

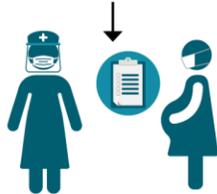
Maternal, Neonatal, and Child Health Surveillance During COVID-19

Accessible version: <https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/pregnancy-surveillance.html>

1. Pregnancy Surveillance



Community health worker (CHW) or antenatal neonatal care (ANC) clinic health worker collects information using **ANC checklist, Danger sign checklist & Pregnancy Wheel** and enrolls woman into pregnancy surveillance cohort for monitoring



Further information is collected during ANC visits by health workers



Women at COVID-19 treatment center are enrolled in **ISARIC-WHO Supplemental Pregnancy Surveillance Module** and information is collected on pregnancy and COVID-19 status, with contact tracing follow-up if COVID-19 positive

If maternal death occurs during pregnancy, community or facility-based mortality surveillance is conducted (see 4a and 4b)

2. Delivery Surveillance



During delivery, BEmONC and CEmONC facilities are trained in COVID-19 case management and reporting and record pregnancy outcomes including:

- Mother Outcomes: Live, death, complications
- Mother's age
- Place of delivery
- Birth Weight
- Gestational Age
- Birth Outcomes: Live, death, twin



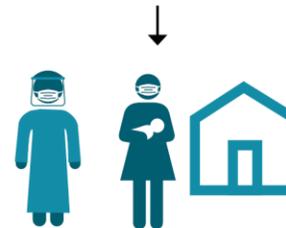
COVID-19 status after birth for mothers and newborns are monitored and added to **pregnancy surveillance** platform if COVID-19 negative, and **ISARIC-WHO Supplemental Pregnancy Module** platform if COVID-19 positive with contact tracing follow-up

If maternal or perinatal death occurs during delivery, facility-based mortality surveillance is conducted (see 4b)

3. Postnatal Surveillance



If woman is COVID-19 positive, stays until symptoms clear & information is entered into **ISARIC-WHO Supplemental Pregnancy Module** with contact tracing follow-up



Health outcomes are tracked during postpartum follow-up visits using a **PNC checklist** at home within one week of delivery (postpartum surveillance)

Note: If woman does not visit ANC care and gives birth at home instead of health facility, CHWs monitor health outcomes through postpartum surveillance

If maternal or perinatal death occurs during postnatal follow-up, community-based mortality surveillance is conducted (see 4a)

4. Mortality Surveillance



A. Community-based

Maternal and perinatal deaths occur during pregnancy or postpartum and are discovered by CHW

Deaths are entered into the death notification system, followed up with by Verbal Autopsy, death review, and Social Autopsy; data is sent to the community as part of the larger **Maternal and Perinatal Death Surveillance and Response** system



B. Facility-based

Maternal and perinatal deaths occur during facility-based delivery

Deaths are entered into the death notification system, undergo a death review, and a death certification response is developed as part of the larger **Maternal and Perinatal Death Surveillance and Response** system

There are four components of community and facility-based pregnancy surveillance under COVID-19 conditions:

1. Pregnancy surveillance

Depending on who becomes aware of pregnancy first, a community health worker (CHW) or antenatal neonatal care (ANC) clinic health worker should collect information on a woman's pregnancy status, including expected due date, danger signs, and any symptoms of or exposure to COVID-19. Surveillance tools should include an antenatal care (ANC) Checklist, Danger Sign Checklist, and the CDC-adapted COVID-19 Pregnancy Wheel. CHWs should be instructed to fill out every field (not leave any field blank) on the ANC/PNC registers or surveillance questionnaire. CHW or facility-based health workers should enroll woman into the pregnancy surveillance cohort for local area monitoring. CHWs or facility-based health workers should assign a unique identification number for each woman that is linked between CHWs and facilities for tracking. Further information is collected during ANC visits by health workers, including continued assessment for COVID-19 symptoms or exposure. If a woman develops severe COVID-19 [symptoms](#) (specifically trouble breathing; persistent pain or pressure in the chest; new confusion; inability to wake or stay awake; bluish lips or face) and is referred to a COVID-19 treatment center, she should be enrolled in [ISARIC-WHO Supplemental Pregnancy Surveillance Module](#) and information should be collected on pregnancy and COVID-19 status, with contact tracing follow-up in the community. If maternal death occurs during pregnancy, community or facility-based mortality surveillance should be conducted (Component 4).

2. Delivery surveillance

Basic Emergency Obstetric and Neonatal Care (BEmONC) and Comprehensive Emergency Obstetric and Neonatal Care (CEmONC) facilities should be trained in COVID-19 case management and reporting and record pregnancy outcomes including:

- Maternal outcomes: alive, deceased, health complications
- Maternal age
- Delivery location
- Gestational age
- Parity: single birth, twins, triplets, etc.
- Birth outcomes: alive, deceased, health complications
- Birthweight

COVID-19 status after birth for mothers and newborns should be monitored. If a woman tests negative for COVID-19, a CHW or facility-based health worker will add her information to the pregnancy surveillance platform; if a woman tests positive for COVID-19, a facility-based health worker will add her information to the [ISARIC-WHO Supplemental Pregnancy Surveillance Module](#) platform and she should have contact tracing follow-up. If a maternal or perinatal death occurs during delivery, then facility death review should be conducted by the death review committee (Component 4).

3. Postpartum/postnatal surveillance

If a woman tests positive for COVID-19, she should remain in the health facility until symptoms clear and a facility-based health worker should add her into the [ISARIC-WHO Supplemental Pregnancy Surveillance Module](#). Contact tracing follow-up should also occur in the community. CHWs should track health outcomes during postpartum follow-up visits at the woman's home using a PNC Checklist within one week of delivery (postpartum surveillance).

If a woman does not visit ANC and gives birth at home instead of health facility, CHWs should monitor health outcomes through postpartum surveillance. If a maternal or perinatal death occurs during postnatal follow-up at the community level, the CHWs should notify and register their deaths to the point person at the community or at the facility (Component 4).

4. Mortality surveillance

There are two types of mortality surveillance which are conducted for suspected COVID-19 and non-COVID-19 cases alike: community- and facility-based mortality surveillance.

Community-based mortality surveillance:

- If a maternal death occurs during pregnancy or postpartum and it is discovered by a CHW, they should notify a point person at the facility and at the community level along with basic information about the death. A health facility manager will then assign a health provider, CHW supervisor, and community leader to visit the family to conduct a Verbal Autopsy. A Social Autopsy, which engages the community to determine factors which contributed to the death in order to develop appropriate local responses, will also be conducted.
- For neonatal deaths, **5%–10%** are recommended to receive a Verbal Autopsy, but **all** should be followed by a Social Autopsy in the community where the death occurred.
- Data should be sent to the district and a response should be developed for the community as part of the larger Maternal and Perinatal Death Surveillance and Response system.

Facility-based mortality surveillance:

- If a maternal or perinatal death occurs during a facility-based delivery, that death should be entered into the death notification system. The case will then undergo a death review, and a death certification response should be developed as part of the larger Maternal and Perinatal Death Surveillance and Response system.
- The facility death review committee may request a team member to perform the investigation using Verbal Autopsy, if needed.

NOTE: Training on Infection Prevention and Control (IPC) measures must be provided to each CHW and all facility-based health workers before beginning surveillance activities.