICEF and WHO in October, 2020.¹ These data indicate that there are at least 1.9 million stillbirths globally each year. The heavy public health burden of stillbirth has long remained invisible, despite more than a decade of sustained effort to raise it on the global health agenda. Ironically, even the recent BMJ collection,² highlighting the UN guiding principle “Leave no one behind”, omitted any mention of the 26 million women and families who will experience a stillbirth by 2030. As the first stillbirth estimates to be generated by the UN Inter-Agency Group for Child Mortality Estimation, these data signal a long overdue shift towards global attention on stillbirth prevention.

The new stillbirth report comes at a crucial point in time as we live through the most significant pandemic in over a century. COVID-19 will have a considerable impact on maternal and newborn health globally, directly and indirectly affecting the lives of millions of women and families.³ The report draws attention to the existing

global inequalities, which are likely to be exacerbated by the global pandemic, potentially further increasing the risk of stillbirth.

[Read full article](#)

Changes in Preterm Birth Phenotypes and Stillbirth at 2 Philadelphia Hospitals During the SARS-CoV-2 Pandemic, March-June 2020

Sara C. Handley, MD, MSCE; Anne M. Mullin, BS; Michal A. Elovitz, MD

Jama: December 2020

Abstract

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has had far-reaching implications, including changes in societal stressors and health care delivery, which may alter preterm birth risk. Previous studies in the US regarding SARS-CoV-2 in pregnancy focused on associations of SARS-CoV-2 infection with cesarean delivery, neonatal transmission, preterm birth, and stillbirth.¹ In a relatively homogeneous Danish population, Hedermann et al² reported a decrease in preterm birth during the pandemic among uninfected patients. Given differences in preterm birth across populations,³ we examined a diverse urban cohort in the US to determine if preterm birth, spontaneous preterm birth, medically indicated preterm birth, and stillbirth rates have changed during the SARS-CoV-2 pandemic.

METHOD

GeoBirth is a curated pregnancy cohort of all births in 2 Penn Medicine hospitals in Philadelphia ongoing since 2008 (approximately 9000 births per year), in which each preterm birth (<37 weeks' gestation) is manually classified by 2 independent blinded reviewers, with further adjudication by a third reviewer when there is nonconcordance. Preterm birth phenotypes are categorized as spontaneous preterm birth (eg, preterm labor, spontaneous rupture of membranes) or medically indicated preterm birth (eg, clinician initiated due to a maternal or fetal health condition, such as preeclampsia or intrauterine growth restriction). Stillbirth is defined as intrauterine fetal demise at 20 weeks' gestation or greater. We compared preterm birth, spontaneous preterm birth, medically indicated preterm birth, and stillbirth rates among singleton pregnancies during the pandemic period (March-June 2020) with the same months in 2018 and 2019 (prepandemic) to account for seasonality using a 2-tailed Fisher exact test with a significance threshold of $P < .05$ using R, version 4.0.2. We used marginal effects models to calculate absolute risk differences between the 2 epochs adjusting for birth month, age, parity, body mass index, race/ethnicity, marital status, smoking, and insurance status. We also performed analyses stratified by race/ethnicity because of persistent preterm birth disparities.³ This study was approved by the University of Pennsylvania Institutional Review Board with a waiver of informed consent.

RESULTS

There were a total of 8867 singleton, live-born deliveries in March through June of 2018, 2019, and 2020 (42% non-Hispanic Black, 37% non-Hispanic White, and 21% other race/ethnicity); 2992 deliveries occurred during the pandemic period, including 283 preterm births (135 spontaneous and 148 medically indicated) and 15 stillbirths. Prepandemic and pandemic birth outcomes were as follows: 10.5% vs 9.5% of deliveries were preterm births (adjusted difference, -1.1% [95% CI, -2.4% to 0.2%]), 5.7% vs 4.7% were spontaneous preterm births (adjusted difference, -0.8% [95% CI, -1.8% to 0.2%]), 5.4% vs 5.2% were medically indicated preterm births (adjusted difference, -0.3% [95% CI, -1.4% to 0.6%]), and 5.4 per 1000 births vs 5.0 per 1000 births were stillbirths (adjusted difference, -0.03 per 1000 births [95% CI, -0.34 to 0.29]) (Table). Spontaneous preterm birth among non-

Hispanic White patients declined during the pandemic (4.5% vs 2.9%; adjusted difference, -1.4% [95% CI, -2.8% to -0.1%]); no other racial/ethnic groups had significant changes in outcomes. However, no significant interaction was detected between race/ethnicity and epoch with spontaneous preterm birth ($P = .09$ for interaction).

In the 2 hospitals, universal SARS-CoV-2 testing began on April 1, 2020, and April 13, 2020. Among 86 patients with test results positive for SARS-CoV-2, the preterm birth rate was 11.6% ($n = 10$; 6 spontaneous and 4 medically indicated preterm births) and there was 1 stillbirth..

DISCUSSION

This study did not detect significant changes in preterm or stillbirth rates during the SARS-CoV-2 pandemic in a racially diverse urban cohort from 2 Philadelphia hospitals. Although these data allow for disaggregation of spontaneous and medically indicated preterm births, no differences in overall rates of these phenotypes were detected.

These findings differ from a Danish report of decreasing preterm birth rates² and higher stillbirth rates in a UK hospital⁴ during the pandemic. The differences between studies may be due to differences in enforcement of lockdown orders, population heterogeneity, access to health care, or societal stressors.

Study limitations include examination of a single health system, short epochs, limited representation of other races/ethnicities, few stillbirths, and potential for change in delivery hospital choice during the pandemic.

Newborn

The younger the milder clinical course of COVID-19: Even in newborns?

Char Leung

PAI: September 2020

Abstract

BACKGROUND

Milder symptoms were observed in children with COVID-19. However, whether this also holds true for neonates is not known.

METHODS

The clinical data of a total of 3213 patients aged 2 years or below, including 749 neonates, in Brazil nationwide were studied. Comparisons were made between neonate and infant patients by conducting statistical tests.

RESULTS

Neonates appeared to bear more severe clinical courses. In addition to higher case fatality rates, newborns with COVID-19 had much shorter time from symptom onset to death and longer time from symptom onset to discharge. Dyspnoea, sore throat and cough were more prominent in neonate patients, suggestive of both upper and lower respiratory tract infection, as opposed to upper respiratory tract symptoms mostly observed in children.

CONCLUSION

Findings suggested that trained immunity provides a possible explanation because the innate immune system in newborns is not “well-trained” while that in adult tends to hyperactive.

Small and sick newborn care during the COVID-19 pandemic: global survey and thematic analysis of healthcare providers' voices and experiences

Suman P N Rao, Nicole Minckas, Melissa M Medvedev, David Gathara, Prashantha Y N, Abiy Seifu Estifanos, Alfrida Camelia Silitonga, Arun Singh Jadaun, Ebinoluwa A Adejuyigbe, Helen Brotherton, Sugandha Arya, Rani Gera, Chinyere V Ezeaka, Abdou Gai, Abebe Gebremariam Gobezaayehu, Queen Dube, Aarti Kumar, Helga Naburi, Msandeni Chiume, Victor Tumukunde, Araya Abrha Medhanyie, Gyikua Plange-Rhule, Josephine Shabini, Eric O Ohuma, Henok Tadele, Fitsum W/Gebrie, Amanuel Hadgu, Lamesgin Alamineh, Rajesh Mehta, Elizabeth Molyneux, Joy E Lawn

BMJ: December 2020

Abstract

INTRODUCTION

The COVID-19 pandemic is disrupting health systems globally. Maternity care disruptions have been surveyed, but not those related to vulnerable small newborns. We aimed to survey reported disruptions to small and sick newborn care worldwide and undertake thematic analysis of healthcare providers' experiences and proposed mitigation strategies.

METHODS

Using a widely disseminated online survey in three languages, we reached out to neonatal healthcare providers. We collected data on COVID-19 preparedness, effects on health personnel and on newborn care services, including kangaroo mother care (KMC), as well as disruptors and solutions.

RESULTS

We analysed 1120 responses from 62 countries, mainly low and middle-income countries (LMICs). Preparedness for COVID-19 was suboptimal in terms of guidelines and availability of personal protective equipment. One-third reported routine testing of all pregnant women, but 13% had no testing capacity at all. More than 85% of health personnel feared for their own health and 89% had increased stress. Newborn care practices were disrupted both due to reduced care-seeking and a compromised workforce. More than half reported that evidence-based interventions such as KMC were discontinued or discouraged. Separation of the mother–baby dyad was reported for both COVID-positive mothers (50%) and those with unknown status (16%). Follow-up care was disrupted primarily due to families' fear of visiting hospitals (~73%).

CONCLUSION

Newborn care providers are stressed and there is lack clarity and guidelines regarding care of small newborns during the pandemic. There is an urgent need to protect life-saving interventions, such as KMC, threatened by the pandemic, and to be ready to recover and build back better.

Quality Improvement

Continuous quality improvement as a tool to implement evidence-informed problem solving: experiences from the district and health facility level in Uganda

Hector Tibeihaho, Charles Nkolo, Robert Anguyo Onzima, Florence Ayebare, Dorcus Kiwanuka Henriksson

PubMed: January 2021

Abstract

BACKGROUND

Continuous quality improvement processes in health care were developed for use at health facility level, and that is where they have been used the most, often addressing defined care processes.

However, in different settings different factors have been important to support institutionalization. This study explores how continuous quality improvement processes were institutionalized at the district level and at the health facility level in Uganda.

METHODS

This qualitative study was carried out in seven districts in Uganda. Semi-structured interviews with key informants from the district health management teams and document review were conducted. Thematic analysis was used to analyze the data.

RESULTS

All districts that participated in the study formed Continuous Quality Improvement (CQI) teams both at the district level and at the health facilities. The district CQI teams comprised of members from different departments within the district health office. District level CQI teams were mandated to take the lead in addressing management gaps and follow up CQI activities at the health facility level. Acceptability of quality improvement processes by the district leadership was identified across districts as supporting the successful implementation of CQI. However, high turnover of staff at health facility level was also reported as a detrimental to the successful implementation of quality improvement processes. Also the district health management teams did not engage much in addressing their own roles using continuous quality improvement.

CONCLUSION

The leadership and management provided by the district health management team was an important factor for the use of Continuous Quality Improvement principles within the district. The key roles of the district health team revolved around the institutionalisation of CQI at different levels of the health system, monitoring results of continuous quality improvement implementation, mobilising resources and health care delivery hence promoting the culture of quality, direct implementation of CQI, and creating an enabling environment for the lower-level health facilities to engage in CQI. High turnover of staff at health facility level was also reported as one of the challenges to the successful implementation of continuous quality improvement. The DHT did not engage much in addressing gaps in their own roles using continuous quality improvement.

[A quality improvement pathway to rapidly increase telemedicine services in a gynecologic oncology clinic during the COVID-19 pandemic with patient satisfaction scores and environmental impact](#)

Rachel P Mojdehakhsh, Stephen Rose, Megan Peterson, Laurel Rice, Ryan Spencer

Science Direct: January 2021

Abstract

The primary goal was to convert 50% of all outpatient Gynecologic Oncology (GynOnc) encounters during the COVID-19 pandemic to telemedicine within one week. The secondary goal was to reach 100% documentation of telemedicine consent. The tertiary goal was to analyze patient satisfaction scores. An additional goal was to estimate CO₂ emissions prevented from being produced.

The period from 3/16/2020–4/15/2020 was targeted. The initial intervention involved transitioning surveillance visits. A second intervention, with nursing and advanced-practice-provider support, included transitioning additional visit types, and distributing a note template. The Telehealth

Satisfaction Survey (TeSS) was administered to patients. Descriptive statistics and run charts were used to analyze and depict results.

Within four weeks, there were 408 encounters; 217 were telemedicine (53.2%). Following the second intervention, 13 of 15 days (86.7%) reached the 50% telemedicine target and consent was documented in 96.6% of the telemedicine encounters. The TeSS had a 74.8% response-rate. Patients rated the following aspects of the telemedicine encounter as good or excellent: call quality (96.5%), personal comfort (92.9%), length-of-visit (94.7%), treatment explanation (93.8%), overall experience (88.5%). Moreover, 82.3% of patients would use telemedicine again. Additionally, 6.25 metric tons of CO₂ emissions from travel were prevented from being produced.

A GynOnc clinic can rapidly implement telemedicine systems. With multidisciplinary team planning and standardized note templates, transitioning 50% of encounters to telemedicine and achieving high rates of consent documentation were accomplished in four weeks. This increase in telemedicine represented a measurable decrease in the amount of CO₂ emissions. Additionally, patients were overwhelmingly satisfied.

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