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Provision of Essential Maternity and Reproductive Health Services the COVID-19 pandemic: Guidelines for Provincial, District, Facility and Clinical Managers

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FOREWORD

The World Health Organisation (WHO) declared COVID-19 a global pandemic on 11th March 2020. The first case was diagnosed in South Africa on 5th March 2020. South Africa faces a particular challenge given the large vulnerable immunocompromised population living in overcrowded conditions.

These guidelines provide guidance to healthcare workers and managers for the management and treatment of pregnant women in the context of COVID-19. They should be read in conjunction with the current Maternal and Neonatal health Guidelines and the Guidelines for Clinical Management of suspected or confirmed COVID-19 disease.

These guidelines are likely to change as knowledge regarding strategies to address COVID-19 develop globally and in South Africa. The guidelines will be updated regularly based on emerging evidence and WHO recommendations.

The National Department of Health would like to thank the experts from different settings who contributed to the development of this guidelines

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Date:

Contents

Background

The purpose of this guideline is to assist managers at facility, district and provincial level to continue to provide essential maternal, neonatal and reproductive health services. The guideline focuses on health system rearrangement and patient flow in order to continue to curb the spread of COVID-19. The document has a companion document which includes detailed information on how to clinically manage pregnant women who are confirmed to have COVID- 19.

1. Non-emergency, but essential services that need to continue at the usual level of care during the COVID pandemic:

- ✓ Contraception services (there may be a need to postpone some sterilization procedures; where this is the case reliable contraception must be offered)
- ✓ Termination of pregnancy services
- ✓ Antenatal care, including BANC Plus and high-risk antenatal clinics
- ✓ Elective caesarean sections
- ✓ Postnatal care (includes review of both mother and baby)
- ✓ Gynaecological oncology services including colposcopy and LLETZ procedures, surgery for gynaecology cancers
- ✓ Immunisations (including influenza vaccine for pregnant mothers and routine immunisations for babies)

The exceptions are when the woman is one of the following as per the latest NICD Case Definitions:

- ➢ A confirmed COVID-19 case*
- ➢ A person under investigation (PUI) for COVID-19 (symptomatic)*
- ➢ A contact of a confirmed case*

In such situations, where a pregnant woman has recovered or is no longer considered a contact can be postponed as follows:

- Confirmed case: until 14 days after the onset of symptoms (mild disease) or 14 days after stabilization of the condition (recovered)
- PUI: until COVID-19 is excluded, or if COVID-19 is confirmed, then until 14 days after onset of symptoms (mild disease) or 14 days after stabilization of the condition (severe disease)
- Contact: until 14 days have passed since the last contact occurred, and met the criteria for de-quarantining.

2. Services that can be postponed during a lock-down period and no restrictions:

- Elective gynaecologic surgery
- Non-emergency, non-oncology gynaecology clinics
- Visits for routine pap smear screening (opportunistic pap smear screening can still be done if the woman has presented for an essential service such as antenatal care, contraception or antiretroviral treatment review)

3. Emergency services that need to continue at the usual level of care during the COVID-19 pandemic:

- Intrapartum care, including vaginal delivery;
- Emergency caesarean sections;
- Management of any obstetric emergency
- Management of gynaecological emergencies, including those related to early pregnancy

When such cases present, the woman must be screened for COVID-19 symptoms. Confirmed or suspected COVID-19 cases must be assessed for severity of disease. Cases with severe COVID-19 will need referral to a designated centre with expertise and facilities to manage severe COVID-19. Cases with mild disease can be managed

in isolation at the usual level of care, with consultation as required with the next level of care.

4. Systems that need to be in place

- Contraception services must be accessible at all health care facilities. For women of reproductive age, the issue of family planning should be raised during all non-emergency health care interactions (not limited to maternity or gynae departments). Avoiding unplanned pregnancies is of particular importance during the pandemic, and those planning for a pregnancy should be advised to consider deferring their plans until the pandemic is over.
- All Pregnant or post-partum women, especially those who are COVID-19 cases or PUIs should have access to a COVID-19 phone number/WhatsApp number through which they can contact their antenatal/postnatal clinic to discuss COVID-19 related care issues such as whether or not they should attend for scheduled visits. The relevant number must be provided to the woman at her first antenatal visit
- All facilities must also provide pregnant and postpartum women with the number for the NDOH COVID-19 WhatsApp support line (0600 123456) and the COVID-19 emergency Helpline (0800 029 999): Women should be advised that through the support line they can access a **COVID-19** community messaging system for information, advice about self-care, support and addressing queries. These are also available in different formats and languages on the SidebySide (www.sidebysideva.org) or the Perinatal Mental Health Project (https://pmhp.za.org)
- The antenatal and postnatal clinic must ensure they obtain contact details (address and preferably multiple phone numbers) for any pregnant woman who is a COVID-19 case or a contact who is required to self-quarantine If these women are not admitted, then regular (e.g. weekly) telephonic follow-up should be conducted to plan the further management of the pregnancy with the woman (e.g. providing COVID-19 test results, scheduling of further antenatal visits, checking that there is no clinical deterioration)
- All health facilities must have a process of screening all outpatients for COVID-19 before or as they arrive at the facility. The facility must be able to provide surgical

face masks for patients who screen positive, to be worn during all further interactions at the facility.

- All facilities must have a designated isolation area, where outpatients (including pregnant women) that screen positive on arrival can be thoroughly assessed through history-taking and clinical examination, to determine whether the patient meets the criteria for COVID-19 testing, and to plan further care, where necessary in consultation with or with referral to a higher level of expertise.
- All primary health care facilities must have a functional 24/7 communication system with the obstetric doctor at their direct referral hospital for consultations regarding further management of COVID-19 cases or PUIs in pregnancy (e.g. using VULA App, WhatsApp, phone).
- All designated birthing (delivery) sites should be able to identify potential COVID-19 cases, test for COVID-19, identify patients with severe COVID-19 disease and be able to manage intrapartum care (in an isolation room) in COVID-19 patients with mild disease. The District management should consider closing the birthing service at any low-volume birthing site (<50 births per month) in an urban (non-remote) area which cannot meet these requirements (there will need to be a minimum of 2 midwives working in labour ward on any shift). The birthing service for that community would then be consolidated at a better resourced neighbouring facility, with consideration of transfer of some midwives and/or doctors to the neighbouring facility to support the increased case burden there.
- Unless there are obstetric reasons for admission, pregnant or post-natal COVID-19 cases/ PUIs **with mild disease**, or asymptomatic contacts of confirmed COVID cases should self-isolate at home. Where this is not possible, due to the home circumstances, the pregnant woman should have access to a designated isolation/quarantine facility, where she can stay until she tests negative or has passed the 14-day infectious period. If her next scheduled ANC /PNC visit falls within this isolation period, there needs to be telephonic or WhatsApp communication with the clinic to reschedule this visit.
- Facilities with waiting mothers' areas (maternity waiting homes- MWH) for pregnant women at term who have no means of transport to get to the facility when they go

into labour, must ensure that appropriate infection prevention control (IPC) measures are enforced amongst the occupants of the MWH to minimise the chance of spread of the virus (hand-washing, social distancing etc). If a woman has COVID-19 or is a PUI, or has a confirmed contact, then she cannot be admitted to the MWH until infection has been excluded. The antenatal care provider must individualise a plan for the woman, e.g. admission for isolation in hospital, admission to a quarantine/isolation facility or self-isolation at home and admission to the MWH once the infectious period has passed.

- Pregnant women who are COVID-19 cases or PUIs, not in labour, who require admission to hospital, will need to be nursed in an isolation unit within the hospital. This could either be in a section of the hospital identified for all COVID cases or PUIs, or in an individual cubicle within the maternity unit. Irrespective of the site, clear plans need to be made regarding the frequency of nursing observations and doctor's and/or midwife's rounds required. This will vary according to the gestational age and the reason for the admission.
- Pregnant or post-partum patients with confirmed or suspected COVID-19 with severe disease, in septic shock or in respiratory distress, should be referred as soon as possible for inpatient care at a designated specialised COVID-19 treatment site with high-care and ICU facilities and a multi-disciplinary specialist team.
- Where such patients present at a primary health care site, there must be direct transfer to the designated specialised COVID-19 treatment site, bypassing the interval levels of care (the interval level of care may have a role in telephonically assessing the severity of the case and facilitating transfer through communication with the specialised COVID-19 treatment site).
- All hospitals must be aware of where their referral centre is for patients with severe COVID-19. Hospitals must have a functional 24/7 communication system with the relevant doctors at this referral centre (e.g. using VULA App, WhatsApp, phone).
- Labour in women who are COVID cases or PUIs should be managed at the appropriate level of care based on existing risk factor criteria. Any woman with severe COVID-19 should be referred directly to the designated specialised site for managing severe COVID cases.

- The COVID-19 case or PUI in labour must be managed in an isolated cubicle, by dedicated staff who cannot be assigned other duties for non-COVID-19 patients during the same shift.
- If a woman who is a COVID-19 case or suspect needs an emergency caesarean section, it should ideally be done in a designated theatre room exclusively reserved for COVID-19 cases. This may not be feasible at most hospitals and is not essential. If the theatre air conditioning system is functional, a break of 30 minutes is required after the COVID case has left the theatre before the next case enters. This break will also allow mandatory decontamination of surfaces in theatre according to IPC guidelines. The recovery monitoring of the COVID-19 patient post-operatively should be done in the theatre room, not the recovery room (unless there is a dedicated recovery room for COVID-19 patients). When the patient is assessed as being well enough to leave the theatre, she must be transferred straight out of the theatre complex, bypassing the recovery room. Regular training drills must be conducted and documented so that all relevant staff are aware of the procedures and cleaning protocols.
- Post-delivery, if the baby is well, the mother and baby can be nursed together in isolation, preferably in the same cubicle where the mother delivered, with the same staff in attendance, unless the cubicle is required for a new woman in labour. Breastfeeding is encouraged with adherence to infection control practices such as wearing masks and washing of hands.
- Discharge home should only be allowed after careful planning for care of mother and baby after discharge. This may require a longer post-delivery stay in-facility than for non-COVID mother/baby pairs
- For PUIs awaiting COVID-19 test results, the result should be obtained before the mother/baby pair is discharged, as this will clarify the necessary arrangements for post-discharge care.
- For confirmed cases, if the mother is well enough to manage in self-isolation with the baby at home, and her home circumstances are suitable for this, then she can be discharged, as long as contact can be maintained by the hospital or post-natal clinic via phone or WhatsApp. The alternatives are to keep the mother/baby pair in

isolation in a designated section of the facility or to refer to a designated isolation/ facility until the period of infectious risk has passed.

- All health care workers should have access to a staff wellness programme for support, including COVID-19 testing, due to high levels of anxiety from working in this environment.
- All cases of PUI need to be documented and confirmed COVID-19 cases need to be notified.

5. What is expected at each level of care for management of maternity and reproductive health services during the COVID-19 pandemic

5.1.1. PHC clinic:

- ✓ Safe working conditions for all staff, including appropriate personal protective equipment (PPE) for all staff according to PPE guidelines.
- ✓ Staff should receive regular (e.g. weekly) updates on the COVID-19 statistics, any new protocols and training on how to manage COVID-19 at their level of care. Simulation training (fire drills) is encouraged.
- ✓ Screening of all outpatients on arrival (brief history and temperature check).
- ✓ Isolation cubicle for thorough assessment of those who screen positive, and for making initial management plan.
- ✓ Testing for COVID-19, or clear referral route to testing site.
- ✓ Clear referral criteria to higher levels of care for obstetric risk factors and complications.
- ✓ Clear protocols on managing COVID-19 or suspected COVID-19, including referral criteria to higher levels of care or to isolation/quarantine facility.
- ✓ Direct access to consultation with Obstetrics and gynaecology doctor at referral hospital (via Vula App/cellphone/WhatsApp)
- ✓ Either direct access or access via doctor at referral hospital, to doctor at specialised COVID hospitals (for severe COVID cases) and to doctor at isolation/quarantine

facilities for those with mild disease or contact history who cannot self-isolate at home.

- ✓ Direct access for ANC/PNC patients to a senior staff member in the maternity department of the facility (via cellphone/ WhatsApp) for COVID related queries (especially regarding scheduling of appointments).
- ✓ For COVID cases, PUIs and contacts of confirmed cases, who are to be managed through self-isolation at home, the clinic must ensure contact details are obtained and that a system of routine follow-up via phone/WhatsApp is in place.
- ✓ Access to EMS transport able to transfer COVID-19 patients

5.1.2. All designated birthing (delivery) sites, including Midwife-run obstetric units

All of the above (for PHC clinic), plus:

- ✓ Isolation facility for managing a COVID patient or suspect during labour, delivery and immediate post-natal period.
- ✓ Adequate midwife and nurse staffing to allow dedicated staff (at least 1 midwife and 1 other nurse per shift) exclusively allocated to the care of the COVID-19 patient in labour and her newborn.
- ✓ For the woman in labour, a companion of her choice should be encouraged, due to the many proven obstetric and mental health benefits, but can only be allowed under the following conditions:
    - The woman in labour is not a COVID-19 case or a PUI.
    - The companion has been screened for COVID-19 on arrival at the facility and is screen negative.
    - The companion has been instructed about and is willing to comply with infection prevention precautions, including those that have been put in place because of the COVID-19 pandemic.
    - The infrastructure of the labour ward allows for the companion to avoid close contact with any other patients in the ward.
    - The presence of the companion is not prohibited by any other local (provincial) regulation put in place for the COVID-19 pandemic.

5.1.3. Hospital with maternity service

All of the above (for PHC clinic and delivery site), plus:

- ✓ Isolation facility for managing a pregnant or postpartum COVID-19 patient, or PUI, who needs inpatient care for non-COVID-19 reasons (e.g. pre-eclampsia). This could either be within the maternity complex or in a general ward designated for isolating COVID-19 patients. For each patient in this category there will need to be an individualized plan made and reviewed daily for frequency of observations required and frequency of ward rounds to be conducted by the obstetric doctor and/or the midwife.
- ✓ The operating theatre complex must have a functional air conditioning system with an adequate number of air exchanges per hour according to hospital standards to ensure that the virus would be cleared from the air following surgical cases involving patients with COVID-19.
- ✓ The hospital requires an isolation area within the neonatal nursery to care for a sick baby delivered from a mother with COVID-19

5.1.4. Specialised COVID-19 Hospital:

This is a hospital designated to receive referrals, from other facilities in a defined catchment area, of patients with COVID-19 (or PUIs) with severe features (particularly patients in septic shock or respiratory distress due to COVID-19). Requirements:

- ✓ Safe working conditions for all staff, including appropriate personal protective equipment (PPE) for all staff according to PPE guidelines.
- ✓ Referral criteria for accepting severe COVID-19 patients or PUIs.
- ✓ ICU and High-care facility available for COVID-19 patients.
- ✓ Specialists with the necessary skills to manage the COVID-19 patient with severe features
- ✓ Multi-disciplinary team including midwives, specialist obstetrician, specialist neonatologist and specialist anaesthetist for co-managing pregnant woman with severe COVID-19 and her newborn.

5.1.5. Isolation/Quarantine Facility:

This is a facility to which people can be referred, from other facilities within a defined catchment area or from the community, for the purpose of isolation. Such a facility will take in people, including pregnant women and postpartum women with their newborn, who are well enough to be managed as outpatients but who need to be kept in isolation to reduce the risk of their transmitting COVID-19 to other members in the community. These would be people whose home circumstances make it impossible for them to self-isolate or self-quarantine at home. They would include asymptomatic people who have been in close contact with a confirmed COVID-19 case (see NICD case definition of a contact), as well as people with COVID-19 or PUIs with mild disease not requiring in-patient care. The facility could either be a designated section of a health facility, or a facility which has been entirely designated for isolation/quarantine purposes for the period of the COVID-19 pandemic. Quarantine will be for women who are contacts and Isolation will be for women who have tested positive.

Requirements:

- ✓ Safe working conditions for all staff, including appropriate personal protective equipment (PPE) for all staff according to PPE guidelines.
- ✓ Isolation facilities for multiple individuals including pregnant women and postpartum mother/baby pairs.
- ✓ Admission criteria and protocols for managing the isolation/quarantine period.
- ✓ On-site doctor.
- ✓ Clear referral criteria and pathway for obstetric/neonatal complications.
- ✓ Direct access to consultation with obstetrician and neonatal doctor at referral hospital (via Vula App/cellphone/WhatsApp).
- ✓ Clear protocols on managing COVID-19, including referral criteria to specialised COVID-19 hospital.
- ✓ Direct access to doctor at specialised COVID-19 hospitals (for consultation and referral of COVID-19 cases who develop severe features)
- ✓ Access to EMS transport able to transfer COVID-19 patients for those who need transfer to another facility for obstetric or neonatal problems or for COVID-19 – related complications,

6. Monitoring the services provided during the COVID-19 period

Aim:

To monitor the outcome of pregnant women during the time of COVID-19

Method:

The monitoring plan is to piggy back the data collection of pregnant women with COVID-19 onto the PPIP data collection system and use that base to monitor the impact of COVID-19 and non- Sars-CoV-2 virus infection on pregnant women and their babies.

All sites will be required to complete a one-page data sheet for women who are or have been infected with Sars-CoV-2 virus during their pregnancy and a one-page summary of the outcome of the neonate. The form will be completed for the woman at delivery and for the neonate at discharge. The sites must continue to complete PPIP as they would have in the past, but will need to submit their data **monthly** to the National PPIP database.

The information from the data sheet on women with COVID-19 will be entered by the SAMRC/UP Maternal and Infant Health Care Strategies Unit and collated with the monthly PPIP data from the PPIP sites.

Each site will have access to data for their site, but no other. The NDOH and the SAMRC/UP unit will have access to the whole database and do the analysis. The SAMRC/UP unit will manage the database.

A weekly summary of the number of women who have delivered who had or have COVID-19 will be produced. A monthly summary of the PPIP data and the effect of Sars-CoV-2 virus only the outcomes of infected and non-infected women will be produced.

The only extra work any labour ward manager has to do is to complete the two data forms, one for the pregnant woman with COVID-19 and one for the exposed infant. A training programme will illustrate how the system will work and how to complete the pregnant woman's and the exposed baby's forms.

Data analysis:

The data will give the number of pregnant women with COVID-19 that deliver and:

1. Maternal pregnancy complications
2. Maternal health system usage (normal, high care, ICU, ventilation)
3. Days in hospital
4. Outcome
5. Route of delivery
6. Relationship of complications to HIV status and ARV treatment
7. Perinatal outcome – Stillbirth, neonatal death, survivor
8. Birthweight

9. Gestational age
10. Neonatal complications (HIE, prematurity, infection)
11. Neonatal health system usage (stayed with mother, admitted nursery, high care, NICU, ventilation)
12. Days in nursery
13. Growth restriction
14. Covid-19 infected
15. Feeding method
16. Effect of HIV status on COVID-19 in pregnancy

Data from the PPIP sites will be compared with previous data from those sites to assess the impact of the COVID-19 pandemic has on all pregnancy outcomes. It can then be determined whether the COVID-19 pandemic has had any "collateral" damage on pregnant women and their babies.

Data security:

The data will not contain any patients' names. Only designated people will have access to the data.

Appendices:

Data sheets below.

Please complete this form for every confirmed COVID-19 pregnant woman at time of delivery.

DATE COVID-19 WAS CONFIRMED: / /

HEALTH CARE FACILITY: _____

DATE SHEET COMPLETED BY: _____

Woman's details

Identifier: _____

Maternal age: ____ years OR ☐ Unknown

Parity: ☐ OR ☐ Unknown

Antenatal care: *Please tick one*
- ☐ Yes
- ☐ No
- ☐ Unknown

Delivery information

Date of delivery: D D M M Y Y Y Y

Gestational age: ____ weeks OR ☐ Unknown

Delivered: *Please tick one*
- ☐ At this facility
- ☐ In transit
- ☐ At home
- ☐ At another facility
- ☐ Unknown

If GA known: *Please tick one*
- ☐ Certain
- ☐ Uncertain

GA based on: *Please tick one*
- ☐ Dates
- ☐ Ultrasound
- ☐ Clinical exam

Birth weight: ____ g OR ☐ Unknown

Number of fetuses: ☐

Mode of delivery *Please tick one*
- ☐ Normal vertex delivery
- ☐ Vaginal breech delivery
- ☐ Assisted vaginal delivery
- ☐ Caesarean section before labou
- ☐ Caesarean section during labour

Condition at birth: *Please tick one*
- ☐ Born alive
- ☐ Stillborn, alive on admission
- ☐ Fresh stillborn, dead on admission
- ☐ Stillborn, admission status unknow
- ☐ Macerated stillborn

Syphilis serology

Please tick one
- ☐ Positive
- ☐ Negative
- ☐ Not done
- ☐ Unknown

HIV serology

Please tick one
- ☐ Positive
- ☐ Negative
- ☐ Not done
- ☐ Unknown

Anti-retroviral drugs

Please tick one
- ☐ Prophylactic
- ☐ Long-term
- ☐ Intrapartum
- ☐ Type unknown
- ☐ No ART
- ☐ Unknown

Infant feeding

Please tick all that
- ☐ Breastfeeding
- ☐ Formula
- ☐ Mixed feeds
- ☐ Donor milk
- ☐ Expressed breast milk
- ☐ Unknown

Maternal obstetric condition

Please tick all that apply
- ☐ Hypertension/pre-eclampsia/eclampsia
- ☐ Gestational diabetes
- ☐ Spontaneous preterm labour
- ☐ Premature rupture of membranes
- ☐ Antepartum haemorrhage
- ☐ Postpartum haemorrhage
- ☐ Puerperal sepsis
- ☐ Pneumonia/ARDS
- ☐ Other, specify: _____

Neonatal morbidity

Please tick all that apply
- ☐ Respiratory distress syndrome
- ☐ Meconium aspiration syndrome
- ☐ Hypoxic-ischaemic encephalopathy
- ☐ Necrotising enterocolitis
- ☐ Intracranial haemorrhage
- ☐ Congenital abnormality
- ☐ Neonatal sepis
- ☐ Other, specify: _____

Health systems usage: woman

Please tick all that apply
- ☐ Admitted to high-care unit
- ☐ Admitted to ICU
- ☐ Intubated & ventilated
- ☐ Death

Total duration of hospital admission: _____ days

OR ☐ Unknown

Health systems usage: baby

Please tick all that apply
- ☐ Stayed with the mother
- ☐ Discharge to interim caregiver
- ☐ Admitted to neonatal nursery
- ☐ Admitted to high-care unit
- ☐ Admitted to ICU
- ☐ Intubated & ventilated
- ☐ Death

Total duration of nursery admission: _____ days

OR ☐ Unknown

In-hospital COVID-exposed neonates: Individual data sheet

Maternal ID		*[link to maternal ID on obstetric COVID-19 form]*
Infant ID		*[keep list onsite of Infant ID with names & facility reference Nr]*
Maternal information [if out-born or admitted from home] OR [if maternal COVID-19 data is not collected at local site] OR [if paediatric staff opts to document the maternal data]	Parity	/ not recorded
	Age	/ not recorded
	Antenatal care	Yes / no / not recorded
	Maternal HIV status	Positive / negative / not recorded
	If HIV-positive, maternal ART	TEE / TLD / 2nd-line / other / intrapartum / none / not recorded
	Mode of delivery	Vaginal / Caesarean section / not recorded
	Hypertensive disease	PET / eclampsia / non-pregnancy HT / none / not recorded
	Diabetes	Yes (gestational) / yes (non-gest) / none / not recorded
	Number of foetuses	/ not recorded
	Antenatal steroids	Yes / no / not recorded
	Prolonged rupture of membranes	Yes / no / not recorded
	Maternal pneumonia	Yes / no / not recorded
	Maternal level of illness	Well / ill / critically ill (HCU or ICU) / not recorded
	Maternal death (any cause)	Yes / no / not recorded
Maternal positive COVID-19 test [from 14 days before delivery up until neonatal admission date]	Date maternal COVID-19 test	
	Type maternal COVID-19 test	PCR / antibody / other:
Neonatal information [in-born and out-born] [all admissions within neonatal period] [include COVID-exposed neonates who room-in with their mothers after birth] [filled at primary neonatal ward, before down-referral/ step-down]	Date of birth	
	Date of admission	
	Birth weight	
	Sex	Male / female / not recorded
	Place of birth	Inborn / another facility / in transit / at home / not recorded
	Gestational age	
	Apgar score @ 1 min	/ not recorded
	Apgar score @ 5 min	/ not recorded
	Admission ward	NICU / HCU / standard neonatal / with mother / not recorded
Neonatal signs & symptoms [tick all relevant]		Rash/ oedema/ fever/ hypothermia/ cyanosis/ resp distress/ hypoglycaemia/ hyperglycaemia/ apnoea/ lethargy/ seizures/ feeding intolerance/ vomiting/ diarrhoea/ dehydration/ pallor / jaundice / other:
Neonatal diagnosis [tick all relevant]		Prematurity/ LBW/ VLBW/ ELBW/ HMD/ TTN/ MAS / congenital pneumonia/ cong sepsis/ nosocomial sepsis/ NEC/ jaundice (phototherapy)/ perinatal hypoxia (prem baby)/ HIE/ intracranial haemorrhage/ shock/ cong abnormalities/ other:
Interventions [tick all relevant]	Respiratory support	O_2/ NPO_2/ HFNC/ CPAP/ IPPV/ Oscillation/ None/ other:
	Surfactant administration	Yes / no / not recorded
Neonatal COVID-19 testing [record all relevant]	Result COVID-19 test (test 1)	Positive / negative / indeterminate / not recorded / not done
	Date COVID-19 test (test 1)	
	COVID-19 specimen type (test 1)	NPA / OPA / tracheal aspirate / other:
	Type COVID-19 test (test 1)	PCR / antibody / other:
	Result COVID-19 test (test 2)	Positive / negative / indeterminate / not recorded / not done
	Date COVID-19 test (test 2)	
	COVID-19 specimen type (test 2)	NPA / OPA / tracheal aspirate / other:
	Type COVID-19 test (test 2)	PCR / antibody / other:
Infant feeding [tick all relevant]	Infant feeding type	Breastfeeding / expressed breast milk / infant formula / donor milk / TPN / not recorded
Neonatal outcome [record at discharge/ down-referral/ separation]	Discharge type	Remained with mother / discharged to mother / discharged to caregiver / referred out for neonatal care / down-referred (step-down) / death
	Date of discharge/ death	

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