

# Operational Considerations for Maintaining Essential Services for and Providing Maternal, Newborn, and Child Healthcare in Low-Resource Countries

## Coronavirus Disease 2019 (COVID-19)

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While current data suggest that pregnant women, newborns, and children are not at highest risk for COVID-19 deaths, disruption of routine essential services poses a threat to their survival and health.

Based on what we know at this time, pregnant women might be at an increased risk for severe illness from COVID-19 compared to non-pregnant women. The risk of adverse pregnancy outcomes, such as preterm birth, is increased among pregnant women with chronic conditions, such as asthma, heart disease, hypertension, and diabetes, or infectious diseases, such as tuberculosis (TB), malaria, and HIV, and may be increased among pregnant women with COVID-19. Newborns with low birth weight or prematurity are at increased risk for complications both generally and as a result of COVID-19. Among children, malnutrition, chronic conditions (e.g., asthma, diabetes, congenital heart defects, epilepsy, and behavior/learning problems), TB, malaria, and HIV are all examples of issues that need consistent healthcare services; service disruptions as a result of COVID-19 could result in substantial increases in mortality as a result of non-COVID-19 conditions, similar to what was seen during the Ebola epidemic. [1, 2]

Therefore, it is crucial that the needs of mothers, newborns, and children are kept in mind when developing mitigation strategies for maintaining essential services delivery in low-resource countries, including considering providing services by telehealth where feasible. In addition, it is essential that clinics use [mitigation strategies](#), including:

- Implementing infection prevention and control activities ([IPC](#)).
- Ensuring staff use appropriate personal protective equipment (PPE), such as masks and [eye protection](#) (e.g., goggles, face shield) for all patients and gowns and gloves as needed.
- Ensuring patients wear [cloth face coverings](#) for source control.
- Enforcing a distance of at least 2 meters between all people in the facility (social distancing) whenever possible.
- Making handwashing stations with soap and water or hand sanitizer soap with at least 60% alcohol available.

The following considerations should supplement local Ministry of Health Guidance.

### Essential Maternal, Newborn and Child Health (MNCH) services to Provide During COVID-19



#### Individualize counseling and advice on self-care, in addition to COVID-19-specific messages. Essential and emergency maternal care interventions

- Screen for and manage anemia, malaria, pre-eclampsia/eclampsia, sexually transmitted infections/HIV, TB, gender-based violence, infection, antepartum/postpartum hemorrhage, labor, and childbirth complications.
- Provide preventive measures per country guidelines.
- Ensure availability of auxiliary services: ultrasound, laboratory services, and blood bank services.

#### Essential and emergency newborn care interventions



- Screen for and manage asphyxia, congenital anomalies, birth injuries, infection, feeding problems, breathing difficulties, hypo-/hyperthermia.
- Provide prophylactic treatment as indicated: antibiotics, antiretroviral (ARV) drugs, TB drugs.
- Provide essential care: birth dose of oral polio vaccine, bacille Calmette-Guerin (BCG), and hepatitis B vaccinations per national immunization schedule; thermal protection, eye and cord care, vitamin K.
- Respond to observed signs or reported problems.
- Facilitate early and exclusive breastfeeding.
- Provide individualized counseling messages for parents/caregivers.



### Essential child health services

- Prioritize primary series vaccinations, especially for measles-rubella- or poliomyelitis-containing vaccines and other combination vaccines.
- Prioritize vaccination for diseases with risk of outbreaks: measles, polio, diphtheria, and yellow fever.
- Prioritize pneumococcal and seasonal influenza vaccines for vulnerable population groups.
- Provide diagnostic testing for infants and children exposed to HIV (or other diseases) per national algorithms/guidelines
- Intensify effort to detect and monitor the nutritional status using low-literacy/numeracy tools including Mid-Upper Arm Circumference (MUAC) tapes

### Special considerations

- Adolescent girls and youth may be particularly impacted by changes to service delivery during the COVID-19 pandemic, as well as sexual exploitation and abuse, gender-based violence, less access to education, adolescent pregnancies, and unequal access to information. Adolescents who are pregnant or young parents may be disproportionately impacted by social isolation and lack of social support.
- While the technical components of service delivery may remain the same, health care providers may need to alter modes of delivery to meet patient needs. Women represent 70% of the health and social sector workforce globally,<sup>1</sup> and with their frontline interaction with communities and participation in care work, they face a higher risk of exposure to COVID-19; appropriate engineering and administrative controls and PPE should be used to minimize risk of infection to all frontline workers. Further, special attention should be given to how their work environment may expose them to discrimination and to address their social and reproductive health and psychosocial needs as frontline health workers.

<sup>1</sup> [https://www.who.int/health-topics/health-workforce#tab=tab\\_1](https://www.who.int/health-topics/health-workforce#tab=tab_1)

## Optimize service delivery in Maternal, Newborn, and Child Health settings and platforms

### Antenatal Care

#### Telehealth

- Triage and provide advice on common discomforts, concerns or preoccupations, and danger signs related to pregnancy (e.g., haemorrhage, swelling, headache, blurry vision).
- Provide counseling on family planning, pregnancy spacing, birth preparedness/ complication readiness plan, and visit schedule.
- Mental and emotional health support (e.g., for prenatal depression)
- Adherence support for women with chronic illnesses (for example, HIV)
- Advice on self-care.<sup>2</sup>

### **Community-based visits with a trained community health worker (CHW) using point-of-care devices:**

- Visits at 20, 26, 34, and 38 weeks
- Advice on common discomforts
- Voluntary counseling and testing for HIV
- Counseling and referral as needed for syphilis, hepatitis B
- Urinalysis with urine dipsticks for proteinuria and asymptomatic bacteriuria, rapid test for malaria
- Follow-up of problems/infections/illnesses being managed by a skilled provider
- Distribution of iron-folic acid, mebendazole, PrEP, ARV, intermittent preventive treatment of malaria in pregnancy (IPTp)
- Treatment of malaria
- Triage and referral for identified problems
- Group antenatal care sessions should be discontinued or transitioned to telehealth if possible

### **Facility-based visits with a skilled provider and laboratory capacity**

- First visit at any gestational age, to include ultrasound estimation of gestational age
- Visits at 30, 36, and 40 weeks
- Voluntary counseling and testing for HIV, syphilis, hepatitis B; treatment and management of people testing positive
- Hemoglobin, urinalysis with urine dipsticks, rapid test for malaria
- Distribution of iron-folic acid, mebendazole, ARV drugs, IPTp; consider provision of multi-month prescriptions as applicable
- Treatment of malaria, urinary tract infection/asymptomatic bacteriuria
- Evaluation and management of danger signs
- Inpatient or outpatient management of complications
- Group antenatal care sessions should be discontinued or transitioned to telehealth if possible

## **Labor and Childbirth**

### **Telehealth**

- Triage and advice for women who think they are in labor

### **Community-based providers**

- Triage and advice for women who think they are in labor

### **Facility-based delivery with a skilled provider (private or public sector)**

- Cesarean surgeries should only be performed when medically indicated. COVID-19- positive status is NOT an indication for cesarean section
- In overcrowded health facilities where social distancing is difficult, an early discharge may be considered 6 hours post-delivery for healthy women and their newborn who have experienced uncomplicated vaginal births and 2 days after cesarean birth. Mothers and newborns may be discharged separately if one requires further skilled care.

## **Postnatal Care and Essential Newborn Care**

### **Telehealth**

- Triage and provide advice on concerns or preoccupations and pregnancy danger signs.
- Provide counseling on family planning, pregnancy spacing, complication readiness plan, visit schedule, and newborn vaccinations.
- Advice on self-care.<sup>2</sup>



- Mental and emotional health support (e.g., for postpartum depression, adherence support for women with chronic illnesses)
- Provide breastfeeding counseling<sup>3</sup>

<sup>2</sup> <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html>

<sup>3</sup> Breast milk is the best source of nutrition for most infants. We do not know whether mothers with COVID-19 can transmit the virus via breast milk, but the limited [data](#) available suggest this is not likely. A mother’s intention to breastfeed should be supported by maternity care providers. A mother with confirmed COVID-19 should be counseled to take [precautions](#) to avoid spreading the virus to her infant, including [handwashing](#) and wearing a [cloth face covering](#). If a woman is COVID-19 positive and too unwell to breastfeed, provide support for the woman to express breastmilk. If possible, expressed breast milk should be fed to the infant by a healthy caregiver, who is not at [high-risk for severe illness](#) from COVID-19 (also see [here](#)). An infant being breastfed by a mother who is suspected or confirmed to have COVID-19 should be considered as having suspected COVID-19—when the infant’s testing results are not available—for the duration of the mother’s recommended period of [home isolation](#) and 14 days thereafter.

<sup>4</sup> All newborns need to be given skin-to-skin care by the mother, irrespective of the mother’s or their COVID-19 infection status, as recommended by [WHO](#). Strict hygiene practices are required and must be continued including medical mask wearing by mothers who are COVID-19-positive, and frequent handwashing or use of hand sanitizer with at least 60% alcohol if soap and water are not readily available before touching the baby.

#### Detailed antenatal care (ANC) visit recommendations, including considerations for providing remote ANC contacts

Current WHO recommendation	Services		
	Visit	In person contact	Remote Contact
1 : 12 weeks	<ul style="list-style-type: none"> <li>• Comprehensive history and plan for care</li> <li>• Blood pressure (BP)/blood and urine test</li> <li>• Initial risk assessment</li> </ul>		
2 : 20 weeks			✓ Including ongoing risk assessment
3 : 26 weeks			✓ Including ongoing risk assessment
4 : 30 weeks	<ul style="list-style-type: none"> <li>• BP/blood and urine test</li> <li>• Abdominal palpation</li> <li>• Fetal heart rate</li> <li>• Ongoing risk assessment</li> </ul>		
5 : 34 weeks			✓ Including ongoing risk assessment
6 : 36 weeks	<ul style="list-style-type: none"> <li>• BP/blood and urine test</li> <li>• Abdominal palpation</li> <li>• Fetal heart rate</li> <li>• Ongoing risk assessment</li> </ul>		
7 : 38 weeks			✓ Including ongoing risk assessment
8 : 40 weeks	<ul style="list-style-type: none"> <li>• BP/blood and urine test</li> <li>• Abdominal palpation</li> <li>• Fetal heart rate</li> <li>• Ongoing risk assessment</li> </ul>		

Regardless of type of contact, ALL women need to have:

- Assessment for, and information on, possible COVID-19 symptoms. If women report symptoms or contact with a person with suspected/confirmed COVID-19, provide country-specific information on mandatory self-isolation and advise phone contact or rescheduling if possible (if urgent need, follow facility/country recommendations for seeking care).
- Information on danger signs in pregnancy and birth preparedness.
- Ongoing pregnancy risk assessment – including emotional well-being and personal safety.
- More frequent contacts if risk assessment identifies potential or actual pregnancy complications. These may need to be in-person contacts.
- Iron, folic acid, calcium, and other recommended supplementation.
- Preventive measures and treatment such as tetanus toxoid vaccination, malaria prophylaxis (intermittent preventive treatment in pregnancy, insecticide treated nets) and treatment, antiretroviral therapy or HIV pre-exposure prophylaxis, routine disease and infection screening and treatment.
- Adequate documentation of care provision to ensure appropriate care planning.
- Screening for [intimate partner violence](#).

## Resources

[https://www.who.int/publications/i/item/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected-20200125](https://www.who.int/publications/i/item/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125) 

<https://openwho.org/courses/COVID-19-IPC-EN> 

<https://www.cdc.gov/violenceprevention/intimatepartnerviolence/index.html>

UNFPA. COVID-19 Technical brief for antenatal services. <https://asiapacific.unfpa.org/en/publications/covid-19-technical-brief-antenatal-care-services> 

UNFPA . COVID-19 Technical brief for maternity service <https://www.unfpa.org/resources/covid-19-technical-brief-maternity-services> 

Blackwell, N. et.al. (2015) Mothers Understand And Can do it (MUAC): a comparison of mothers and community health workers determining mid-upper arm circumference in 103 children aged from 6 months to 5 years. (Arch Public Health. 2015 May 18;73(1):26. <https://pubmed.ncbi.nlm.nih.gov/25992287/> 

## References

1. Elston, J. W. T., et al. 2017. "The health impact of the 2014–15 Ebola outbreak." Public Health 143: 60-70.
2. Jones, S. A., et al. 2016. "'Women and babies are dying but not of Ebola': the effect of the Ebola virus epidemic on the availability, uptake and outcomes of maternal and newborn health services in Sierra Leone." 1(3): e000065.

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