

### **Editorial**

### Managing Committee 2019-2020

ife as we know it, has taken a sharp turn Lto a direction, hitherto unknown to all of us. At the start of the pandemic, there was anger, disbelief, denial and all sorts of mixed emotions but with the start of Unlock 1 we are now perhaps heading towards a cautious acceptance. Our daily life, our freedom, took a beating like never before as the world bowed to an invisible enemy.

The lockdown for over two months globally, has taught us very many things, from respecting and appreciating the routine support of our domestic helps in household chores, to the new ways of learning through webinars and seeing patients online. We have perhaps spent more quality time with our family, which we never could in our busy lives.

The medical community all over the world are sharing their experiences, quicker and faster like never before and we are learning without stepping out from our homes. Although this now seems to be the new normal, but these virtual meetings can eventually only supplement but not replace our 'real' social liaisons. Till such time, since new evidence is coming out every other day about COVID-19, it is getting tougher and confusing to keep up with it.

This is our humble effort to summarize the current evidence that may affect our practice in the current scenario, in this special edition of BOGS Times on COVID-19.

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**COVID-19 Obstetric** 

OPD the New Normal



Precautions for Performing Antenatal USG in COVID



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Ward





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Labour Room and During

Corona Infection in the

Vaginal Delivery



Page 15: Doctors/ HCWs Exposure or Contact with COVID 19 — What to Do Next

### President Speaks ...



Hope you and your family are well. We are maybe going through the most difficult times of our life.

A pandemic in the form of COVID-19, an economic disaster due to lockdown, woes of lakhs of migrant labourers and then struck by the super cyclone Amphan.

These few months seem to have changed our lives drastically.

Your BOGS has extended a helping hand to our fraternity, mainly the junior doctors working in medical colleges by providing them 280 PPE kits, 900 n95 masks and 800 protective googles.

During this distribution process i had the privilege of visiting the ID Hospital at Beliaghata. The medical superintendent profusely thanked us for the PPE kits and protective googles. On request he give us the permission to go around the hospital and the wards.

On one side were anxious relatives under a makeshift shelter waiting day and night for news about their near and dear ones with hardly anything to eat.

But what struck me most was the fearless attitude of young nursing staff mostly in their late twenties handling patients with elan.

Their body language oozed confidence and a determination to win this war against Covid.

Whereas none of our great leaders dared to cross the road in front of the hospital during their much publicized visits, here was a bunch of lively girls knowingly facing the dreaded virus with never say die attitude.

The look in their eyes, their confidence and dedication made me realise how much we need to learn from them. They are the real warriors, the real heroes of this battle. My salute to them.

The picture was almost the same when we visited the quarantine centre at CNCI, Rajarhat. Many had left their little children back home for more than a month, unsure of whether they will ever be back. Some fought the tears in corner of their eyes, but they were fighters not any less than the army men guarding our country. They were guarding humanity from death.

Friends these visits made me realise how little i have contributed to mankind. It was a learning experience that I wished to share.

Before ending I wish you all be safe, be positive, be strong.

We shall overcome. Long live BOGS. Jai Hind.

Dr Dibyendu Banerjee

### Hony. Secretary Speaks ...

Dear seniors, colleagues and friends,

Hope this will find you and your family in good spirit and health.



Never in my wildest imagination had I ever thought in last 12 months, that I would be writing to you as Honorary Secretary of our beloved society in the middle of June 2020. After an eventful academic year the entire managing committee of 2019-20 was eagerly waiting to welcome the new team under the able leadership of Dr Bhaskar Pal. As we were on our last lap looking forward towards the finishing line, the so called 'Chinese Virus' invaded our homeland and destroyed all our calculations. The unprecedented global COVID-19 pandemic not only changed the entire world, but also forced us to modify the way we live.

The three months long national lockdown also forced us to postpone our remaining academic programme including two prestigious orations, and delayed the completion of our Managing Committee election this year. In spite of living in a negative atmosphere full of anxiety and fear, we also learnt new things and tried to adopt new technologies to reach out to you in this changed world. For the first time in the history of BOGS the Managing Committee had a unique experience of virtual meeting on zoom platform, during this period of social distancing. The society has already organised two successful webinar programmes, to keep our academic candle burning. We have organised our prestigious Dr Sudhir Chandra Bose memorial oration on digital platform as webinar, another 'first of its kind' event in BOGS history.

Not only on the academic front, we have taken care not forgetting our social responsibility too in this period of unprecedented national emergency. The managing committee has taken a unanimous and spontaneous decision to spend a record five lakh rupees to procure PPE kits for our junior doctors working in the front line managing Covid patients. My heartfelt thanks to my president Dr. Dibyendu Banerjee, who led from the front in the entire project, starting from the meticulous planning upto its flawless implementation. Needless to say we need to do a lot more on this social front especially after the added destruction of Cyclone Amphan.

Friends, extraordinary situations demand extraordinary measures. Staying safe is the new normal form of staying well. Together we will overcome this in days to come. With your help and support your BOGS will once again go back to its vibrant form soon!

I would like to end by saying...

"আমাদের দেখা হোক মহামারী শেষে, আমাদের দেখা হোক বিজয়ীর বেশে"

Jai Hind! Long live BOGS!

Dr M M Samsuzzoha





# **COVID-19** Obstetric Implications

### Susmita Chattopadhyay

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The rapidly changing scenario in this pandemic, and the almost weekly update of guidelines with regards to the emerging evidences towards the care of women infected with SARS-CoV-2 or COVID-19 disease, have sent us all scrambling to change the way we practice.

So far as the evidence goes, which are mostly from the worst affected countries like USA, UK, and China, there has not been any specific implication in pregnant women having COVID-19.

### How does COVID-19 affect pregnancy?

There is evolving evidence that there could be a cohort of asymptomatic individuals in the general population, or those with very minor symptoms who are carrying the virus, though the incidence is unknown. Pregnant women if they develop the disease are at no greater risk of becoming seriously unwell, compared to healthy adults according to current evidence.

The large majority of pregnant women develop only mild or moderate cold/flu like symptoms. Cough, fever, shortness of breath, headache and hyposmia/anosmia may be other relevant symptoms. However a small proportion of them do require admission to hospital. The first report of a study published on 11th May, from the UKOSS registry data, show 427 pregnant women needed admission. Most of them only needed ward treatment and were discharged home well, while around 1 in 10, required intensive care and 5 women died.

The study found that the majority of women who became seriously ill were in their 3rd trimester and thus emphasizes the need of social distancing from 28 weeks of pregnancy.

Those from black, ethnic minority and Asian background were more likely to be admitted. Pregnant women over the age of 35, who were overweight or obese and those with preexisting medical problems such as diabetes and hypertension were also at higher risk of developing serious illness.

As pregnancy is a hypercoagulable state and emerging evidence suggests that individuals admitted to hospital with COVID-19 are also hypercoagulable, it follows that infection with COVID -19 in pregnancy is likely to be associated with an increased risk of maternal venous thromboembolism. Reduced mobility from self-isolation at home or hospitalization increases this risk further.

There is also a significant impact on psychosocial wellbeing for the women and their families. A small study of 71 women from Ireland shows that the women were worried about the impact on their families and the financial situation.

### How does COVID -19 affect the fetus?

Currently there is no data suggesting an increased risk of miscarriage or early pregnancy loss or spontaneous preterm

birth in relation to COVID-19.

There is no evidence to date that the virus SARS CoV-2 is teratogenic.

There is some evidence of vertical transmission, although the proportion of pregnancies affected and the significance to the neonate is yet to be determined.

In the UKOSS cohort of patients, six (2.5%) babies had a positive test for SARS-CoV-2 during the first 12 hours after birth; some of these were in babies born by pre-labour caesarean. One of these babies required admission to NICU. There were 2 perinatal deaths but it is unclear whether they were related to co-existing maternal COVID-19 infection.

There is no evidence of vertical transmission of SARS-CoV-2 infection when the infection manifests during the third trimester of pregnancy.

### Advice to pregnant women to prevent COVID-19 infection

- Disinfection of surfaces to reduce fomite spread.
- Frequent hand washing with soap and water or an alcohol based sanitizer for a minimum of 20 secs.
- Avoid touching face, eyes, nose and mouth.
- Keep a distance of at least 1metre in various necessary interactions and activities.
- Avoid non-essential travel, preferable to use private vehicle. If public transport is used, distance should be maintained.
- Use mask whenever going out of the house.
- Preferable to work from home.
- Avoid gatherings and functions to celebrate the 7th month milestone, which is a common cultural practice.
- Minimize visitors from coming to meet the mother and newborn after delivery.
- Essential milestone visits and 12 and 19 week scans are needed.
- Defer routine visits in the current scenario.
- Minor ailments and questions can be consulted over phone or web platform.

### **References:**

- 1. RCOG and RCM guideline on Corona virus (COVID-19) Infection in Pregnancy Version 9 Updated 13May 2020
- 2. FOGSI GCPR on pregnancy with COVID-19 Infection. Version 1, 28th March, 2020
- 3. Yan J, Guo J, Fan C, et al. Coronavirus disease 2019 in pregnant women: a report based on 116 cases. Am J Obstet Gynecol 2020; XX:x.exex.ex.

## **BOGS Support** *for* **Health Care Workers**

The Bengal Obstetric and Gynaecological Society has always supported the cause of junior doctors and healthcare workers in the state. In these difficult times of the COVID-19 pandemic, our society is at the forefront in providing personal protective gear to junior doctors of various medical colleges throughout the city including Medical College, Kolkata, ID & BG Hospital, Beliaghata and Chittaranjan National Cancer Institute which are three of the many COVID designated hospitals in the state.

The BOGS has distributed 900 N95 masks, 800 Studd goggles and 280 PPEs over the past couple of months to various hospitals at a cost of two and a half lakhs of rupees.



Rotary Club of Calcutta, Kankurgachi has also helped in this by providing us with 200 PPEs and 400 protective goggles at a cost of Rupees one lakh and fifty thousand.

We thank Rotary Club of Calcutta, Kankurgachi for their generosity and help in these trying times. We also thank all our members for their support and hope to continue with our endeavours in the future as well.







### **Avishek Bhadra**

Assistant Professor (Eden Hospital, Medical College, Kolkata)

COVID-19 is the most tumultuous, most catastrophic and the most defining epoch of our lifetime. This outbreak may engender a "new-normal" in nearly all walks of life. Traditionally, most individuals have assumed that the only way to see a doctor is to come to a clinic in the Out Patient Department (OPD). The pandemic has revealed the truth: more primary care patients can have their needs met through telemedicine. Health Care Provider teams should be working to "flatten the curve" by steering patients to health care online for nearly everything but emergent symptoms. Doctors attending OPDs should rapidly seek to adopt teleconferencing capability and electronic record keeping and consider what appointments can be conducted remotely. However, admittedly, telemedicine can't do it all. OPD visits still are required for patients needing hands-on care and especially for us, the obstetricians, many elements of antenatal care may require in-person assessment, in particular Blood Pressure and urine checks and measurement of fetal growth. Wherever possible, ultrasound scans and other investigations should be provided within a single visit, involving as few staff as possible.

It is important that OPD services do all they can, to protect women from contracting COVID-19 during their maternity care by following local guidance stringently and using appropriate Personal Protective Equipment (PPE). It is also important to reduce the rate of transmission between staff working in OPDs. Infrastructural changes are essential with special reference to follow local guidelines for airconditioning machines. Cross infection from stethoscope, BP machine, fetal doppler, bed linen, curtains etc should also be prevented. All women should be asked to attend alone if possible or with a maximum of one partner and should be initially screened before entering the OPD to see if they have suggestive symptoms. OPDs should arrange to place visual alerts such as signage and posters at entrances and in strategic places providing instruction on hand hygiene, respiratory hygiene, and cough etiquette and also ensure supplies are available such as tissues, hand soap, waste receptacles and alcohol-based hand sanitizer in readily accessible areas. Ideally patients should be at least 6 feet apart in waiting areas. If the OPD lacks a waiting area, then designated areas or waiting lines should be created by partitioning or signage. If possible, separate entrances for all clinic patients should be provided. Otherwise a clear path from the main door to the clinic must be created, with partitions or other physical barriers, to minimize contact with other patients.

Several major impacts can be anticipated during this outbreak that could affect the operations of OPD. These include both surges in patients seeking care and the potential for workforce absenteeism for personal or familyillness. Understandably, emphasis must be on the system to identify persons with presumptive COVID-19 disease and implement a triage procedure to assign appropriate levels of care.OPD facilities need to adjust the way they triage, assess, and care for patients by using methods developed to suite local needs. The world has changed a lot, and healthcare needs to change with it!

### References:

- 1. Guidance for outpatient and ambulatory care settings; CDC; April 7 2020
- Occupational health advice for employers and pregnant women during the COVID-19 pandemic; RCOG; 27 April 2020
- 3. Guidance for antenatal and postnatal services in the evolving corona virus; RCOG; 24 April 2020

### **Precautions for Performing Antenatal USG in COVID Era**

### Seetha Ramamurthy Pal

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Ultrasound forms an essential part of Obstetric and Gynaecological care. In the background of COVID Pandemic and social distancing, Health care workers offering ultrasound services are at increased risk of exposure to the virus. All possible precautions need to be taken while performing ultrasound, both during and after the lockdown period, as these precautions will be the new norms that will have to be followed. Many societies, both national and international have formulated guidelines for the use of PPE and the effective use of Ultrasound in this COVID-19 Pandemic. These are recommended practices that are so far believed to be the most effective in reducing transmission risk.

The two main aspects of preventing infection are

- 1) Preparation of the Ultrasound room and Equipment
- 2) Protecting the patient and the health care workers.

### **Important Considerations:**

SARS-COV 2 infection is mainly spread by droplet infection by coughing, sneezing and direct contact of these droplets.

The survival of severe acute respiratory syndrome (SARS)associated viruses (including COVID-19) on dry inanimate surfaces, such as ultrasound systems, is between 48 and 96 h.

With the spread of COVID-19 being in the community, it is prudent to treat every patient as a potential carrier, even if asymptomatic.

With the continued risk of COVID-19, there is no role of triaging patients for USG currently, however certain scans need to be prioritized over the others depending on the indication.

Health care workers should wear appropriate PPE even if a distance of > 1 m is maintained from the patient.

However many aspects of ultrasound examination increases the transmission risk like, small room, inadequate ventilation, inadequate distance, prolonged examination time, Invasive procedures and repeated handling of the transducers and knobs.

### Protection of Ultrasound room and Equipment

It is recommended that single unit air conditioning should be run in an "open to outside air" mode (vent open)

All indoor areas such as entrance lobbies, corridors and staircases, escalators, elevators, security guard booths, office rooms, meeting rooms, pantries and cafeteria should be mopped with a 1% sodium hypochlorite solution or phenolic disinfectants

The ultrasound room should be cleaned thoroughly each morning and all contents should be wiped with a compatible low-level disinfectant (LLD). Commonly approved agents



The number of transducers connected to the ultrasound machine should be reduced to a minimum.

Fabric-covered chairs should be replaced with hard-surface chairs that can be wiped.

Ultrasound transducers and cables should be cleaned every morning and this along with the patient bed and couch should be cleaned after each scan with LLD. High-level disinfection (HLD) is not required when using ultrasound probes on intact skin.

Excess ultrasound gel on the transducer should be wiped off with a soft cloth after each examination. Gel can harbour a lot of germs and its presence prevents adequate disinfection.

### Timing of Ultrasound scans

With limited resources and capacity, it is advisable to limit the number of scan appointments everyday and hence triaging of patients required as to whether scans can be delayed or need to be done at an emergency basis.

Dating should be done at the Early Morphology 11–13 weeks 6 days scan window.

Second trimester scans should be given priority over first trimester scans

Routine" Growth and Doppler scans should be postponed to a 34-36 weeks assessment

Decision Making" Growth and Doppler scans between 28 and 41 weeks should be considered on priority

### Patient protection

All appointments should be done over the phone and patient screened, before she enters the clinic for any suspected infection.

Detailed TOCC (Travel, especially for migrant workers, Occupation, Contact and Cluster) should be taken both over the phone and at entry to the clinic.

Patient should be accompanied by only one visitor and both should be wearing a double layer mask at all times.

A properly filled declaration and written informed consent document should be obtained from the patient

### Health care provider protection:

All health care providers should use a N95 mask with a three-ply surgical mask (if possible), eye gear and a cloth gown when performing ultrasound scans as there is direct patient contact.

Hand hygiene is imperative before and after direct patient

contact. If it is not possible to wash hands, hand sanitizer can be used.

Latex-free disposable gloves should be used during the ultrasound examination and changed after each patient.

Use of single-use gel packs is recommended as opposed to gel containers.

Ultrasound examination of patients with suspected or confirmed COVID-19 infection should be done by doning PPE (respirator, such as N95, goggles, face protective shield, surgical gown and gloves) prior to entering the examination room.

A bedside scan with a dedicated machine preferably is strongly recommended. If the patient must be scanned in the clinic, this should be done at the end of the clinic list, as the room and equipment will subsequently require a deep clean. References:

- 1. Guidance for antenatal screening and ultrasound in pregnancy in the evolving coronavirus pandemic. www.rcog.org.uk. March 2020.
- 2. ISUOG Safety Committee Position Statement on safe performance of obstetric and gynecological scans and equipment cleaning in context of COVID-19. Ultrasound Obstet Gynecol 2020; 55: 709–712 (COVID-19) pandemic.
- 3. Guidance for Management of Pregnant Women in COVID-19 Pandemic. icmr.gov.in- May 2020.
- 4. Khurana, Ashok et al. "SFM India Oriented Guidelines for Ultrasound Establishments During the COVID 19 Pandemic." Journal of Fetal Medicine, 1–7. 11 Apr. 2020, doi:10.1007/s40556-020-00254-7S.





### Sebanti Goswami

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elivering surgical services safely and effectively in the face of pressures placed by the COVID-19 pandemic is indeed a challenge. Surgical services need to balance minimizing the risk of nosocomial spread of COVID-19 against continuing care for acute surgical conditions and managing urgent elective surgery.

### **General precautions:**

- 1. Elective surgery should be avoided or postponed and medical treatment should be used wherever possible to tide over the crisis.
- 2. A surgeon should avoid operating at multiple centres and restrict himself/herself to a single centre only to prevent cross-contamination between centres and avoid the need for isolating healthcare workers at multiple locations if someone tests positive.
- All patients should go through the screening protocols 3. in surgeries. There are

VIRUS

Result for

gative

8 before admission particularly cases of elective

large number of

asymptomatic carriers and the patient can be highly infective in the pre symptomatic stage. Surgery should be posted as early as possible after obtaining the report of RT PCR.

- 4. The number of team members entering the Operating Room (OR) should be minimum
- 5. Adequate Personal Protection Equipments (PPE) should be used while operating on COVID positive or COVID suspected patients 1. In view of the false negative tests ideally during the tenure of the pandemic it is advisable to use PPE even while operating on negative patients
- Donning and doffing of PPE should be done properly 6. and in designated areas
- 7. General anaesthesia (GA) should be avoided as far as practicable as it is an Aerosol Generating Procedure (AGP). The risk of transmission to healthcare workers are highest during AGP and GA escalates it significantly as it includes intubation of the airway, positive pressure ventilation and aerosol particle generation.
- The use of electrocautery should be minimized (although it is still a matter of controversy whether electrocautery in open procedures is an AGP, it is always better to tilt on the safer side unless electrosurgery pencils (smoke pencils) with attached suctions are used.

The laparoscopic surgeries are obviously advantageous in the form of shorter hospital stay, lesser pain and early return to duties. However, in the context of the pandemic the risks are considerably higher as they include the risks of GA supplemented by a head low position and increased intra-abdominal pressure. Added to these is the difficulty of sterilization of instruments with a narrow lumen as well as the safe evacuation of smoke generated due to energy devices and CO2. Moreover, a laparoscopic procedure calls in for a greater number of personnel in the OR.

### Precautions during Laparoscopic surgeries:

- Frequent air changes, AC with ventilation of fresh air is a prerequisite
- Minimal number of personnel per case, PPE to be used by everyone entering the OT



- Only anaesthetist & required personnel to be present during induction of anaesthesia. Surgeon should enter only after induction is completed (preferably 20 min)
- GA should be avoided and when GA is indispensable, a specialised box should be used over the head of the patient to minimise the spread of aerosol.
- The use of a sterile camera cover is mandatory
- Minimal head low as possible with the lowest intraabdominal pressure which is just adequate for a safe laparoscopy procedure is advocated
- Surgeon should make smaller incisions, avoid open trocar entry and ensure that there is no leakage from washers.
- Energy devices are to be used minimally for the smallest duration and with low electrosurgery settings to avoid generation of fume. Endo-loops and sutures are preferred alternatives to energy sources
- Smoke evacuation techniques demand a special space in laparoscopy. Sudden deflation of the abdomen is to be avoided

A closed release of pneumoperitoneum preferably through a central suction is recommended. If this is not feasible, a bottle suction with intervening fluid trap to filter gas/fumes should be used. Fluid in the suction should be disposed as positive/ contaminated fluid in the bottle. Use of filters (active or passive) to the gas outflow and automated smoke evacuation devices are recommended.

However a critical appraisal of 50 articles in Lancet concludes that if laparoscopy is performed in a closed cavity enabling containment of surgical smoke/aerosol, and proper evacuation of smoke with simple measures is respected, and as long as laparoscopy is not contraindicated, we believe that this surgical approach may be safer for the operating team while the patient has the benefits of minimally invasive surgery. Evidence-based research in this field is needed for definitive determination of safety. • Specimen should be retrieved in a controlled manner after lowering the intra-abdominal pressure.

### Post-operative protocols

- OT should be fumigated between each case
- Instruments should be soaked in 1% Hypochlorite solution for 30 minutes / Ethylene oxide
- Patient & her relative should continue to wear mask and a single relative per patient is to be allowed in the wards
- PPE should be disposed along with other wastes according to the norms of waste disposal

### **Conclusion:**

To mount an effective response to the COVID-19 pandemic, hospitals should prepare detailed context-specific pandemic preparedness plans for surgical services. Specific guidance should be updated continuously to reflect emerging evidence as the COVID-19 pandemic progresses.

### References:

- 1. Good Clinical Practice Recommendations for Gynaecological Endoscopy during the COVID-19 Pandemic. IAGE; Version 1: 16th April 2020
- Global guidance for surgical care during the COVID-19 pandemic. © 2020 BJS Society Ltd; John Wiley & Sons Ltd
- 3. www.bjs.co.uk
- 4. https://www.aagl.org/category/covid-19
- 5. Yoav Mintz et al. The risk of COVID-19 transmission by laparoscopic smoke may be lower than for laparotomy: a narrative review. https://www.springermedizin. de/covid-19/the-risk-of-covid-19-transmission-bylaparoscopic-smoke-may-be-l/18015378 ;26.05.2020





# **Infection Prevention in Ward**

### Alpana Chhetri

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## Standard precautions to be followed before attending patients.

1. Hand Hygiene preferably with alcohol based hand rub (ABHR) if hands are not visibly soiled, or with soap and water if visibly soiled.

### Follow WHO 5 Moments of Hand hygiene

- o Before touching a patient
- o Before clean/aseptic procedures
- o After body fluid exposure/risk
- o After touching a patient
- o After touching patients surroundings
- 2. Respiratory Hygiene and cough etiquette.
  - All people should be encouraged to use disposable tissue to cover their nose and mouth while coughing and sneezing.
  - o All used tissue to be discarded immediately into proper biomedical bag.
- 3. Full Personal Protective Equipment (PPE) kit with goggles, face shield, head cover, gloves and shoe cover and N-95 respirator.
- 4. Donning and doffing of PPE to be done in separate area with separate entry and exit and the area should have hand washing facilities. Proper disposal of PPE, disposable respirators and face mask.

### A. Specific measures for care of COVID-19 suspected or confirmed cases

### 1. Patient placement/Isolation.

- o Preferably patients should be placed in AIIR (Airborne infection isolation room), formerly known as negative pressure isolation room. A single airy room with attached bathroom and toilet should be used if AIIR not available.
- o If a single room is not available, keep the patients in well ventilated wards, with distance between two beds more than one metre, with doors closed, entry and exit should be minimised.
- o Cohort patient with the same diagnosis in one area/ ward.
- Do not place suspect/ confirmed COVID-19 in the same area or ward as those who are confirmed. (COVID care centre/ COVID health centre)
- o Where practicable, managing patients with mild illness in their own home, is the preferred approach rather than cohorting patients in the hospital.



- 2. All patients must always wear a **3 layer surgical mask**.
- 3. **No family members** allowed meeting the patients.
- 4. Patients are **not allowed to carry mobile phones** in the wards.
- 5. **Free movement** of the patients within the ward should not be allowed, and **unnecessary transport** of patients from wards to be avoided unless medically indicated.
- 6. All the **paper works** like writing notes in BHT and treatment card to be done in a separate area.
- 7. **The floor and all surfaces** should be regularly cleaned with 1% sodium hypochlorite solution.
- 8. The patients should use **separate lift**.
- 9. **Patient care equipment** should be either single use/ disposable or dedicated equipment like stethoscope, blood pressure cuffs and thermometer.
- 10. **Aerosol generating procedures** should be avoided in COVID suspect or confirmed cases. If it cannot be avoided o Perform only if medically necessary
  - o Conduct Procedures in negative pressure rooms
  - o Nebulisers should be discouraged and alternative devices like spacers should be used.
  - o Limit the number of health care workers present during the procedure
  - o PPE kit, N95, Goggles and face shield to be worn. (Collection of OP and NP swabs are not considered as Aerosol Generating Procedures)
- 11. Clinical waste must be discarded in leak proof bio-medical waste bin and disposed properly.

### B. Staff Consideration

- o All health care workers (HCWs) should be asked regularly to monitor themselves for fever and symptoms of COVID19 and should be reminded to stay at home if ill.
- All health care workers (HCWs) should be aware of emergency contact details involved in patient care so that if they get symptoms of COVID-19, they can contact to health care facility immediately.
- o It is strongly advised to all HCWs that they must not wear rings, wrist watches and jewellery.

## Management of Asymptomatic pregnant women attending Emergency

Since the number of asymptomatic pregnant patients is on the rise, every facility should create a set –up with three demarcated zone- clean, potentially contaminated and contaminated with separate passage ways to prevent exposure of individuals with each other.

Every pregnant woman should be triaged at entry and allotted into one of the zones depending on the presentation.

Infected	Potentially Infected	Clean
Tested	<ul> <li>Patients from containment</li></ul>	<ul> <li>Patients from</li></ul>
and shown	area <li>Symptoms of SARI</li> <li>Travel history in last 15</li>	non-containment
positive	days <li>Health care worker caring</li>	area. <li>No symptoms of</li>
for COVID	for COVID-19 infected	SARI <li>No contact with</li>
19	individuals <li>Test results awaited</li>	infected individual <li>No travel history.</li>

- The infected and potentially infected pregnant women should be kept in separate isolation areas.
- Each isolation area should include isolation ward, isolation labour observation and delivery room, isolation OT and isolation PACU,HDU,ICU areas.
- Access to isolation areas should be strictly limited and family visits are declined.
- All heath care providers should take necessary precautions like that of COVID wards while attending these patients.

## Recommended PPE for the Care of suspect, probable and confirmed COVID-19 cases

	No direct pa- tient physical contact and >1.5 metres	Physical Contact < 1.5 metres	Pa- tients in ICU	Aerosol Generat- ing proce- dures
Disposable Gloves	No	Yes	Yes	Yes
Disposable Plastic Apron	No	No	No	No
Long-sleeved fluid-resis- tant gown (Level1,20r3)	No	Yes	Yes	Yes
Surgical Mask	No	Yes	No	No
N95 respirator	No	No	Yes	Yes
Eye protection	No	Yes	Yes	Yes

References

- Government of India, Ministry of Health & Family Welfare, Directorate General of Health Service (EMR Division).
   Revised guidelines on Clinical Management of COVID-19(Online) March 2020.
- Centres for Disease Control and Prevention, Interim Consideration for Infection Prevention and Control of Coronavirus Disease 2019 (COVID 19)in Inpatient Obstetric Healthcare Settings. (Online) April 4,2020.
- The Federation of Gynaecological Societies of India. Good Clinical Practice recommendation on Pregnancy with COVID-19 Infection; Version1; (Online) March 28, 2020.
- Interim infection prevention and control guidelines for the management of COVID-19 in Healthcare settings. Version1. 12 May 2020



## **Prevention of Corona Infection in the Labour Room and During Vaginal Delivery**

### Tulika Jha

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The Corona virus pandemic is upon us. The novel SARS-Corona virus was an unknown pathogen, Covid 19 a new clinical entity and even after almost three months of WHO declaring it a pandemic, knowledge about the virus and the disease is still evolving. The advisories and guidelines related to Covid 19 are also undergoing changes every few weeks.

As obstetricians we have a dual responsibility: 1) Prevention of infection from one pregnant woman to the other and to the neonate and 2) Prevention of infection to and from the pregnant woman and health care workers (HCWs).

### **GENERAL CONSIDERATIONS**

To prevent such infection, the following conditions have to be fulfilled in the labour or delivery rooms.

Pregnant women with suspected or confirmed COVID-19 disease should have their childbirth only at secondary & tertiary level delivery points where there should be a separate isolation room and delivery rooms for providing perinatal care.

An advance communication should be sent to the designated secondary / tertiary level delivery point in the event of a pregnant woman with suspect or confirmed COVID-19 being referred. The Superintendents of all secondary and tertiary level delivery points should notify a Nodal person with his / her mobile number who may be contacted when a pregnant woman with suspect or confirmed COVID-19 disease is referred from other health facilities.

Health Staff providing obstetric care must wear Personal Protective Equipment (PPE) and take all precautions as per Government guidelines.

### **TRIAGE & ADMISSION**

Pregnant Women should be attended at Triage / ER by the Obstetrician or Medical Officer (on duty) wearing appropriate PPE including face mask.

As per GOWB & GOI advisories, all women who have tested positive for novel Corona virus(nCoV) should be transferred to a Covid designated hospital. Depending upon the severity of Covid symptoms and stage of labour, the patient may be admitted or sent home for isolation with medical advice.

Symptomatic suspects, who warrant admission, should

be admitted in the isolation ward and tested. They should be managed as per government protocol for the management of labour and Covid.

### **TESTING STRATEGIES**

In April this year, the Indian Council of Medical Research (ICMR) announced a strategy for testing of pregnant women in India. It stated: 1) Testing for pregnant women should be done as per ICMR strategy. The latest testing strategy as stated by the ICMR is as follows:

### Strategy for COVID19 testing in India (Version 5, dated 18/05/2020)

- All symptomatic (ILI symptoms) individuals with history of international travel in the last 14 days.
- All symptomatic (ILI symptoms) contacts of laboratory confirmed cases.
- All symptomatic (ILI symptoms) health care workers / frontline workers involved in containment and mitigation of COVID19.
- All patients of Severe Acute Respiratory Infection (SARI).
- Asymptomatic direct and high-risk contacts of a confirmed case to be tested once between day 5 and day 10 of coming into contact.
- All symptomatic ILI within hotspots/containment zones.
- All hospitalised patients who develop ILI symptoms.
- All symptomatic ILI among returnees and migrants within 7 days of illness.
- No emergency procedure (including deliveries) should be delayed for lack of test. However, sample can be sent for testing if indicated as above (1-8), simultaneously.

### NB:

- ILI case is defined as one with acute respiratory infection with fever ≥ 38°C AND cough.
- SARI case is defined as one with acute respiratory infection with fever ≥ 38°C AND cough AND requiring hospitalization.
- All testing in the above categories is recommended by real time RT-PCR test only.
- All changes incorporated in these guidelines as compared to the previous version have been indicated in bold.



2) Pregnant women residing in clusters/containment area or in large migration gatherings/evacuee centres from hotspot districts presenting in labour or likely to deliver in the next five days should be tested even if they are asymptomatic.

Testing can also be done for other pregnant women if the clinical situation so demands. Women who are awaiting results should be kept in the isolation ward, ideally in separate rooms or cabins if available.

#### **ISOLATION/SEGREGATION WARDS**

Pregnant women, following admission, should immediately be escorted to an isolation room, suitable for the majority of care during their hospital visit or stay.

A minimum of one metre distance must be maintained between beds in the isolation wards. All patients must wear a triple layered mask and must move about as less as possible. They should also maintain proper respiratory, hand and general hygiene.

Isolation wards should ideally have an ante-chamber for health care providers for donning and doffing PPE and masks. There should also be washroom facilities.

Minimum number of essential health staff (doctors, nurses, cleaning staff), wearing full set of PPE and N95 mask, should attend to provide intra-partum care and neonatal resuscitation.

The RCOG guidelines on "Covid-19 and Pregnancy" published in June, 2020 encourages the presence of a trusted birth companion to accompany the woman provided the person has not had any Covid related symptoms in the past seven days, has tested negative for Covid in the past 72 hours and was self isolating at home.

The person should follow the infection prevention protocol of the hospital and maintain proper respiratory, hand and other hygiene. The person will later follow the testing and isolation protocol for primary contacts as advised by the government guidelines. Other visitors should not be allowed. Infection prevention norms are to be strictly followed.

#### **MANAGEMENT OF LABOUR**

Once settled in the isolation room, assessment of maternal and foetal conditions, symptoms of difficulty or shortness of breath, temperature, pulse and respiratory rates, oxygen saturation by pulse oximetry (>94%), progress of labour and other vital parameters should be done as per protocol

Assessment of the severity of Covid -19 symptoms should be done as per Government of West Bengal or GOI guidelines. Depending upon the severity of the illness, a multispeciality team including an anaesthesiologist and neonatologist may be involved. If labour is confirmed, the care in labour should ideally continue in the same isolation room. Labour table is to be kept in the isolation room as per need.

If a woman presents in preterm labour, tocolysis is contraindicated in following the general principles of avoiding such an intervention with systemic disease. Antenatal corticosteroids should be administered as per usual dosage schedule as there is no robust evidence showing worsening of disease following its administration.

Close monitoring should continue through out the duration of labour. If there is a deterioration of clinical features, intensive care measures may be required including ventilation.

Mode and timing of birth should not be influenced by the presence of Covid-19, unless the woman's clinical condition demands urgent delivery. It should be guided by her obstetric and Covid-19 infection itself is not an indication for induction of labour or operative delivery.

All hospitals should have a separate Operation Theatre for management of suspected or confirmed Covid-19 pregnant mothers. Neonatal resuscitation corners should be located at least two metres away from the delivery table or operation table.

Avoid prolonged oxytocin infusion and volume overload in these women. Avoid Carboprost injection post delivery in these women especially if there are respiratory symptoms but oxytocin, misoprostol, tranexamic acid can be used. Methyl ergometrine should be used with caution.

In the isolation OT and LR, all procedures and deliveries should be conducted wearing level III protective gear. If a sterile PPE set is not available, a sterile fluid resistant long sleeved gown should be worn over the PPE set. Donning and doffing steps should be followed meticulously.

Level III protection:

- Disposable surgical cap
- N95, FFP2 or equivalent mask
- Work uniform (surgical scrub suit)
- Disposable medical protective uniform
- Disposable sterile latex gloves
- Full face respiratory protection namely face shield, visor, air purifying respirator

The standards and facilities required for infection control in these areas should be same as that for other adults with suspected or confirmed Covid-19 infection.

In peripheral hospitals, either a separate OT can be arranged (if possible) or the same OT can be used following the prescribed infection control measures and using PPE.

#### **PRINCIPLES OF ANAESTHESIA**

There is no evidence that epidural or spinal analgesia or anaesthesia is contraindicated in the presence of coronaviruses.



Therefore, a COVID-19 infected woman who is fit enough to labour can be offered epidural analgesia. If she requires a cesarean delivery, the same epidural can be continued and a general anesthesia can be avoided.

If a woman who has not had an epidural anesthesia requires a caesarean birth, the choice of anesthesia is governed by the general health status of the woman. For most women, spinal anesthesia by standard techniques is suitable. However, in the situation where there is respiratory compromise, general anesthesia and subsequent ventilation will be needed.

### **POST PARTUM CARE**

### **Breast-feeding for newborns:**

In the light of current knowledge, there is no evidence that COVID-19 is secreted in breast milk and the benefits of breastfeeding outweigh any potential risks of transmission of the virus through breast milk. The risk of holding the baby in close proximity should be discussed with the mother.

Infants born to mothers with suspected, probable, or confirmed COVID-19 should be fed according to standard infant feeding guidelines, while applying necessary precautions for infection prevention.

In absence of mask, breast pump can be used after proper sterilization to express breast milk to feed the neonate.

Post Partum Care will be provided in the same isolation ward and state protocol for discharge of Covid-19 patients should be followed.

As with all confirmed or suspected COVID-19 cases, symptomatic mothers who are breastfeeding or practising skin-to-skin contact or kangaroo mother care should practice respiratory hygiene, use of a triple layer mask, perform hand hygiene before and after contact with the child, and routinely clean and disinfect surfaces with which the symptomatic mother has been in contact.

### Testing guidelines for newborns:

Which neonates to be tested:

- Those born to mothers with COVID-19 infection within 14 days of delivery up to 28 days of birth
- Symptomatic neonates exposed to close contacts with COVID-19

When to test:

- If symptomatic, as soon as possible
- If asymptomatic and roomed in, test only if mother's report comes positive
- If mother's report is positive and baby's initial sample is negative, test should be repeated after 48 hours *What sample should be tested:*
- Nasopharyngeal swabs (upper respiratory), oropharyngeal swabs is a lower priority
- Tracheal aspirate (lower respiratory), if the neonate is being mechanically ventilated

### **FAMILY PLANNING & CAC SERVICES**

Comprehensive Abortion Care (CAC) services should be provided to the beneficiaries in need in the same separate OT. PPIUCD can be provided to the mothers after delivery. Tubectomy can be done along with caesarean section.

### **INFECTION PREVENTION PRACTICES**

Disinfection of surfaces in the childbirth or neonatal care areas for patients with suspected or confirmed Corona virus infection is the same as those for usual labour room and operation theatre areas.

For surface cleaning and disinfection, agents that are useful are alcohol or chlorine based. Alcohol based agents should contain 70% isopropyl alcohol. Chlorine based solutions are prepared by diluting liquid chlorine (1000 mg/L strength) or freshly prepared 1% sodium hypochlorite solution. The contact time of these solutions should be at least 30 minutes.

The appropriate concentration of sodium hypochlorite for disinfecting general liquid biological waste is approximately 1%. Household bleach is 5 - 6 % sodium hypochlorite; therefore a 1:5 (v/v) dilution of bleach to liquid biological waste is appropriate.

### References:

- 1. MOHFW, GOI guidelines for containment of Covid-19
- 2. GOWB guidelines for "Providing Care to Pregnant Women In View of Covid 19 Pandemic"
- 3. FOGSI GCPR, Version 2, April 2020
- 4. Corona Virus (Covid 19) Infection in Pregnancy: RCOG Guidelines, June 2020
- 5. ICMR Guidelines for management of Covid-19 in pregnancy, April 2020



# Doctors/ HCWs Exposure or Contact with COVID 19 — What to Do Next

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"Protect the Protectors"- is the slogan for health care workers (HCWs) attending COVID-19 cases. Unfortunately, it is not always possible to protect HCWs from contracting this disease, as they are at increased risk of acquiring COVID-19 if there is a breach in personal protection while managing patients. The health-work force is a valuable and scarce resource and if a large number of COVID-19 affected health personnel gets isolated for treatment, and their close contacts undergo quarantine, this affects the entire health/ hospital service delivery.

From the beginning of the epidemic it has been recognised that HCWs managing this potentially airborne disease are a uniquely high-risk group. The primary route for the spread of COVID-19 is thought to be through aerosolized droplets that are expelled during coughing, sneezing or breathing, but there are also concerns about possible airborne transmission and other routes of transmission.

Asymptomatic patients spreading infection add a new and worrying dimension to the spread of disease among HCWs.

**Definition of contact:** A contact is defined as a healthy person who has been in such association with an infected person or contaminated environment, as to have been exposed, and is therefore at a higher risk of developing the disease.

A contact in the context of COVID-19 is:

- A person living in the same household as a COVID-19 case.
- A person having had direct physical contact with a COVID-19 case or his/her infectious secretions, without recommended personal protective equipment (PPE) or with a possible breach of PPE.
- A person who was in a closed environment or had face to face contact with a COVID-19 case at a distance of within 1 metre, including air travel.



### Institutional Mechanism for preventing and responding to Healthcare Associated Infections (HAIs) among HCWs:

The Hospital shall activate its Hospital Infection Control Committee (HICC), which is responsible for implementing Infection Prevention and Control (IPC) activities and organizing regular trainings on IPC for HCWs. A Nodal Officer (Infection Control Officer) shall be identified by each hospital to address all matters related to Healthcare Associated Infections (HAIs), who will ensure that:

- i. Healthcare workers in different settings of hospitals shall use PPEs appropriate to their risk profile (as detailed in the guidelines issued by Ministry of Health, Govt of India).
- ii. All healthcare workers undergo training on Infection Prevention and Control and are aware of common signs and symptoms, need for self-health monitoring and need for prompt reporting of such symptoms.
- iii. Provisions are made for regular (thermal) screening of all hospital staff.
- iv. All healthcare workers managing COVID-19 cases are provided with chemo-prophylaxis under medical supervision.
- v. Provisions are made for prompt reporting of breach of PPE by the hospital staff and follow up action

## SOP for health work force deployment during COVID-19:

## A. SOP to be followed in case HCW reports exposure/breach of PPE

Healthcare workers must report every exposure to COVID-19, to the concerned nodal officer and HOD of the concerned department immediately.

The Nodal officer will get the exact details of exposure to ascertain whether the exposure constitutes a high risk or low risk exposure as described below:

### High risk exposure:

- HCW or other person providing care to a COVID-19 case or lab worker handling respiratory specimens from COVID-19 cases, without recommended PPE or with possible breach of PPE.
- Performed aerosol generating procedures without appropriate PPE.
- HCWs without mask/face-shield/goggles: having face to face contact with COVID-19 case within 1 metre for more than 15 minutes, having accidental exposure to body fluids.

**Low risk exposure:** Contacts who do not meet criteria of high risk exposure.

The Nodal Officer/HOD will form a sub-committee to assess the level of exposure and the risk. As per their assessment:

- High risk contacts will be quarantined for 14 days, tested as per ICMR testing protocol, actively monitored for development of symptoms and managed as per following protocol:
  - o If they test positive but remain asymptomatic they will follow protocol for very mild/mild/ presymptomatic cases as described below in section B.
  - o If they test negative and remain asymptomatic, complete 14 day quarantine and return to work.
  - o Should symptoms develop, follow the guidance in B.
- Low risk contacts shall continue to work. They will selfmonitor their health for development of symptoms. In case symptoms develop guidance in section B to be followed.

### B. SOP to be followed in case HCW reports symptoms suggestive of COVID-19

If any healthcare worker manifests signs and symptoms suggestive of COVID-19, he/she will be isolated immediately and the following procedure will follow:

• In case of mild/very mild/pre-symptomatic case, he/ she will have an option of home isolation, subject to the conditions stipulated in the revised guidelines for home isolation of very mild/ pre-symptomatic COVID-19 cases (available at: https://www.mohfw. gov.in/pdf/Revised guidelines for Home Isolation of very mild presymptomatic COVID19 cases 10 May 2020.pdf). Such cases would end their home isolation as per timeline provided in the said guidelines.

- In cases where home isolation is not feasible, such mild/very mild/pre-symptomatic cases will be admitted to a COVID Care Centre.
- Moderate cases that require oxygen therapy shall be managed at a Dedicated COVID Health Centre.
- Severe cases will be managed in a Dedicated COVID Hospital.

Subsequently, those who test negative, will be managed as in non-COVID area as per their clinical diagnosis. Their resuming work will be based on the clinical diagnosis and the medical certification by the treating doctor.

As an editorial in the Lancet stresses: "Health-care workers, unlike ventilators or wards, cannot be urgently manufactured or run at 100% occupancy for long periods. It is vital that governments see workers not simply as pawns to be deployed, but as human individuals"

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- 1. Li, X. Guan, P. Wu, X. Wang, L. Zhou, Y. Tong, et al. Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus–Infected Pneumonia. N Engl J Med (2020 Jan 29).
- COVID-19: protecting health-care workers. The Lancet, 395 (10228) (2020 Mar), p. 922
- 3. 3. Advisory for managing Health care workers working in COVID and Non-COVID areas of the hospital. Ministry of Health & Family Welfare Directorate General of Health Services (EMR Division). Dated 15th May, 2020.
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