Title: Safe surgery and safe delivery in COVID-19 patients

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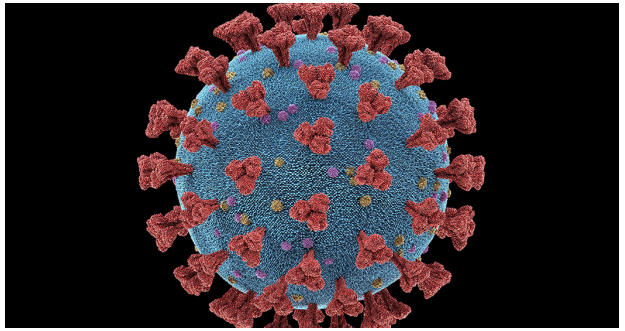
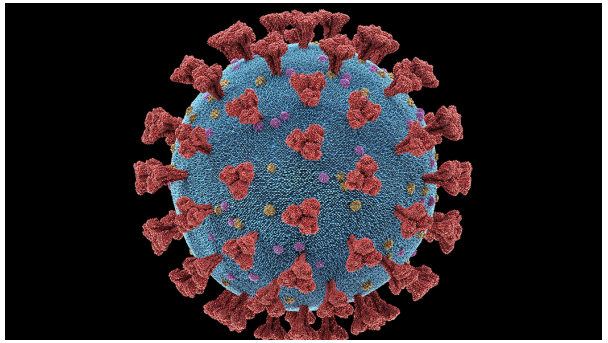
Preventing and controlling transmission of COVID 19 infection






• Current knowledge about COVID-19 in pregnanc
• Preparation for COVID-19 in the department
• Management of the first case
• Management of the severe case
• Last words and conclusion

COVID-19 and pregnancy – current knowledge

Published data thus far – 921 (Pubmed-15/9/20)

Most infections – 3rd trimester
Features similar to non-pregnant
Fever and cough most common
Dyspnoea, myalgia, rhinorrhea, sore throat, diarrhoea

80% asymptomatic; of symptomatic, 80% mild
Of those admitted, 0.8% died; 11% ICU

Preterm delivery appears more common; Majority had CS though COVID-19 not an indication

Fetal and neonatal

Preterm birth (21 – 35%), low birth weight, neonatal death – 2% in this series
Transmission – Uncommon, largest series 4% neonatal infection; no evidence of mode of delivery or breastfeeding being implicated

Ultrasound Obstet Gynecol. 2020 Sep 14. doi: 10.1002/uog.23107. Online ahead of print.

Maternal and Perinatal Outcomes of Pregnant Women with SARS-COV-2 infection

Daniele Di Mascio [1], WAPM (The World Association of Perinatal Medicine) working group on COVID-19

Collaborators, Affiliations + expand

PMID: 32926494 DOI: 10.1002/uog.23107

Abstract

Objectives: To evaluate maternal and perinatal outcomes of pregnant women affected by SARS-COV-2.

Methods: This was a multinational retrospective cohort study including women with laboratory-confirmed SARS-COV-2 from 73 centers from 22 different countries in Europe, United States, South America, Asia and Australia from February 1, 2020 to April 30, 2020. Confirmed SARS-COV-2 infection was defined as a positive result on real-time reverse-transcriptase-polymerase-chain-reaction (RT-PCR) assay of nasal and pharyngeal swab specimens. The primary outcome was a composite measure of maternal mortality and morbidity including admission to intensive care unit (ICU), use of mechanical ventilation, or death.

Results: 388 singleton pregnancies tested positive to SARS-COV-2 at RT-PCR nasal and pharyngeal swab were included in the study. The primary outcome was observed in 47/388 women (12.1%). 43/388 women (11.1%) were admitted to ICU, 36/388 (9.3%) required mechanical ventilation, and 3/388 women deceased (0.8%). Of the 388 women included in the study, 122 (31.4%) were still pregnant at the time of the study. Among the other 266 women, 6 had spontaneous first-trimester abortion, 3 had elective termination of pregnancy, 6 had stillbirth, and 251 delivered a live-born infant. The rate of preterm birth less than 37 weeks of gestation was 26.3% (70/266). Of the 251 live-born infants, 69/251 (27.5%) were admitted to NICU, with 5 neonatal deaths (2.0%). The overall rate of perinatal death was 4.1% (11/266). Only one infant (1/251, 0.4%) born from a mother tested positive during the third trimester, was found positive to SARS-COV-2 at RT-PCR.

Conclusions: SARS-COV-2 in pregnant women is associated with 0.8% rate of maternal mortality, but 11.1% rate of admission to ICU. The risk of vertical transmission seems to be negligible.

Keywords: COVID19; Coronavirus; SARS-COV-2; infection; pregnancy.

Preparing your department/hospital for COVID-19

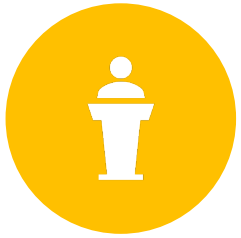
MEETINGS

PROTOCOL

PREPARATION

IPC TRAINING; DRILLS

LEADERSHIP BY EXAMPLE



REMEMBER MENTAL HEALTH OF STAFF

COMMUNICATION
COMMUNICATION
COMMUNICATION

DOCTORS, NURSES AND MIDWIVES, PHARMACISTS, ENGINEERS, TECHNICIANS, CLEANERS, MEDICAL RECORDS, ADMINISTRATIVE

Specialties: O&G, Infectious diseases/microbiology, neonatology, anaesthesia, pulmonologist, haematology, cardiology, midwives, theatre nurses

Principles of management in pregnancy

- early isolation, lab tests for the virus and coinfection
- aggressive infection control procedures
- **oxygen therapy**
- **judicious fluid use; encourage oral**
- antibiotics (if secondary bacterial infection)
- ~~Lopinavir-ritonavir; ?hydroxychloroquine~~
- Dexamethasone – effective, SPO2 less than 90 on O2; best at start of the cytokine storm
- **fetal monitoring; individualized delivery planning**
- Early ICU/HDU care advised

Int J Gynaecol Obstet. 2020 Jun 18. doi: 10.1002/ijgo.13278. Online ahead of print.

Good Clinical Practice Advice for the Management of Pregnant Women With Suspected or Confirmed COVID-19 in Nigeria

Kehinde S Okunade [1 2], Christian C Makwe [1 2], Opeyemi R Akinajo [2], Emmanuel Owie [2], Ephraim O Ohazurike [2], Ochuwa A Babah [1 2], Adeyemi A Okunowo [1 2], Sunday I Omisakin [1 2], Ayodeji A Oluwole [1 2], Joseph A Olamijulo [1 2], Omololu Adegbola [1 2], Rose I Anorlu [1 2], Bosede B Afolabi [1 2]

Affiliations + expand

PMID: 32557562 DOI: 10.1002/ijgo.13278

Abstract

The impact on healthcare services in settings with under-resourced health systems, such as Nigeria, is likely to be substantial in the coming months due to the COVID-19 pandemic, and maternity services still need to be prioritized as an essential core health service. The healthcare system should ensure the provision of safe and quality care to women during pregnancy, labor, and childbirth, and at the same time, maternity care providers including obstetricians and midwives must be protected and prioritized to continue providing care to childbearing women and their babies during the pandemic. This practical guideline was developed for the management of pregnant women with suspected or confirmed COVID-19 in Nigeria and other low-resource countries.

Keywords: COVID-19; LMICs; Management; Nigeria; PPE; Pregnancy; Telehealth.

DELIVERY: Individualised assessment

Team-based approach

Obstetric indication and not COVID-19. Buy time. Induction, spontaneous labour; elective or emergency CS.

Depends on parity, coexisting condition, complications. COVID-19 is not an indication for CS.

VAGINAL DELIVERY

GENERAL PATIENTS

- **IPC trained staff**
- **Regularly disinfected fetal doppler or CTG (use plaster instead of regular belts)**
- **Staff – apron (or disposable gown), face shield in addition to face mask, shoe covers or boots**

SUSPECTED OR CONFIRMED COVID +VE

- **Dedicated midwives doing long shifts**
- **dedicated fetal doppler or CTG, delivery kit**
- **Staff – Impervious surgical gown, N-95 mask, face shield, surgical boots, elbow length gloves**

CAESAREAN SECTION

- **GENERAL PATIENTS – USUAL CARE**

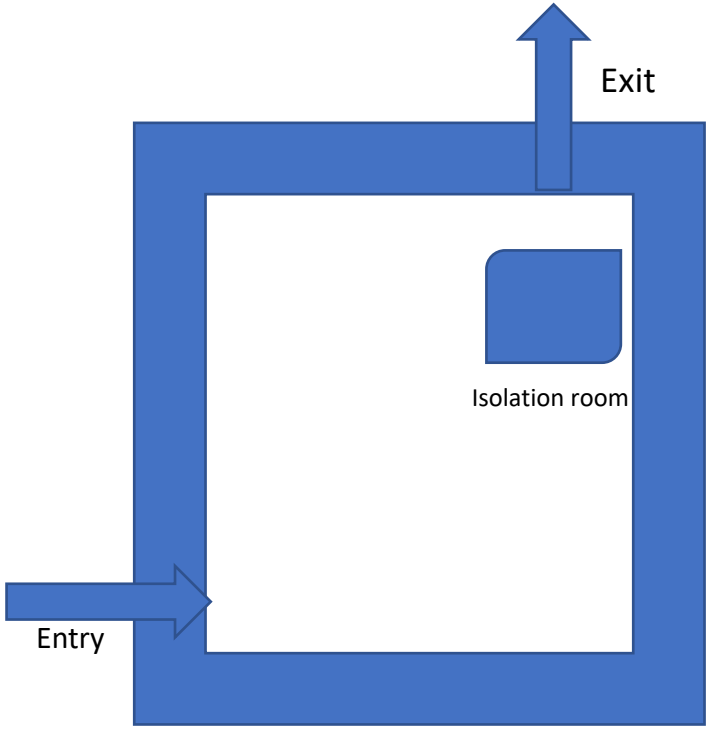
- **SUSPECTED OR CONFIRMED COVID-19 +ve**
  - **IPC Trained doctors and nurses**
  - **Pack system for drugs and consumables**
  - **Plan to minimize blood loss so - carbetocin, tranexamic acid, isoplasma**
  - **Staff – Impervious surgical gown, N-95 mask, face shield, surgical boots, elbow length gloves. “Tyvek suits”**
-

The COVID-19 maternal health team

Tyvek not needed but these were early days

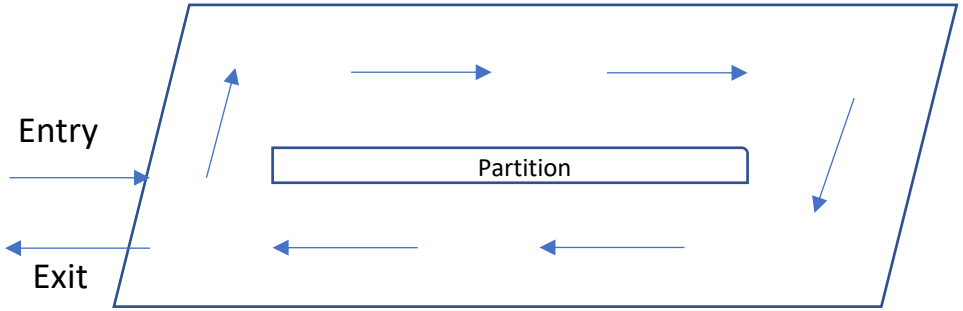
General space preparation for holding and isolation – practical solutions

- Plan such that there is appropriate ventilation if the room is not sealed off from the other rooms and should be near the exit or have an independent exit if possible



- If two entrance/exits, the flow should be arranged such that after entry through the ‘clean’ area, exit should not be through the same place but instead, through the ‘contaminated’ area

- If one exit, partition so that you can have a similar effect and ensure you don’t bring contaminated back to clean



Management of first COVID-19 positive pregnant woman

Patient arrived on 25th April 2020, 38 weeks pregnant with one previous C.S., referred from a private hospital, asymptomatic

- Meeting scheduled that same day (Sat) of key stakeholders – OB, Theatre nurses, Anaesthesia, Neonatology, Management
- All stated their consumable needs; combined list
- Pre-op blood tests and patient registration
- Fetal monitoring issues and consent issues
- Simulation done the next day – Sunday. Walk through as well as demonstration of PPE donning and doffing
- Theatre dedicated to COVID-19 patients; renovated and re-arranged

Main issues – contact between isolation ward and the outside world. Whatsapp extremely useful. Delivered on the 27th of April, successfully

Experience in LUTH…

- Nine patients thus far
- All presented in the third trimester
- One booked, 8 unbooked
- Seven asymptomatic at time of presentation
- Fifth very symptomatic with full fledged COVID pneumonia and RDS
- Only one vaginal delivery for an IUFD

Patient no 5……

- 33 year old Asian woman, 35 weeks
- No contact or travel history
- Known asthmatic - oxygen, oral salbutamol and antibiotics
- CXR – suspected COVID-19 pneumonia and acute pulmonary oedema
- Positive for COVID on RT-PCR, referred to LUTH
- One previous CS
- Developed respiratory failure; emergency CS done

Patient no 5……

- Seemed stable then deteriorated on Day 4
- 15L oxygen/min – oxygen dependent; no ICU space
- Day 10 seemed stable on 15L so weaned
- Collapsed immediately, GCS down to 6
- Haematology decided on EBT high methoglobinaemia
- Became less O2 dependent
- Discharged home on Day 22

Lessons learnt and last words…

- Pack system for all the consumables and drugs needed
- Ensure theatre decontaminated and cleaned
- Walk through patient transfer to theatre, surgery or labour, post-op management, nursing of the neonate and monitoring of mother before your first patient
- Babies all negative; roomed in with mother and breastfed
- MDT care is crucial – saved our case no 5. Ask for help
- **SITUATION IS IMPROVING, FEAR IS LESS**

Acknowledgements: Maternal and Newborn Care Team, LUTH

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