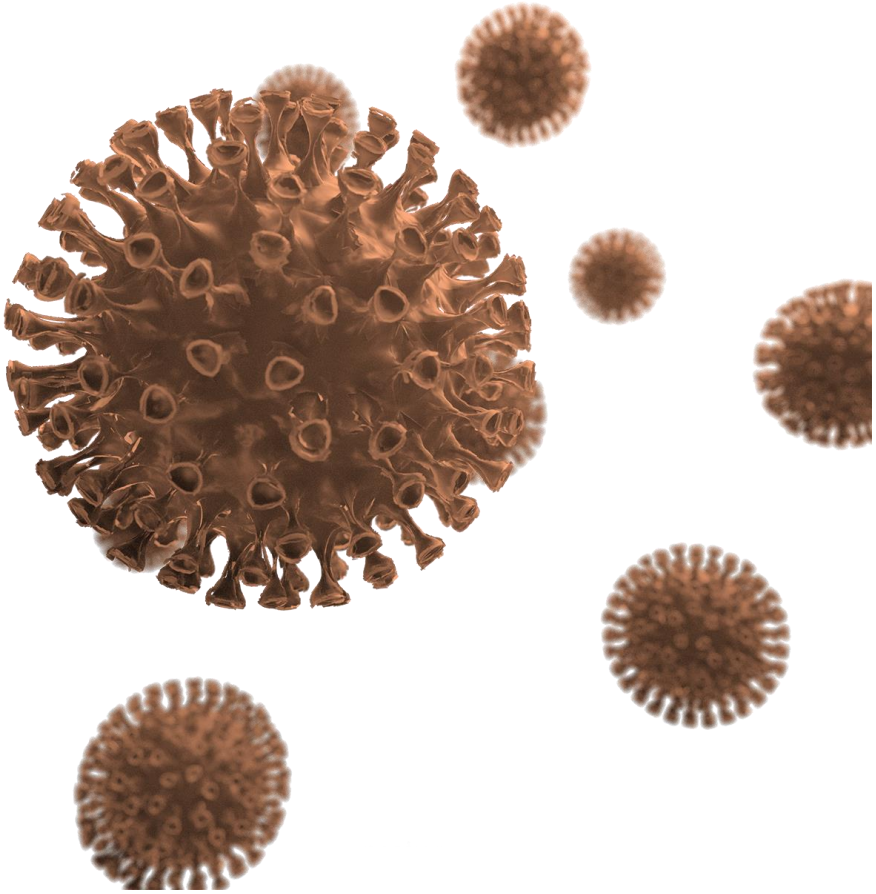


Bangladesh

Version 1.2

National Guideline for providing essential Maternal, Newborn and Child Health Services in the context of COVID-19

Updated on 18 May 2020

Contents

List of abbreviations:

ANC	Antenatal Care
BEmONC	Basic Emergency Obstetric and Newborn Care
CEmONC	Comprehensive Emergency Obstetric and Newborn Care
COVID-19	Coronavirus Disease 2019
DGHS	Directorate General of Health Services
DGFP	Directorate General of Family Planning
GBV	Gender-based violence
IMCI	Integrated Management of Childhood Illness
IPC	Infection Prevention and Control
IUD	Intrauterine Device
LARCS	Long-Acting Reversible Contraceptives
MNCH	Maternal, Newborn and Child Health
MUAC	Mid Upper Arm Circumference
NNHP	National Newborn Health Program
PAPR	Powered Air-Purifying Respiratory
PNC	Postnatal Care
PPE	Personal Protective Equipment
PUI	Person Under Investigation
PW	Pregnant Woman
SCANU	Special Care Newborn Unit
SRH	Sexual and Reproductive Health
UHC	Upazila Health Complex
UH&FWC	Union Health and Family Welfare Center
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Introduction

Global and national perspectives of COVID-19

Coronavirus infectious disease-2019 (COVID-19) is mainly a respiratory tract infection, which is caused by the newly emergent Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2)[1]. It was first identified inWuhan, a port city in Hubei province on 31 December 2019. On 11 March 2020, the WHO declared the coronavirus outbreak a pandemic. As of 14 May 2020, there were more than 4.4 million confirmed cases across 203 countries and territories; of which approximately 290,000 died[2]. On 08 March 2020, Bangladesh declared the first confirmed case of COVID-19. The first COVID-19 related death was reported on 18 March 2020. As of 14 May 2020, there are 18,863 confirmed cases, of which 283 died. Among the total confirmed cases in Bangladesh, 3% are aged less than ten years[3].

Bangladesh has started the preparation to control and contain the pandemic in the country since January 2020 based on the National Preparation and Response Plan. The health systems of Bangladesh are being confronted with the COVID-19 case surge, and the emergency response required for ensuring appropriate prevention, control and treatment. With limited resources, the health systems become overwhelmed, which may lead to direct mortality from an outbreak and indirect mortality from other treatable conditions, particularly among poor and the most vulnerable. Acknowledging this, the Government of Bangladesh has set priority to ensure routine and emergency services for Maternal, Newborn and Child Health (MNCH) in the context of COVID-19. It requires engaging in strategic planning and coordinated action to maintain throughout the country. Particular attention is needed for establishing effective patient flow (including screening, triage, and targeted referral of COVID-19 and non-COVID-19 cases) to ensure optimum protection of health care providers and patients as well as maintaining coverage and quality of essential MNCH services at all levels.

Impact of COVID-19 on MNCH service update

In Bangladesh, the uptake of essential MNCH services has decreased dramatically since reporting its first case on 08 March 2020. Compared to January-March 2019, utilisation of antenatal care (ANC) has reduced by 19% in January-March 2020. A similar trend is observed for facility-based birth as the numbers are decreased by 12% compared to the same quarter of last year. There are substantial reductions in the update of sick newborn care and child health services (Integrated Management of Childhood Illness-IMCI) throughout the country. SCANU utilisation has dropped by two-thirds, and IMCI utilisation has reduced by one-fifth during the reporting period compared to the reference period of January-March 2019.

[1]World Health Organization. Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected. Interim guidance 13 March 2020 World Health Organization 2020

[2] Worldometer. COVID-19 CORONAVIRUS PANDEMIC 2020 [Available from: https://www.worldometers.info/coronavirus/

[3] Institute of Epidemiology Disease Control and Research. করোনাইনফো [Available from: https://corona.gov.bd/

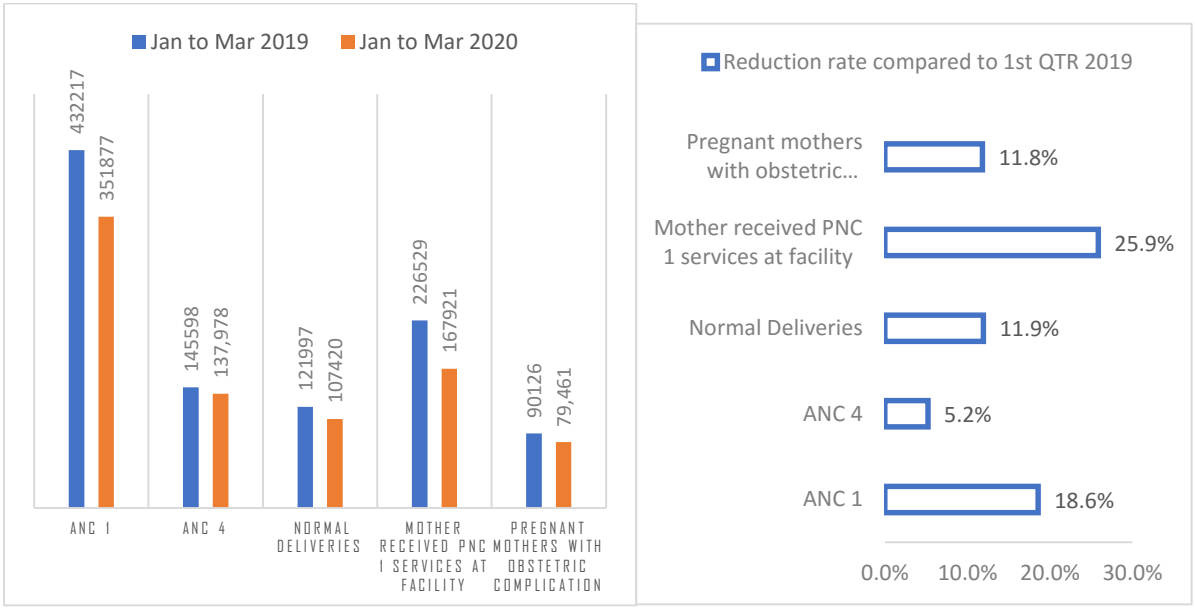


Figure 1Trends of MNH services by quarters between 2019 and 2020 showing reduction in uptake in numbers

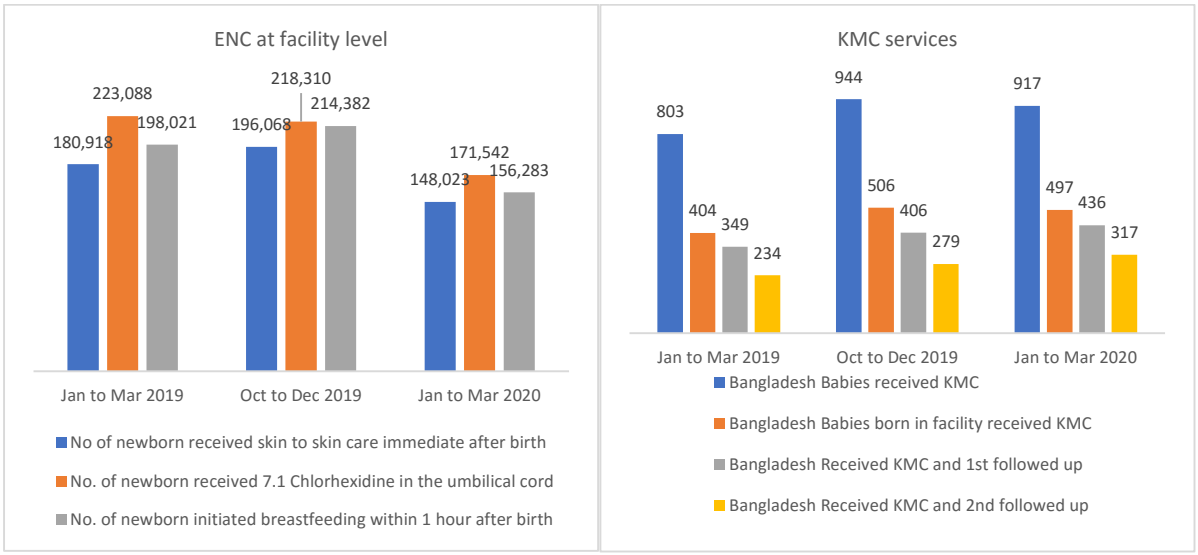


Figure 2 Trends in ENC services and KMC by quarters compared between 2019 and 2020showing reduction in uptake in numbers

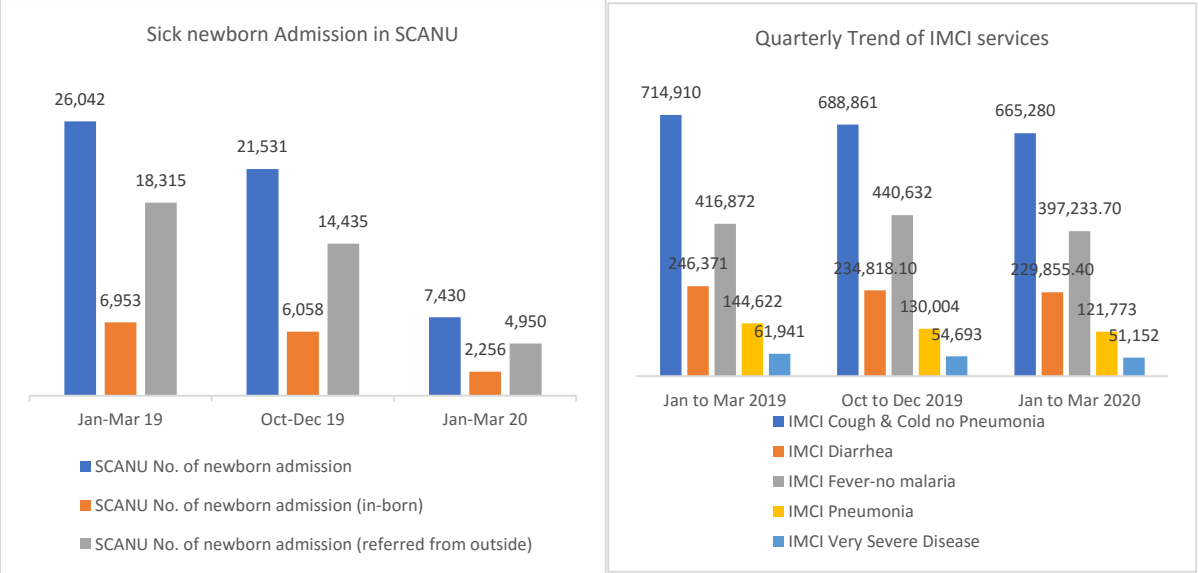


Figure 3 Trends in IMCI services by quarters compared between 2019 and 2020showing reduction in uptake in numbers

Objectives of this guideline

1. To guide the health care providers and managers for providing essential MNCH services in thecontext of COVID-19
2. To standardize MNCH services to COVID-19 and non-COVID-19 cases throughout the country.
3. To guide monitoring ofMNCH servicesin the context of COVID-19

The target audience of this guideline

1. Health managers responsible for MNCH services-national/divisional/district/upazila level.

2. Health care providers providing MNCH services: Gynaecologists and Obstetricians, Neonatologists, Paediatricians, doctors, nurses, midwives, sub assistant community medical officers, family welfare visitors and community health care providers

Case Definition

The following case definitions are adopted from the national guidelines[4]

Suspect case(any one of the following)

- A patient with acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g., cough, shortness of breath), AND a history of travel to or residence in a location

[4]chrome-extension://oemmndcbldboiebfnladdacbdfmadadm/https://apps.who.int/iris/rest/bitstreams/1272502/retrieve

reporting community transmission of COVID-19 disease during the 14 days prior to symptom onset;

- A patient with acute respiratory illness AND having been in contact with a confirmed or probable COVID-19 case in the last 14 days before symptom onset;
- A patient with severe acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g., cough, shortness of breath; AND requiring hospitalisation) AND in the absence of an alternative diagnosis that fully explains the clinical presentation.

Probable case (any one of the following)

- A suspect case for whom testing for the COVID-19 virus is inconclusive (result of the test reported by the laboratory);
- A suspect case for whom testing could not be performed for any reason.

Confirmed case:

- A person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms.

General guidance for providing MNCH services in the context of COVID-19

Availability and continuation of essential MNCH services

The followings services will be prioritised as essential MNCH services, and facilities will take appropriate measures to ensure the continuation of these services (where applicable)

1. Antenatal care
2. Intrapartum care
3. Essential newborn care including breastfeeding
4. Postnatal care
5. Family planning
6. Sick newborn care at SCANU
7. Integrated management of Child Illness (IMCI) services

Triage and Screening

All Medical College Hospitals (MCH), District Hospitals (DH) and Upazila Health Complexes (UHC) will set up **a separate triage/screening area** before entering the facility. All women, newborns and children and their accompanying persons visiting the health facility will have to go through the tirage/screening area before availing any service. The screening will be done in non-touch technique. All suspected COVID-19 patients and their accompanying persons will be instructed to wear facemask at all times before leaving the triage and screening area (the facility will provide masks if needed).The number of accompanying persons and visitors will be restricted in the health facility.

Establishing a separate triage/screening area maybe not feasible in Union Health and Family Welfare Centres (UH&FWCs). In such instances, the service providers will repeatedly announce the symptoms of suspected COVID-19 patients and will instruct them to maintain a separate queue practising at least three feet of physical distancing from other patients.

Common measures for caring all for women, newborns and children irrespective of COVID-19 status

1. Promote and ensure triage and screening for identification and separation of COVID-19 cases
2. Wear appropriate PPE all the times during service hours
3. Advise patients and accompanying persons to wear face masks while visiting the facility (provide mask if necessary)
4. Maintain proper physical distancing with patients at all times (at least 3 feet when PPE is available and at least 6 feet when PPE is not available or chance of aerosolisation)
5. Wash hands with soap and water, or alcohol-based hand sanitiser frequently
6. Avoid touching eyes, nose and mouth during service hours
7. Clean all equipment with an appropriate disinfectant after every use.
8. Clean/disinfect contaminated surfaces such as tables, doorknobs/handles, mobile phones and other high touch surfaces in every 3-4 hours.
9. Counsel all women and accompanying persons on the hand hygiene and respiratory etiquette
10. Immediately inform the supervisor in you have fever, cough or breathlessness

Additional measures for caring for women, newborns and children with suspected or confirmed COVID-19

[in addition to the common measures, the following additional measures are recommended while caring for suspected and confirmed COVID-19 cases]

1. Establish a dedicated isolation ward/unit for managing women and newborn with suspected/confirmed COVID-19. If it is not feasible, dedicate a separate corner within the isolation ward/unit with a dedicated set of equipment for this purpose.
2. Establish a dedicated ANC-PNC corner/room for providing ANC services towomen with suspected/confirmed COVID-19. If not feasibility, provide ANC and PNC to women with suspected/confirmed COVID-19 in the dedicated isolation ward/unit forwomen and newborns.
3. Establish a dedicated labour room forwomen with suspected/confirmed COVID-19.
4. Establish a dedicated operation theatre for conducting cesarean section to women with suspected/confirmed COVID-19 (when necessary and indicated). If it is not feasible, dedicate specific time/date for conducting elective surgeries to women with suspected and confirmed COVID-19 in the regular operation theatre. In case of an emergency where a dedicated operation theatre is not available, the regular operation theatre can be used following proper IPC measures (clean with chlorinated liquid for at least 30 minutes after use)

Supply of drugs, logistics and commodities for essential MNCH services

Uninterrupted supply of medicines, logistics and commodities should be ensured for providing essential MNCH services during the COVID-19 pandemic. The following list of items should be prioritised in this regard.

1. Essential medicines, logistics and equipment for routine and emergency MNCH servicesincluding post-partum family planning.
2. Equipment and logistics for COVID-19 related diagnostics
3. Logistics related to IPC measures, including PPE

An appropriate quick reaction platform should be created for monitoring stock-outs of the listed items andestablish a mechanism for re-distribution and mobilising fresh supplies.

Specific guidance for providing ANC, labour and delivery, PNC and ENC services in the context of COVID-19

Key Facts regarding COVID-19 among women and newborn

Risk:

1. The incidence of COVID-19 infection is relatively low among pregnant women, but if infected (like other respiratory infections), they are more at risk of complications due to the physiological changes that a woman goes through during pregnancy, childbirth and after birth.
2. Till date, there is no evidence of an increased risk of miscarriage or teratogenicity or preterm birth or virus
3. Till date, there is no evidence of in-utero (vertical) transmission of the COVID-19
4. Till date, there is no evidence transmission through breast milk
5. Babies born to mothers with COVID-19 can potentially become infected through droplet exposure
6. In times of crisis such as this pandemic, women and girls may be at higher risk of denial of SRH services, intimate partner violence and other forms of domestic violence due to increased tensions in the household
7. More than 90% of all children with COVID-19 are asymptomatic or suffer from mild, or moderate symptoms. Around one-fifth of the children with COVID-19 did not exhibit any symptoms. Approximately 2.5% of children with COVID-19 become severely ill, and 0.2% develop critical features

Clinical features:

1. Common symptoms of COVID-19 include fever (44-98%), cough (46-82%), shortness of breath (31%) and fatigue and myalgia (11-44%). Some have reported symptoms of loss of taste and smell, pharyngitis, headache, GIT disturbances[5]
2. Shortness of breath, pain/ pressure in the chest, confusion, lethargy or unconsciousness, and cyanosis require urgent medical attention, which might appear on day 5-10 of prodromal stage[6]
3. Lymphopenia, increased CRP and ground-glass opacity on chest radiograph or CT scan is suggestive of COVID-19 infection apart from a positive PCR test result[7]

Prevention:

1. Proper hand hygiene, coughing and sneezing etiquette, social distancing are critical preventive measures
2. Following IPC guideline with appropriate use of PPE can significantly decrease the risk of contamination at healthcare facilities
3. Pregnant women irrespective of infection status should wear PPE at all times while staying outside or visiting hospitals

Treatment:

1. There is no specific treatment or vaccine against COVID-19 infection yet. However, multiple on-going trials are evaluating the efficacy of different drugs and vaccines around the world.
2. For mild and moderate cases, home isolation with careful monitoring of danger signs is enough. Severe cases require hospitalisation and oxygen therapy.
3. Pregnancy can be continued up until full term unless complications arise (such as severe maternal troubled breathing)
4. Mode of delivery can be decided based on the assessment of individual case situation and mother's choice

Antenatal Care (ANC)

The Bangladesh Maternal Health Strategy (2019-2030) recommends a minimum of four ANC contacts by a medically trained health care provider for all pregnant women. During the COVID-19 pandemic, the recommendation will stay the same. i.e. at least four face-to-face ANC contacts. Health care providers can organise additional ANC contacts through telemedicine or other measures.

[5]WHO. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen
[6]http://iedcr.gov.bd/index.php/component/content/article/73-ncov-2019
[7]https://www.hopkinsguides.com/hopkins/view/Johns_Hopkins_ABX_Guide/540747/all/Coronavirus_COVID_19__SARS_CoV_2

Table 1: ANC contact recommendation in the context of COVID-19

Number of visits	Time of visit
1st visit	At 4 months/ 16 weeks
2nd visit	At 6-7 months/ 24-28 weeks
3rd visit	At 8 months/ 32 weeks
4th visit	At 9 months/ 34- 36 weeks

The existing national guideline should be followed regarding the technical content of care. In addition, the following measures will be taken in the context of COVID-19.

During all ANC contacts, women need to have:assessment for, and information on, possible

- COVID-19 symptoms- fever, tiredness, dry cough, aches and pains, nasal congestion, runny nose, sore throat or diarrhoea[8]
- Information on Danger Signs in pregnancy- Danger signs include: Vaginal bleeding; Convulsions/fits; Severe headache and/or blurred vision; Fever and too weak to get out of bed; Severe abdominal pain; Fast or difficult breathing)[9]
- Birth Preparedness- Birth Preparedness planning includes knowing Danger Signs; planned birthplace, skilled birth attendant and transport; identifying companion)[10]

With COVID-19 symptoms/signs

1. If the woman is in isolation at home, schedule the ANC appointment after the isolation periodand ask the woman to come to the facility wearing a face mask.

   The woman can stop home isolation under the following condition:

   - *No fever for three full days withoutmedication, and*
   - *Other symptoms have improved (i.e. shortness of breath or cough), and*
   - *At least seven days have passed since her symptoms first appeared*

2. If the woman has access to testing facilities, advise the woman for COVID-19 testing. The woman can stop home isolation under the following condition:

   - *No fever for three full days without medication, and*
   - *Other symptoms have improved (i.e. shortness of breath or cough), and*
   - Two consecutive tests negative, 24 hours apart

3. Maintain at least three feet of physical distancing[11]
4. Wear appropriate PPE at all times

[8]WHO, *Global surveillance for COVID-19 caused by human infection with COVID-19 virus: interim guidance*
[9]Organization, W.H., *WHO recommendations on antenatal care for a positive pregnancy experience.* 2016
[10]Midwives, I.C.o., *International Confederation of Midwives (ICM), Women's Rights in Childbirth Must be Upheld During the Coronavirus Pandemic.* 2020.

[11]UNFPA, *COVID-19 Technical Brief for Antenatal Care Services.* 2020.

5. Wash hands before and after examining each patient
6. Conduct physical examinations respectfully but quickly to minimise exposure time
7. Clean surfaces that are coming in touch with the woman and mop the floor with 1% sodium hypochlorite solution in every 3-4 hours.
8. Supply the woman enough iron, folic acid, calcium etc. to help avoid facility visits for 1-2 months

Without COVID-19 symptoms/signs

1. Provide ANC away from general patients presenting for emergency/other outpatient care
2. Restrict attendance during ANC contacts (one accompanying person per woman)
3. Maintain at least three feet physical distancing
4. Wear appropriate PPE at all times
5. Wash hands before and after examining each patient
6. Clean surfaces that are coming in touch with the woman and mop the floor with 1% sodium hypochlorite solution in every 3-4 hours.
7. Supply women with enough iron, folic acid, calcium etc. to help avoid facility visitsfor 1-2 months

Intrapartum care and care during obstetric emergencies

The existing national guideline should be followed regarding the technical content of care. In addition, the following measures will be taken in the context of COVID-19.

With COVID-19 symptoms/signs

1. Direct women need to move to the isolation area marked for COVID-19-positive mothers and stabilise
2. Provide all care in the isolationunit/area/corner for the entirety of the stay
3. A family member (with proper PPE) should be allowed to accompany the women in labour for providing support during labour
4. Minimise the number of staff entering theisolation unit/area/corner
5. Women presenting at a BEmONC facility with severe respiratory symptoms requiring respiratory support should be stabilised and then transferred to a CEmONC facility
6. Take decision regarding the mode of birth based on obstetric indications and the woman's preferences (not be influenced by the presence of COVID-19, and unless there are maternal or fetal emergency indications)
7. Wear appropriate PPE (face mask, gloves, goggles/face shield) at all times

8. Wash hands before or after attending the birth[12]
9. Mode of delivery needs to be individualized based on obstetric indications and the woman's preferences and not be influenced by the presence of COVID-19, unless there are maternal or fetal emergency indications.
10. Wear full set PPE (face mask, gown, gloves, shoe cover, goggles and face shield) while performing a cesarean section[13]
11. Clean surfaces that are coming in touch with the mother and mop the floor with 1% sodium hypochlorite solution after conducting the birth.
12. Manage women with severe/critical COVID-19 symptoms following the national clinical case management protocol.
13. Administer antenatal corticosteroid if preterm birth is anticipated (as benefit out-weighs the risk). However, steroid administration is only permissible if a doctor/ specialist approves it or administers to the patient.[14]

**At UH&FWCs, a separate room should beused for conducting births of women with suspected or confirmed COVID-19. For complicated cases, refer to UHCs or DHs.

No COVID Symptoms/signs

1. Do not delay care for obstetric and newborn emergencies
2. Direct the woman to the regular maternity area/ labour & delivery room
3. Allow one asymptomatic birth companion (usually a family member) to stay with the woman through labor and birth.
4. Wear appropriate PPE (face mask, gloves, goggles/face shield) at all times
5. Clean surfaces that are coming in touch with the mother and mop the floor with 1% sodium hypochlorite solution after conducting the birth.
6. Consider early discharge (see PNC section)

Essential and Immediate Newborn Care

The existing national guideline should be followed regarding the technical content of care. In addition, the following measures will be taken in the context of COVID-19.

Mother with COVID-19 symptoms/signs

1. Allow rooming-in of the newborn with the mother.

[12] https://dghs.gov.bd/images/docs/Guideline/IPC%20Module%20for%20COVID-19%20for%20frontline%20HCW_20.3.2020.pdf
[13] RCM, R., *Coronavirus (COVID-19) Infection in Pregnancy Information for Healthcare Professionals.* 2020
[14] https://obgyn.onlinelibrary.wiley.com/doi/pdf/10.1002/ijgo.13156

2. Initiative skin to skin careand Kangaroo Mother Care where indicated[15] (with appropriate IPC measures)
3. Initiate breastfeeding within one hour after birth (with appropriate IPC measures)
4. Apply 7.1% chlorhexidine for umbilical cord care
5. Promote delayed bathing (72 hours after birth)
6. BCG immunization just after birth (if possible)
7. Ensure regular routine cleaning of all surfaces that the mother has had contact with appropriate disinfectant.

Appropriate IPC measures→Ask the mother to practice handwashing before and after touching the baby and wear a face mask while breastfeeding, providing skin to skin care or kangaroo mother care.

Breastfeeding if the mother is COVID positive and critically ill

1. Encourage and allow the mother to initiate breastfeeding as soon as she can even if she was unable to initiate during the first hour
2. Feed the baby with expressed milk if the mother is too unwell to breastfeed. Counsel mother to explore the possibility of relactation (restarting breastfeeding after a gap) Alternately, when culturally acceptable, wet nursing (another woman breastfeeding or caring for the child) is an option.
3. Feed the baby with expressed breast milk if the mother-baby aretemporarily separated (shifted to SCANU or otherwise indicated to the mother),
4. Facilitate/support a non-infected family member in expressing breast milk (with PPE)
5. Ensure appropriate IPC measures while expressing breast milk (handwashing with soap and water, or 70% alcohol-based hand sanitiserand wearing a face mask).
6. A non-infected caregiver will feed the breast milk to the baby with proper handwashing and wearing a face mask.

Newborn Resuscitation: Newborn resuscitation/ HBB service should continue as per the national SOP.

IPC for service providers: If performing infant stabilisation or when encounters with infants born to mothers with COVID-19, precautions should be taken for airborne, contact and dropletinfection withagown, gloves, N95 or equivalent respiratory mask with eye protection (or whatever available)

Counselling to COVID 19 positive mother: Counsel all pregnant women with COVID-19 or who have recovered from COVID-19 on safe infant feeding, and appropriate IPC measures to prevent COVID-19 virus transmission.

Referral of symptomatic or sick newborn : If isolation intensive care is not available in the facility where symptomatic or sick newborn is born or referred with COVID 19 infections, the newborn should

[15]UNFPA, *COVID-19_MNH_guidance*.April 2020

be immediately shifted to the designated closest hospital where such facilities where SCANU are available. Complete safety and PPE policies and precautions must be followed during transport.

Postnatal Care (PNC)

Provide the first face-to-face PNC before the discharge from the facility. Subsequent PNC should be provided over telephone if required. Schedule another face to face PNC visit on the 6th week. The existing national guideline should be followed regarding the technical content of care. Promote and encourage breastfeeding irrespective of the COVID-19 status of the mother and the newborn (See breastfeeding guideline during ENC in this document). Promote immediate long-acting post-partum contraceptive services (PPIUD, PP Implant) with proper counselling and consent to avoid any unwanted pregnancies

With COVID Symptoms/signs

1. Provide PNC services in separate ANC-PNC room dedicated for suspected or confirmed COVID-19 women
2. Restrict the accompanying person from entering the ANC-PNC room/area
3. Maintain at least three feet of physical distancing[16]
4. Wear appropriate PPE at all times (face mask, hand gloves, goggles/face shield)
5. Wash hands before and after examining each patient
6. Conduct physical examinations respectfully but quickly to minimise exposure time
7. Clean surfaces that are coming in touch with the mother hours and mop the floor with 1% sodium hypochlorite solution in every 3-4 hours.
8. Counsel the mother to avoid unnecessary contact with others and babies
9. Counsel about postnatal anxiety and depression
10. Instruct the mother to wash her clothes with detergent or disinfectant in water soaked in for 20 minute[17]. (check new guideline)

No COVID Symptoms/signs

1. Consider early discharge from a health facility after 6 hours for women with uncomplicated vaginal births
2. The discharge may be considered after 2 days for women with cesarean sections depending on their status[18].
3. Provide PNC services in the regular ANC-PNC room

[16]UNFPA, *COVID-19 Technical Brief for Antenatal Care Services.* 2020.
[17]https://dghs.gov.bd/images/docs/Guideline/IPC%20Module%20for%20COVID-19%20for%20frontline%20HCW_20.3.2020.pdf
[18]UNFPA, *COVID-19_MNH_guidance.*April 2020

4. Allow one accompanying person with the mother in the ANC-PNC room/area
5. Maintain at least three feet of physical distancing[19]
6. Wear appropriate PPE at all times (face mask, hand gloves, goggles/face shield)
7. Wash hands before and after examining each patient
8. Clean surfaces that are coming in touch with the mother hours and mop the floor with 1% sodium hypochlorite solution in every 3-4 hours.

Family Planning services

See Recommendations for Contraceptive Use during COVID 19 Pandemic (see annex)

Gender considerations and Mental Health Services in pandemic

1. Ensure continuity of care for SRH services
2. Counseling and services for responsive caregiving, parenting prioritized along with feeding and child protection from abuse and violence.
3. Maintain an adequate stock of menstrual hygiene products at healthcare facilities (especially for in-patients and out-patients).
4. Ensure access to clean WASH facilities in delivery rooms and wards.
5. Ensure health service providers and all frontline staff receive adequate training and have access to equipment to protect their own health and offer mental health and social support
6. Assess and meet the specific needs of women health service providers
7. Protect children from violence, abuse or exploitation.
8. Given the exponential rise in domestic and GBV due to COVID-19, all professional staff should be trained to safely handle disclosures of GBV and be familiar with existing support mechanisms to be able to refer those in need to the right pathway for psychosocial support, health and legal assistance, and case management.
9. Given the heightened vulnerability of female frontline workers, clear measures should be in place to prevent and mitigate harassment, abuse or other forms of GBV towards them.
10. Keeping in mind the low levels of literacy - especially amongst women and girls – relay messaging through appropriate materials and means that are accessible and understandable by all. To ensure that women and girls who have less access to mobile phones and the internet, use mixed methods that utilize multiple media options such as radio and visual graphics.
11. The health care response must provide messaging that pregnant women and girls should continue with their antenatal care and seek out assisted deliveries. Such messaging should also advise them on precautionary measures they must take relating to their pregnancy.

[19]UNFPA, *COVID-19 Technical Brief for Antenatal Care Services.* 2020.

12. Ensure that protective training, provision of Personal Protective Equipment (PPE) (which should be women friendly) and medical care facilities for health-care workers must also be extended to the treatment facility support staff who are primarily women as well as mental health and psychosocial support.
13. Ensure that the services provided are adolescent-friendly for adolescent mothers.
14. Provide appropriate supportive care and messaging with the intention to enhance women's safety, dignity and rights.
15. To ensure the response does not reproduce or perpetuate harmful gender norms, discriminatory practices and inequalities, train staff to provide gender responsive and un-stereotyped services and behavior when treating patients

Specific guidance for providing Sick Newborn Management in SCANU

In the community transmission phase, all newborns coming to SCANU should be considered as COVID-19 suspected neonate and should assess before admission to SCANU

Infant suspected as COVID 19 positive

1. Admit the newborn to an area separate from unaffected infants. If no separate space, the newborn should be kept at least 6 feet away from other neonates or place them in air temperature-controlled isolates until proved COVID negative.
2. Thoroughly investigate Neonates with symptoms of COVID-19 infection for other common diseases that may have similar clinical presentations
3. Testing should be done first at ~24 hours of age
4. Repeat testing should be done ~48 hours of age, unless the infant is discharged home prior to this time

Triage for COVID 19 before entering SCANU

Must ASK:

1. Infants born to mothers with suspected or confirmed COVID-19
2. With a known exposure to another suspected or confirmed COVID-19 patient
3. Newborns with symptoms of COVID-19

ASSESS

Newborns with signs of COVID-19 infection

Look and listen

a) Count the breaths per min, Chest in drawing
b) Stridor or wheezing
c) Measure temperature
d) Stiff neck
e) Signs of dehydration

5. Use one swab to sample first the throat and then the nasopharynx. Place single swab in one viral transport media tube and send to lab for molecular testing
6. For infants who are positive on their initial testing, follow-up testing of combined throat/nasopharynx specimens should be done at 48-72-hour intervals until two consecutive negative tests

7. If testing facility is not available, treat the suspected neonate as COVID-19 positive and manage accordingly

Breast Feeding of suspected or positive COVID-19 neonate:

1. The COVID 19 positive or suspected neonate should be fed expressed breast milk by the non-infected mother or caregiver with appropriate PPE
2. COVID positive mother should express breast milk after appropriate breast and hand washing with wearing mask.
3. Caregivers/Nurse/ Midwives who are not infected will feed the breast milk to the infant with proper precaution

*** * Considering the restriction of the COVID positive mother in the SCANU**

Visitation of newborn in SCANU

1. Visitor should be restricted as much as possible
2. Mothers with COVID-19 should not visit SCANU until all the following are met:
    (1) resolution of fever without the use of antipyretics for at least 72 hours and
    (2) improvement (but not full resolution) in respiratory symptoms, and
    (3) negative results of a SARS-CoV-2 test from at least two consecutive specimens collected ≥24 hours apart or at least for 14 days after disappearance of symptom.
3. Other attendant with Person Under investigation (PUIs) should not visit infants until they are confirmed to be negative
4. Other attendant with symptoms of disease and are confirmed to have COVID-19 must also meet the requirements above before visiting infants in the neonatal intensive care unit.
5. Mother or other attendant without disease can visit with proper PPE

Infection Prevention and Control (IPC) in mothers' room

1. Screen all mothers and accompanying attendant for COVID 19 –
    a. Flue like symptoms (fever, headache, sore throat) in mother or other family members
    b. Contact history of mother or family member with COVID patient.
2. If a mother with PUI, and no separate space is available, she should be placed at least 3 feet from other with mask and meticulous hand hygiene

IPC in SCANU waiting space

1. Allow minimum attendant in waiting space
2. Screen all attendant visitors before allowing in the waiting room (contact history with COVID patient, flue like symptoms)
3. Maintain physical distancing during sitting (3 feet)

4. Must follow sneezing and coughing etiquette and dispose used tissue in a closed bin
5. Wash hand with soap and water for 20 seconds and wear mask before entering and after leaving SCANU

IPC for service providers

1. All doctors, midwives and nurses managing COVID 19 suspected or positive newborn during bag-mask ventilation, intubation, tracheal suctioning, nasal cannula oxygen, continuous positive airway pressure and/or positive pressure ventilation of any type,must wear gown, gloves, N95 respiratory mask with eye protection, or air-purifying respirator (powered air-purifying respiratory (PAPR) or government supplied level-3 PPE
2. During routine management of newborn and during feeding, the nurse/ midwife must wear gown, gloves, standard procedural mask and eye protection (either face shield or goggles)

Referral of sick newborn

During transfer of COVID-19 suspected babies if required, follow strict IPC adherence as per National IPC guideline including in ambulances

Hospital discharge of Newborn

Positive test results: but infant has no symptoms of COVID-19,

1. Plan for frequent outpatient follow-up (either by phone, telemedicine, or in-office) through 14 days after birth.
2. Use precautions to prevent household spread from infant to caregivers; following use of standard procedural masks, gloves and hand hygiene in the home environment.
3. Service providers should orient care givers on maintaining IPC in home environment
4. Counsel the mother on the danger signs of newborn and when to return to facility immediately

Negative test results*:*

- Discharge the infant to the care of a healthy caregiver.
- The mother or the caregiver with persons under investigation (PUIs) for COVID-19 should maintain a 3-feet distance and use a mask and practice hand hygiene when directly caring for the infant until either

  a) she has been afebrile for 72 hours without use of antipyretics

  b) at least seven days have passed since her symptoms first appeared; or she has negative results from a COVID-19 test from at least two consecutive specimens collected 24 or more hours apart.

If baby cannot be tested,

1. Treat the baby as COVID-19 positive for the 14-day period of observation.
2. Mother should still maintain precautions until she meets the criteria for non-infectivity

Counselling to COVID 19 positive mother during discharge

1. Mother should keep distance of 6 feed until fully recovered from COVID 19
2. Counsel all pregnant women with COVID-19 or who have recovered from COVID-19 with information on safe infant feeding, exclusive feeding for 6 months and appropriate IPC measures to prevent COVID-19 virus transmission.

Specific guidance for providing IMCI services

Key facts regarding COVID-19 among children

Risk:

- There are few data on the risk of COVID-19 in specific populations, such as children.
- Children of all ages appeared susceptible to COVID-19, and there was no significant sex difference[20].
- Children account for 1%-5% of diagnosed COVID-19 cases[21].
- More than 90% of all children with COVID-19 are asymptomatic or suffer from mild, or moderate symptoms[22]. Around one-fifth of the children with COVID-19 did not exhibit any symptoms. Approximately 2.5% of children with COVID-19 become severely ill, and 0.2% develop critical features[23].
- The case fatality rate among children is less than that of adults. However, there are reported cases of deaths among children in all age groups.

Clinical features:

- Majority of children with COVID-19 are asymptomatic or develop mild or moderate diseases, with the risk for the more severe disease being higher in pre-school children and infants.
- Cough, fever and pharyngeal erythema are the most commonly reported clinical features among Children with COVID-19. Diarrhoea, rhinorrhea, vomiting, nasal congestion, tachypnoea and tachycardia are other reported signs and symptoms[24,25].
- Among children confirmed with COVID-19, the symptoms are usually less severe than adults.
- All mild and moderate cases will be managed according to the IMCI guideline and advised for home-based treatment.
- All other cases will be managed according to the IMCI guidelines.

[20] https://pediatrics.aappublications.org/content/pediatrics/early/2020/03/16/peds.2020-0702.1.full.pdf
[21] A systematic review, published on 20 March 2020, of 45 relevant scientific papers https://onlinelibrary.wiley.com/doi/epdf/10.1111/apa.15270

[22] https://pediatrics.aappublications.org/content/pediatrics/early/2020/03/16/peds.2020-0702.1.full.pdf
[23] https://www.nejm.org/doi/full/10.1056/NEJMc2005073
[24] https://www.nejm.org/doi/full/10.1056/NEJMc2005073
[25] https://onlinelibrary.wiley.com/doi/epdf/10.1002/jmv.25807

Key Recommendations for IMCI services

Bangladesh is in the community transmission phase.
Therefore, **every sick child should be considered as a suspected COVID-19 case** and appropriate measures should be taken to ensure maximum protection and prevention of cross infections

Community care-seeking:

Early and appropriate care-seeking should be promoted through community awareness since the symptoms of COVID-19 are non-specific and are similar to the major illnesses addressed in the IMCI guideline, including cough and difficult breathing, fever and diarrhoea.

Service availability:

The facility-based IMCI services will continue in all UH&FWCs, and IMCI corners at UHCs and District Hospitals with the revised patient-flow system (described later).

Triage and screening:

1. All incoming children and their caregivers will be directed to the fever clinic where the health care provider will conduct initial screening through short history taking (contact history) and non-touch fever assessment.
2. Any child or caregiver having any of the following will be considered as a suspected COVID-19 case: high fever, severe chest indrawing; history of fever for >7 days, history of cough for >14 days; history of known exposure to a confirmed or presumed infection, recent travel to or contact with someone from area with confirmed COVID-19 cases, other household members or close contacts sick with fever, cough/shortness of breath, loss of sense of smell, sore throat, runny nose, diarrhea, vomiting.
3. All suspected COVID-19 cases should be given a medical mask (if not brought from home) and will be directed to the isolation units established at UHCs, District Hospitals and Medical College Hospital where sample will be collected for laboratory confirmation (nasal and throat swab) and appropriate management will be initiated according to the national guideline (https://dghs.gov.bd/images/docs/Guideline/COVID_Guideline.pdf).
4. Adequate measures should be taken to keep at least three-feet of physical distance between the COVID-19 suspected cases and other patients at all times.
5. All non-suspected cases will be referred to the IMCI corners at UHCs, District Hospitals and Medical College Hospitals.
6. Children with fever, cough or difficult breathing and their caregivers will be given medical masks (if face mask not brought from home)

Service contacts at IMCI corners:

1. The existing IMCI guidelines will be followed for the management of sick children at UH&FWCs, and IMCI corners of UHCs and District Hospitals. However, the focus should be on **ASK, LOOK and LISTEN** instead of **FEEL** (i.e. physical examination). The *'low touch'* principle will be followed

regarding physical examination at all times. In case PPE is not available, the *'non-touch'* principle is advisable.

2. All children and their caregivers will have to be referred by the triage and screening corner to receive services from the IMCI corner. The IMCI service provider will NOT provide service to any children without being referred by the triage and screening corner.
3. All children with fever, cough or difficult breathing and their caregivers will wear face masks at all times during the service contact at the IMCI corner. In case not brought from home, a medical mask will be given to the children and their caregivers at the triage and emergency corner.
4. The IMCI services providers will wear appropriate *PPE* (face masks and gloves) at all times.
5. The IMCI services providers will maintain three-feet of *physical distancing* during service contacts at all times. In case *PPE* is not available, maintain six-feet of *physical distancing*.
6. The IMCI service provider will practice *hand hygiene* (soap-water or alcohol rub) before and after conducting every physical assessment. If the IMCI service provider is wearing a hand glove, hand hygiene will be practised with alcohol rub on the top of the glove to ensure maximum protection and prevent cross-infection.
7. All equipment (thermometer, respiratory timers, MUAC tape) will be appropriately *sanitized* (alcohol rub) after each use.
8. Every caregiver will be *counselled* on the importance of hand hygiene, respiratory hygiene and cough etiquette, and social distancing.
9. The frequently used surfaces of the IMCI corners (table, chair, weighing machine, height scale, length board) will be cleaned regularly (two to three times during the service hours) with chlorinated antiseptic solution (1:100 concentration), which will be prepared according to the national guideline[26].

Classification in IMCI Corner:

After assessment, each child will be classified as mild, moderate, severe and other IMCI classifications (table-1). The following table summarizes the clinical classification of children with COVID-19.

Table 2: COVID-19 classification for children

Mild disease: Symptoms include unspecific signs of upper respiratory tract infection, including fever, cough (with or without sputum production), sore throat, runny nose, myalgia and fatigue. Respiratory symptoms may be accompanied by gastrointestinal symptoms such as diarrhoea, nausea, vomiting, and abdominal pain. Some cases may have no fever or have only digestive symptoms
Moderate disease: Symptoms include cough or difficulty in breathing with fast breathing (in breaths/min- < 2 months: ≥ 60; 2–11 months: ≥ 50; 1–5 years: ≥ 40); some may have wheezing, but no obvious hypoxemia such as shortness of breath.

[26] https://dghs.gov.bd/images/docs/Notice/22_03_2020_Disinfectant%20Solution.pdf

Severe disease: Symptoms include cough or difficulty in breathing, plus at least one of the following: central cyanosis or SpO2 < 90%; severe chest indrawing, grunting, signs of pneumonia with a general danger sign: inability to breastfeed or drink, vomits everything, or lethargy or unconsciousness, or convulsions.

*If available, hypoxaemia will be assessed using pulse oximeter for children presenting with cough and difficult breathing

Management of COVID positive children

- **All severe cases** (as defined in table-1) will be considered as suspected COVID-19 cases and referred to the isolation units for laboratory confirmation and management according to the national guideline. Pre-referral medication will be provided according to the existing IMCI guideline (if and when required).
- **All mild and moderate cases** (as defined in table-1) will be managed according to the IMCI guideline and advised for home-based treatment. In the case of home-based treatment, the caregivers should be encouraged to maintain home-isolation for 14 days and return immediately if the child develops any danger sign.
- The IMCI service provider will follow-up through phone call on day-2 (after 48 hours).
- **All other cases** will be managed according to the IMCI guidelines.

Specific IPC measures and use of PPE:

The following items should be available in the IMCI Corners for IPC measures.

1. Soap and clean water (must)
2. 70% alcohol-based hand sanitiser (must)
3. Chlorinated antiseptic solution (1:100 concentration)
4. Medical mask (must)
5. Hand gloves (must)
6. Goggles (must)
7. Face shield (optional)

FLOW CHARTS for IMCI services in the contextof COVID-19

IMCI patient flow in the context of COVID-19

Figure 4: Patient flow system for IMCI services in the context of COVID-19

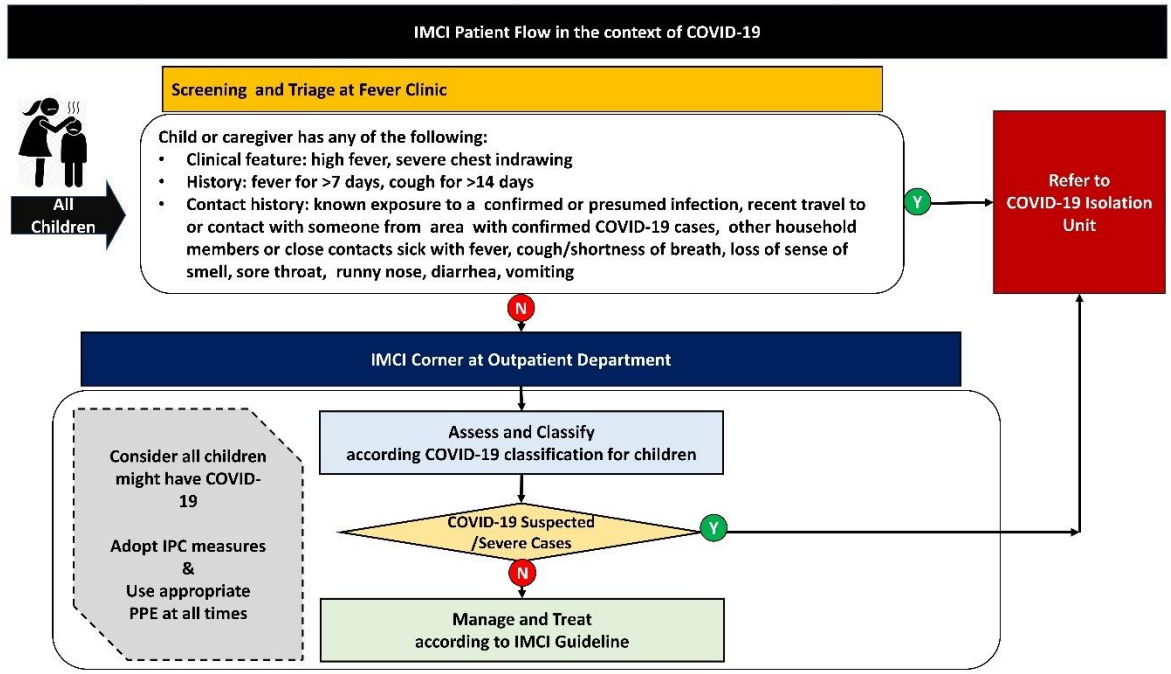


Figure 5:Simplified IMCI guideline for IMCI services in the context of COVID-19

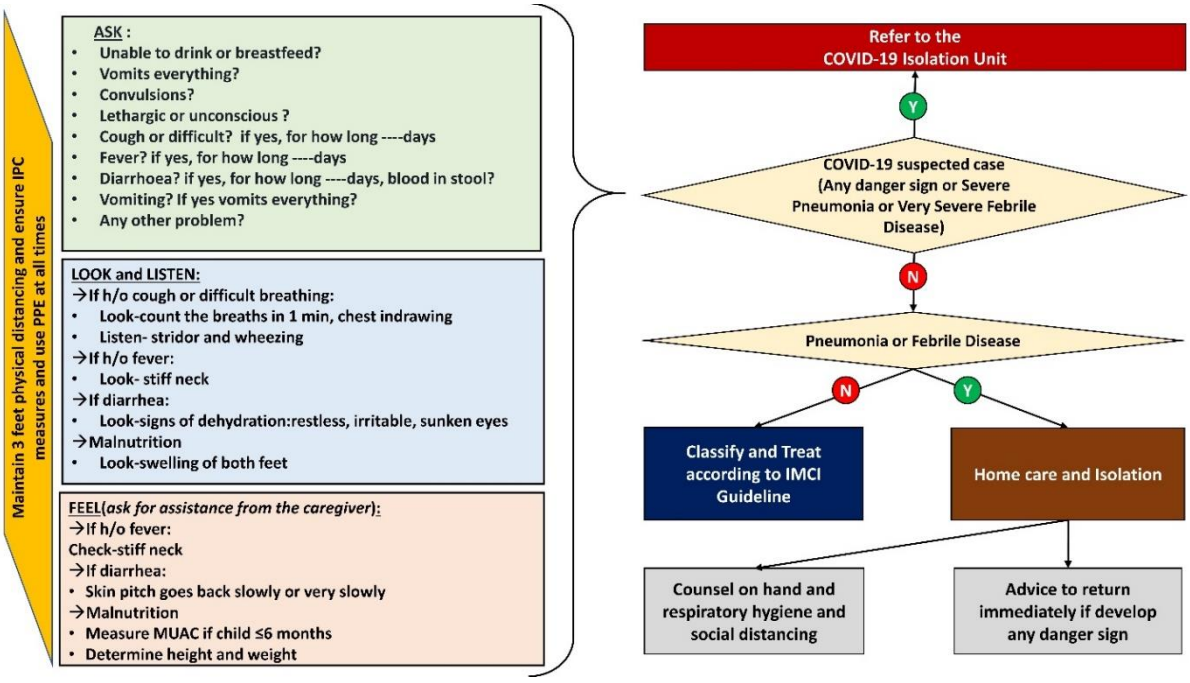


Figure 6: Management of children with cough or difficult breathing in the context of COVID-19

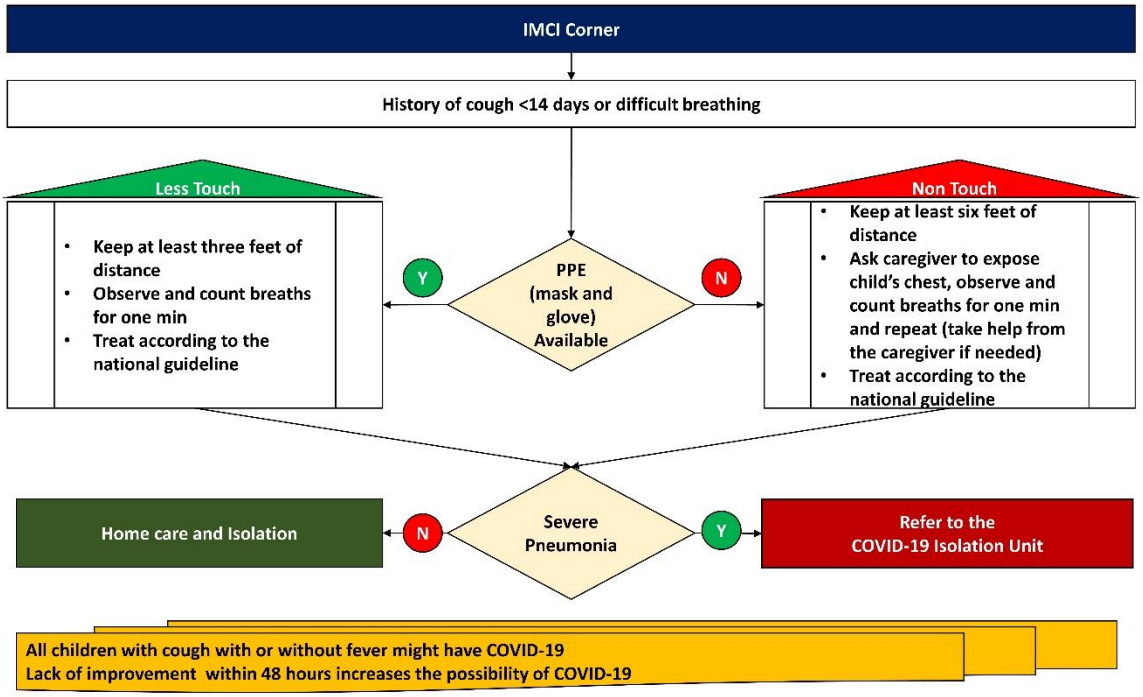
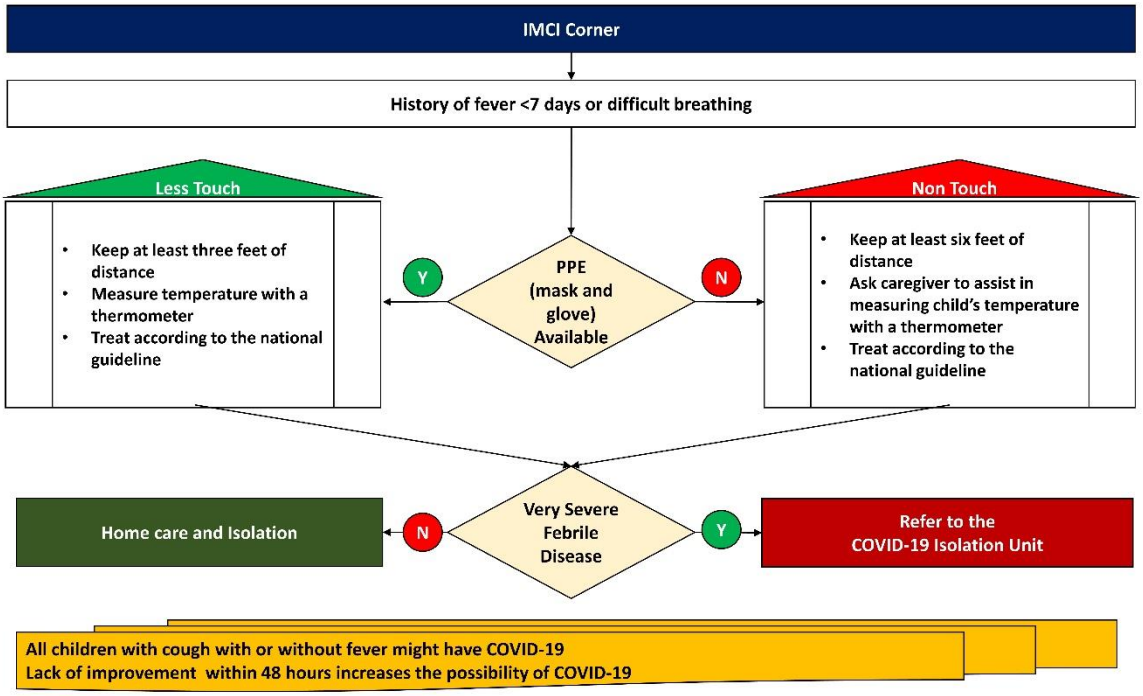


Figure 7: Management of children with fever in the context of COVID-19



Referral system

1. Refer woman/newborn to a setting with capacity for isolation and advanced care for ventilation/SCANU
2. Prepare transport equipment and drugs in anticipation of obstetric emergencies
3. All transport staff should be mask-fitted for N95 respirators or equivalent
4. Transport vehicle to be cleaned and disinfected internally by cleaning or transport staff in PPE before transfer to CEmONC facility
5. On arrival at CEmONC, transport staff to remove PPE and dispose this as directed by protocol and wash hands and wear new PPE on return
6. Equipment used during transportation to be cleaned and/or sterilised after transport

Infection control and waste disposal

- Follow infection control procedure and waste disposal according to national guideline.

Documentation of the COVID Symptom cases:

- Separate register should be maintained at the isolated labor room for COVID symptom positive cases.
- Information for COVID 19 positive newborn at SCANU
- Documentation of suspected/COVID 19 positive cases of under 5 children

Monitoring indicators of MNCH services

Essential MNCH services will be monitored for both non-COVID and COVID-19 suspected and confirmed cases. The following table suggest key indicators in this regard.

Monitoring Indicators for MNCH
1. Number of women received antenatal care (ANC1 & ANC4)
2. Number of births conducted in health facilities (women delivered in health facilities)
3. Number of Cesarean sections performed in health facilities
4. Number of mothers and newborns provided postnatal care within 24 hours of birth
5. Number of women who received contraceptives in the community and health facilities
6. Number of women managed for GBV in the community and HF
7. Number of teleconsultation with pregnant mother
8. Number of maternal deaths in health facilities
9. Number of stillbirths in health facilities
10. Number of neonatal deaths in the health facilities
11. Number of Stock-out of MNCH episodes of essential commodities
12. Number of newborn admitted at SCANU
13. Number of under 5 children treated at IMCI
14. Number of under 5 children with pneumonia or severe pneumonia or VSD treated at IMCI
15. Number of under 5 children with fever treated at IMCI

Special Note

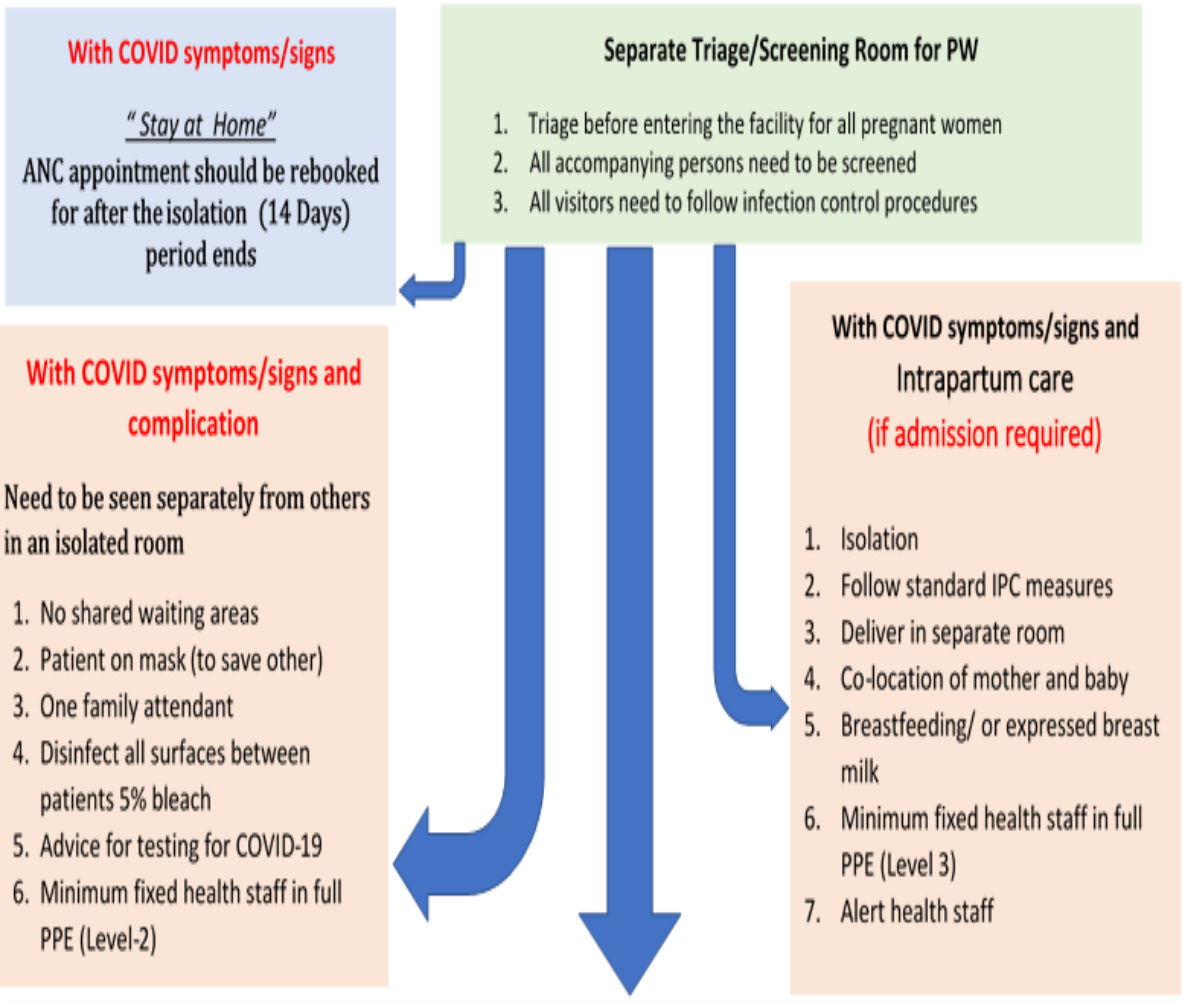
This is a living document and should be revised time to time based on the new evidence and guideline from global level. Data need to collect for COVID positive newborn for analyzing the consequences from the facility and need to share with the professional body after a month from executing the guideline. The data should be collected on outcome of the newborn of the COVID positive mother who provided skin to skin and KMC.

Reference

1. UNFPA and COVID 19 (2020) Website: https://www.unfpa.org/COVID19
2. WHO (2018) Recommendations: intrapartum care for a positive childbirth experience. Geneva: World Health Organization; 2018. https://apps.who.int/iris/bitstream/handle/10665/260178/9789241550215-eng.pdf
3. WHO (2020) Clinical management of severe acute respiratory infection when novel coronavirus (2019-nCvC) infection is suspected (Interim guidance) WHO: Geneva, 2020. https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected
4. WHO (2020) COVID-19: Operational guidance for maintaining essential health services during an outbreak Interim guidance. WHO: Geneva, 25 March 2020: https://www.who.int/publications-detail/COVID-19-operational-guidance-for-maintaining-essential-health-services-during-an-outbreak
5. Continuing essential sexual reproductive, maternal, neonatal, child and adolescent health services during COVID-19 pandemic, 17 April 2020, UNICEF, UNFPA, WHO

Annexes

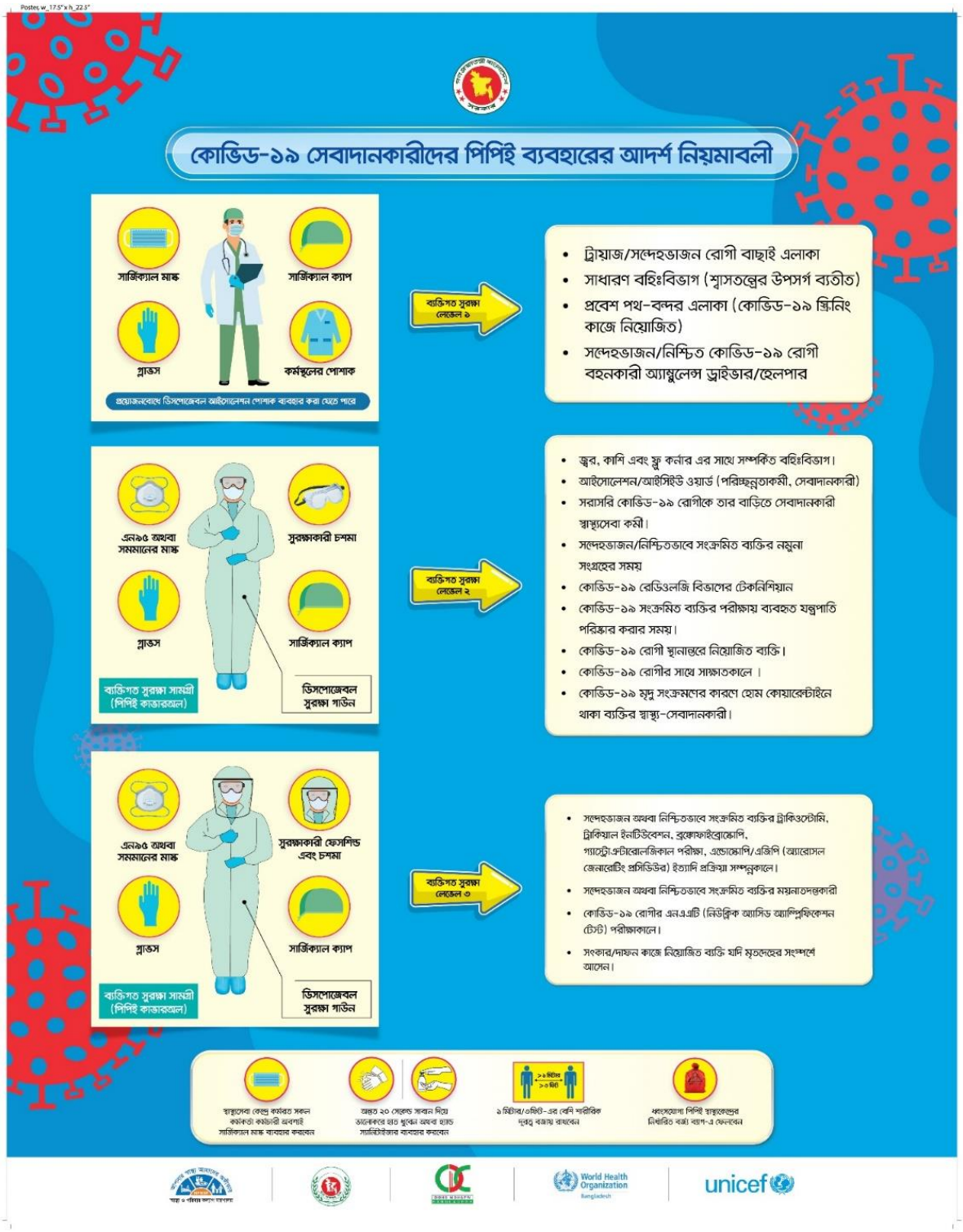
Annex 1 Patient flow in health facilities



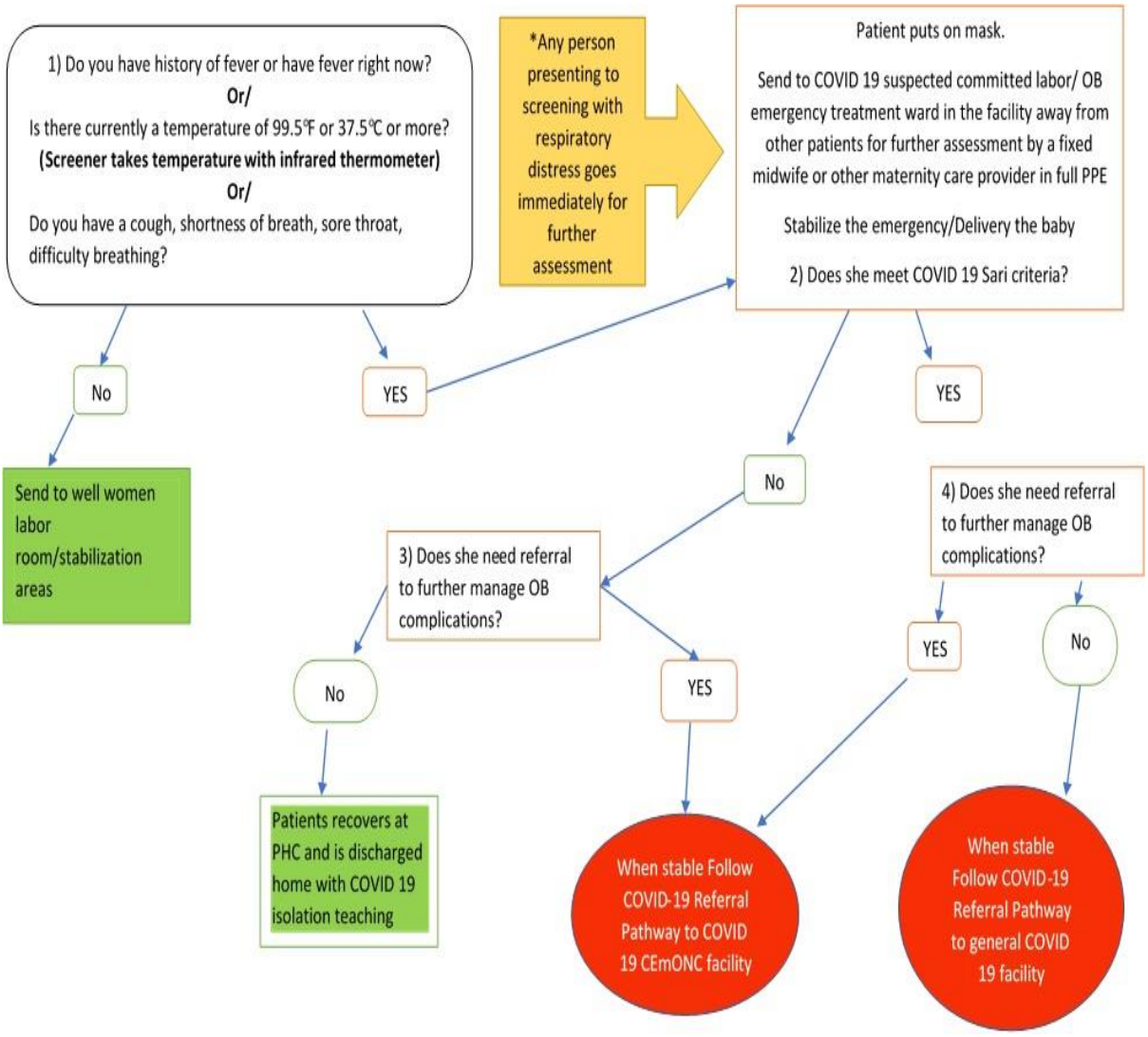
No COVID symptoms/signs

1. Four ANC visit as per schedule. ANC that does not need to be provided in person at the facility when physical assessments and/or tests/investigations is not required and may be undertaken via: Teleconference using a phone or other electronic device (via imo, whatsapp, sykpe, facetime -where available).
2. During any episode of patient contact, Health care providers are recommended to use routine infection prevention and control practices, such as handwashing
3. Cleaning surfaces with a cleaning product
4. Physical examination should be maintained, with hand washing before and after patient contact
5. Discourage groups of more than 20 women from attending ANC at any one time - consider use of an appointment/queuing system
6. Consider increased risk of antenatal anxiety and depression and domestic violence due to the economic and social impacts of the COVID-19 pandemic
7. Supplying women with enough iron, folic acid, calcium, family planning commodities etc. for 1-2 moths
8. The modified schedule of visits and content of phone-based ANC/PNC
9. A reduced schedule of antenatal care visits at the facility is appropriate to minimize overcrowding in clinics and the risk of virus transmission
10. Restrict attendance for ANC visits to include only the women, an asymptomatic companion of choice and the maternity care provider

Annex 2 Rational use of PPE



Annex-3 Labor and OB Emergency COVID-19 Patient Screening Algorithm for PHC Health Facilities



Annex-4 Recommendations for Contraceptive Use during COVID 19 Pandemic

GENERAL INFORMATION FOR CLIENTS OR COUPLES

- As the effect of the virus is still unknown on pregnancy and the fetus, it is safer to delay pregnancy during the COVID 19 pandemic as recommended by Specialists.
- To reduce the chances of being infected or spreading COVID-19, take some simple precautions: Regularly and thoroughly clean hands with an alcohol-based hand rub or wash them with soap and water. Maintain at least 1 meter (3 feet) distance between yourself and others. Avoid going to crowded places. Avoid touching eyes, nose and mouth. Make sure to follow good respiratory hygiene. This means covering the mouth and nose with a bent elbow or tissue when cough or sneeze. Then dispose of the used tissue immediately and wash hands.
- If one of the couples or partner has any COVID 19 like symptom, they should stay home and self-isolate even with minor symptoms such as cough, headache, mild fever, until recover. During self-isolation period, partners should maintain physical distance and avoid any physical contact.
- All modern methods of contraception are safe to use, including during the COVID-19 pandemic. If you have had a baby in the last six months or have a health condition, such as diabetes, high blood pressure, breast cancer, or smoke, seek advice from a health care professional to ensure using a method of contraception which is suitable and safe. However, if these conditions are in control, you can continue use your current contraceptive method.
- Couples should start or continue to use your contraceptive method of choice. You may be able to access information and contraceptive services from a healthcare provider by phone or online or Hotline number (16767).
- If you cannot access these services, you may need to opt for a method that is available without a prescription (such as condoms, pills, or emergency contraceptive pills) from a nearby pharmacy or drug shop.
- If you cannot access contraceptive method of choice – perhaps because it requires a prescription, or because it can only be given by a health worker – consider using condoms, fertility awareness-based methods, lactational amenorrhea (if exclusively breastfeeding), or other contraceptive methods that are recommended for self-care. The recommended r self-care methods could include the pill or mini-pill, emergency contraception pills, and Injectables (DMPA-SC , Sayana Press®).
- During the lock down, the schedule of Injectable contraceptives may have been hampered. They can be taken within one month of the missed schedule. Communicate with the service provider to get your supply.
- Condoms, when they are used consistently and correctly, are the only method of contraception that helps to prevent unintended pregnancy and protect against sexually transmitted infections, including HIV. Condoms can be used together with other methods of contraception to protect against both unintended pregnancy and sexually transmitted infections.

- Emergency contraceptive pills can prevent up to 95% of pregnancies when taken within 5 days after intercourse, and they can be taken by anyone with or without a health condition. Remember emergency contraceptive pills should not be used regularly and not more than once in a month.
- If you suspect pregnancy, do not use any unapproved medicines or MR kits (e.g Cytomis®) at home WITHOUT consultation with your OBGYN. This can be life threatening.
- If women are using an IUD or Implant that still has expiry dates, we recommend to continue the use as these are completely safe and provides long term protection against unwanted pregnancies.
- For removal of long acting methods such as implants or IUDs, after the recommended period of use, seek advice from health provider. If, due to restrictions on movement due to the COVID-19 pandemic, cannot have long acting method removed straight away, it is important to use another method of contraception to avoid pregnancy at this time. There are no medical problems caused by delaying removal of long acting methods such as implants or IUDs. Do not try to remove the contraception method at home; wait until you are able to access health care from a trained provider.
- All kind of Contraceptive methods are available as usual in different Government hospitals, private and NGO outlets and Pharmacies / medicine shops. At present short acting contraceptive services are available are the satellite clinics by FWV, FWA and CHCP at Community clinics.

DIRECTION FOR SERVICE PROVIDERS AND POLICY MAKERS

Services Providers Should

- All service providers, especially OBGYN and FP service Providers providing Sexual and Reproductive Health Services, should increase use of mobile phones and digital technologies to increase telephonic counselling and sharing of messages related to safe and effective use of contraceptives.
- When possible, especially in antenatal, delivery care services and postnatal care with proper counselling and consent, ensure immediate post-partum contraceptive services (preferably PPIUD, PP Implant or tubal ligation) to avoid any unwanted pregnancy.

Telehealth Contraception during the Time of COVID-19

- As organizations move to telehealth visits, the following guidelines and resources can help.
- Continue to provide high quality counseling and contraceptive methods.
- Contraception Counseling:
    - Provide telehealth patient-centered counseling on range of methods & patient priorities.
- Contraception Initiation:
    - Avoid delays by sending prescriptions to pharmacy, mailing, or pre-packing for pick up.

- Assess risk of pregnancy
    - Need in-person visit for IUD, implant, sterilization, +/- DMPA
    - Delay visit if COVID-19 symptoms, PUI, pending test results, or asymptomatic contact
    - Initiate a bridging method as needed.
- Contraception Continuation
    - Use evidence-based extended use for all methods
    - Advise condoms, initiate bridging methods
    - IUD and Implants using extended durations.

Contraceptive Change or Discontinuation

- IUD and implant removal is an essential reproductive health service. Assure removal on request will be facilitated.
- Removal of IUD/ Implants can be delayed by few weeks
- IUD and implant insertion or removal are low risk, non-aerosol generating procedures. To minimizing exposure risk during procedures, routine surgical masks and gloves for patient interactions may reduce asymptomatic transmission. Prepare all equipment trays and materials ahead of time to reduce time in the room.

Government (Policy Makers, Managers) Should

- Ensure enough supply of Contraceptive Methods at all service centers and shops
- Governments may also consider relaxing restrictions on the quantitates (cycles) of short acting contraceptives dispensed to users so as to avoid frequent repeat visits.
- Develop and disseminate messages with simple language through different communication channels including TVC, TV scrolling, social media, radio, community radio, TV talk show etc.

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