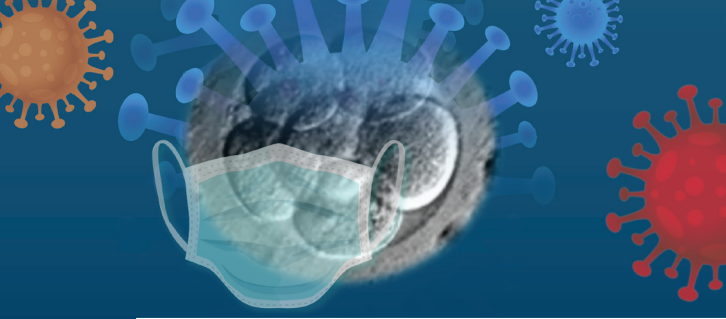


**JOINT IFS-ISAR-ACE
RECOMMENDATIONS ON RESUMING/
OPENING UP ART SERVICES**



JOINT IFS-ISAR-ACE RECOMMENDATIONS ON RESUMING/OPENING UP ART SERVICES

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INTRODUCTION

The novel Corona virus pandemic across the globe has created an unprecedented situation with major challenges that will continue as we understand the pattern of this disease. Besides effects on the health systems, the illness has made a major impact on the economic and social framework of our societies. In keeping with the lockdown since 23rd March, 2020, imposed by the Government of India, wherein only emergency services were permitted, all assisted conception units across the country stopped work. However, as the situation unfolds, the government at the centre relaxes the lockdown permitting non-essential services in a gradual manner, it is time to consider resuming infertility services in keeping with the guidelines set by ministry of health and family welfare. This document is drafted to provide centers across the country a guidance as to how should they restart the services. The recommendations, however, are to be practiced in keeping with the prevailing regulations set up by the health services of their state and local administrations. These are based on the understanding of the COVID-19 disease as of today and shall change with evolving scientific, political and economic situations.

FUNDAMENTAL PRINCIPLE

The fundamental principle guiding all units is to prioritize and implement all measures to protect their patients and staff on priority and minimize the chance of spread of COVID-19. Units providing infertility services should be willing and prepared to modify their services in terms of available framework and human resource to meet the demanding situation. This shall involve triage of patients while commencing and continuing the treatment cycle, besides regular triage of the staff. Further all units should have their SOP in place and a code of conduct, for both the patients and staff. The key areas that need guidance include:

1. UNITS TO RESUME

All units can restart (stand-alone unit, chain of fertility units, corporate set up units or ones in institutions) their services provided they take into consideration:

- a. Willing to start services in a phased manner beginning with diagnostic services, COH and TI/ IUI, and subsequently with IVF over 2-3 weeks.

- b. Sufficient clinical staff, in-house embryologists and nurses that can work in shifts and a back-up team in case any staff member is suspected or tested COVID-19 positive and need quarantining.
- c. Sufficient facilities for separate cryo-storage of gametes and embryos from cycles undertaken during this period.
- d. Have clear policy on number of cycles/ patients the clinic can handle, and not violate the government's policy that demand adequate interval between attending patients and have means to implement the same.
- e. Unit that has adequate supply of PPE for staff and media and consumables for committed patients.
- f. Fair and scientific approach on making their policies on education and training of staff.
- g. Willing to triage patients and undertake only patients tested or screened negative for COVID-19 as per the existing regional policy.
- h. Have a close liaison with another clinic so that they can transfer patients in times of unintended critical situation so that the clinic can undertake trouble shooting to reopen at the earliest.
- i. Have a written code of conduct for patients and staff that explains need of physical distancing and maintaining etiquettes that mitigate the disease in the clinic.
- j. All patients to have the Arogya Setu app downloaded on their mobile phones before start of the treatment.

2. DIAGNOSTIC SERVICES

These can be reassumed as part of the initial phase of re-opening. Only start with couples that are triage negative.

- a. Semen analysis:
 - i. Ensure husband is negative for COVID-19 with RT-PCR (preferable)
 - ii. This may be done taking precautions with adequate PPE, as preliminary data suggests presence of virus in semen, with 15.8% men confirming positive for SARS-COV-2 in semen collected from men with positive RT-PCR on nasopharyngeal swabs (1).
- b. Hormone assays
- c. Saline sonography
- d. HSG – Mostly done at radiology suites. But in institutions to be done with all standard infection control precautions and adequate PPE.
- e. Office hysteroscopy (OH):
 - i. Office diagnostic hysteroscopy may be done with local para or intracervical block (2). Total Intravenous anesthesia may be another choice.
 - ii. For hysteroscopic resection of intra-cavitary lesion regional anesthesia to be preferred, safeguarding the risks to anesthetist from GA.
- f. Laparoscopy (operative):
 - i. Elective laparoscopic procedure should be based on the principle of prioritization based on the urgency of fertility treatment. However, emergency laparoscopies for ectopic pregnancy and adnexal torsion should be performed in view of the underlying urgency. During laparoscopy aerosolization can take place during anesthesia and release pneumoperitoneum. The anesthetist should use a box, video-laryngoscope and a triple filter for safety purposes (if available). Regional anesthesia may be preferred for safety of anesthetist if unsure of COVID-19 status in emergency situation (3). The

pneumoperitoneum and the smoke generated during laparoscopic surgery should be evacuated using filter at suction and outflow trocars going through specially designed smoke evacuators ultra-low-pressure apparatus (ULPA) (4). Bipolar energy sources are to be preferred to ultrasonic devices (5).

3. CONSENT INCLUDING INFORMATION AND DISCUSSION ON DIAGNOSTIC AND TREATMENT SERVICES

A thorough counselling should be done about all issues related to treatment including:

- a. The potential risks involved in proceeding with fertility testing and treatment during the COVID-19 pandemic.
- b. That the decision of couple to proceed or postpone the treatment cycle is entirely theirs and they are in agreement of the same.
- c. The clinic shall have a policy on selecting and prioritizing patients which they shall agree to.
- d. The clinic shall follow all measures as per Government's guidance on COVID-19 (ICMR guidelines, 18.05.20; https://main.icmr.nic.in/sites/default/files/upload_documents/Testing_Strategy_v5_18052020.pdf).
- e. The couple should be informed on the need of triage and screening for COVID-19 infection, through the approved testing method (as per the local health policy of that area/region) at the commencement and during the treatment cycle. The clinic shall have a policy in place to cancel cycle in case the patient or her husband/partner turns positive, on testing at any point during the treatment cycle.
- f. Inform patients that available tests have limited sensitivity and specificity and in eventuality of false negative or positive, cancellation will be done in keeping with safety of patient and staff, at any time during cycle. The clinic shall provide all possible medical guidance in such situation.
- g. The additional costs involved in testing shall be borne by the patient.
- h. That information on effects of COVID-19 infection on fertility treatment and early pregnancy are limited. However, there is no evidence that infection increases risk of fetal malformations or miscarriage at present (5).
- i. In case the staff at the hospital tests positive for COVID-19, during treatment cycle, patient will be shifted to another unit for completing the cycle.

(See appendix for Consent forms)

4. PATIENT SELECTION AND PRIORITIZATION FOR FERTILITY SERVICES

- a. High risk patients (those with hypertension, diabetes, on immunosuppressants or transplant patients, with renal, liver, lung disease or medical conditions) should be deferred for treatment during this period.
- b. Third party reproduction, including donor with fresh oocytes and surrogate cycles may be avoided now.
- c. ART cycles for fertility preservation in cancer survivors to be started at the earliest.
- d. Low risk cases that would require minimum visits to the clinic to be taken.
- e. Patient prioritization to be based on:
 - i. The impact of delay on patient prognosis due to medical factors, such as age, ovarian reserve or endometriosis.
 - ii. The impact of treatment delay on the mental and emotional well-being of patients.

5. TRIAGING SCREENING AND TESTING OF PATIENTS

Triaging and screening should be done for all patients with a questionnaire and followed by testing as suggested (attached in appendix). The patient and husband, both have to agree to the following strategies which includes:

- a. Detailed history of travel, symptoms and contact history.
- b. Temperature recording and SpO2 (preferable) for screening.
- c. Testing
 - i. Diagnostic evaluation will be done using RT-PCR, or depending on the regional/local protocol as well as availability of the test.
 - ii. Use of ELISA antibody testing for triage may not be reliable at this time.
- d. Testing shall be done at the commencement of treatment that is day 2 of IVF/ICSI cycle. Those with a positive test will not be allowed to initiate cycle.
- e. Repeat test to be done at-least 48 hours before hCG trigger (some labs may take 24-48 hrs to report RT-PCR). Cycle will be cancelled in case the test returns positive.
- f. The husband also needs testing, at least once during the cycle, preferable at the start of cycle.
- g. In case either partner turns positive on tests, they should help contact tracing in keeping with the national policy. In case any member found positive for COVID-19, only those in direct contact (face to face with less than a meter /having unprotected direct contact with infectious secretions or excretions of the person with confirmed COVID-19) shall be quarantined.

6. TRIAGING SCREENING AND TESTING OF STAFF

- a. All staff at the clinic will undergo triaging and screening as for patients (questionnaire and daily temperature/pulse oximetry checks). Those suspected to have symptoms will be subjected to RT-PCR test (as per ICMR guidelines of 18.05.2020) and should be asked to quarantine.
- b. In case any staff turns positive on tests, he/she will cooperate for contact tracing.
- c. In case any staff member found positive for COVID-19, only those in direct contact (face to face with less than a meter /having unprotected direct contact with infectious secretions or excretions of the person with confirmed COVID-19) shall be quarantined.

7. REARRANGEMENTS/MODIFICATIONS OF THE ART SERVICES

7 a. Infrastructure

- i. Triaging of patients and staff should be outside the reception area.
- ii. Reception, patient waiting area, scan rooms should be rearranged, so as to maintain physical distancing. May need to do away with extra furniture to provide adequate space for physical distancing.
- iii. Physical distancing (at least 2 mtrs/ 6 ft) to be maintained between individuals including staff and patients.
- iv. Sanitization should be performed routinely as per the local protocols.
- v. Sanitization of the ultrasound probe, ultrasound couch, blood collection and semen collection area should be done after each patient. Likewise, outpatient's area should be sanitized on frequent basis.

- vi. In case there is a COVID-19 positive individual (staff/patient/husband) at the clinic, then complete sanitization to be done after informing the local authority. Closure of the facility will be required as per the regional guidelines for 24-48 hours. In such an eventuality the clinic will have to shift patients with ongoing cycles to a back-up facility with a close liaison as informed to patients before the start. This has to be consented from every patient before start of the cycle.

7 b. Patient management

- i. Limit the number of individuals present at the facility at a given time.
- ii. Patient have to be scheduled for visits (consultations, consenting, scans, blood tests, procedures, semen collection) keeping in mind sufficient interval in-between two patients.
- iii. To restrict the appointments on individual basis. Husbands to come on the day a of consenting and IUI/OPU/semen analysis/freezing and when required. This is to ensure safety of staff and patients.
- iv. All patients including husbands to wear masks at all times. Follow hand hygiene and follow all rules to prevent disease spread as per guidelines from Ministry of health and family welfare.

7 c. Staff management

- i. Staff roster to be planned in a manner with minimal working at a time. To work in shifts considering longer hours to maintain physical distancing. Concept of “Mini-teams” or “Back-up teams” to be kept in mind for doctors, embryologists, nursing staff to avoid unnecessary exposure and preparedness for trouble shooting respectively.
- ii. All individuals including staff to wear masks at all times. Follow hand hygiene and follow all rules to prevent disease spread as per guidelines from Ministry of health and family welfare.
- iii. Also maintain physical distancing for staff discussion. To keep discussion meetings over zoom or similar virtual platforms.
- iv. Staff to avoid meals/tea breaks together.

8. TREATMENT CYCLE (IUI AND IVF)

8 a. Pre-IVF/IUI, ovarian stimulation

- a. Only those with triage negative and confirmed negative tests for COVID-19 to commence IUI or IVF cycle. Ideal to have tests by day 2 of cycle.
- b. All discussions and planning to be completed 2 weeks in advance (ideally over teleconsultations) and consents and agreements to be done on the day of starting.
- c. Couples to be advised social isolation for 2 weeks prior to reduce risks of infections.
- d. Stimulation protocols planned in a manner that involves minimal visits for scans and blood samples:
 - i. Consider utilizing fixed antagonist protocol for IVF cycles, where antagonist is started on day 6/7 of cycle rather than follicle size criteria, to reduce visits for ultrasound monitoring.
 - ii. Stimulation for IUI cycles with lower doses of gonadotropins, monitoring as minimal as required based on follicular growth. Lower threshold to be kept for cycle cancellation if risk of OHSS.
- e. Dosages of gonadotropins to be decided judiciously. Whenever in doubt prefer agonist trigger or freeze all policy.

- f. Husband's to undergo COVID-19 testing (as per local/regional health policy) at least 48 hours prior to hCG trigger (ideal to have it on day 2, when cycle is to be started).
- g. Cancellation policy strictly defined: for COVID-19 positive (either partner) situation and also for OHSS.

8 b. Oocyte retrieval

- A. Ensure patient is COVID-19 negative (by prior testing), for safety of patient and staff. Cancel OPU if any patient tests positive for COVID-19.
- b. Anesthesia – to prefer IV sedation/propofol or regional, avoiding GA, for safety to anesthetist.
- c. PPE in OT-as per the hospital/prevailing protocol (ideal to have FFP2 masks) for surgeon and anesthesia team.
- d. Handling spillage of follicular fluid, blood, stools should be as per infection control guidelines.
- e. Avoid extra movement in and out of OT.
- f. Interval between two cases should be minimum of 30 minutes to allow disinfection of OT.
- g. Disinfection of operating theatre, transfer room and IVF laboratory including the equipment's like incubators, aspiration pumps used for the procedure, after the procedure, as per infection control guidelines.

8 c. Embryo transfer

- a. Limit the number of staff members in the transfer room.
- b. Restrict access for accompanying person(s).
- c. Perform transfer only in cases of low risk/asymptomatic patients and partners.
- d. Apply a freeze-all policy for all patients and/or partners who became symptomatic after the oocyte retrieval.

9. CANCELLATION/TROUBLE SHOOTING DURING ART SERVICES

- a. If any partner tests positive or develops symptoms for COVID-19 at initiation, then do not commence the cycle.
- b. If any partner tests positive or develops symptoms for COVID-19 at day of trigger or OPU, consider cancelling cycle.
- c. If husband test positive for COVID any time between start of cycle and day of OPU- go ahead with OPU as wife negative and freeze all eggs (prior consenting in place).
- d. If either patient or husband has a direct contact (face to face, within < 1 mt) with a COVID-19 positive case then both need to go for quarantine justifying cancellation of cycle.
- e. If any partner tests positive or develops symptoms for COVID-19 on the day of embryo transfer, cancel fresh embryo transfer, and freezing of embryos is advised.
- f. Keep low threshold for cancellation if risk of OHSS; earlier during the cycle if features of hyper-response/features on ultrasound or hormone assay.
- g. In case OHSS develops despite precautions (coasting/ GnRh agonist trigger) then involve chest physicians and intensivists earlier. Repeat COVID -19 testing in such cases as picture may be confusing with the disease.
- h. In patients who have recovered from symptomatic/ asymptomatic COVID-19 infection, commencing for an IVF cycle should be undertaken only after a thorough review.

10. POLICIES AND PROCEDURES FOR EMBRYOLOGY LAB

10 a. General

- a. Deep cleaning of the ART laboratories to be carried out if the facility is shut down for quite some time. Sanitize the environment, equipment and devices with appropriate non-embryotoxic disinfectants at the end of each procedure or after each access to the workplace.
- b. IVF lab is one of the safer locations in the health care with its clean room components. Exposure concerns exists: Staff to staff (infection), patient to staff (infection), staff to patient (infection), sample to staff (infection), staff to samples (contamination), between samples (contamination).
- c. Universal Good laboratory practices should be followed by each staff.
- d. Use proper Personal protective equipment (eye protectors, face masks, gloves, shoe covers and disposable laboratory coats).
- e. Based on staffing levels, whenever possible, facilities should arrange at least two teams that should alternate to limit the virus spread in the event of an operator being infected.
- f. Restricted social life and interactions for all lab staff.
- g. Train the internal personnel (clinicians, nurses, etc.) how to refill the cryo-tanks in order to safeguard the cryopreserved material in case of the lab staff being quarantined.
- h. In the absence of electronic witnessing systems, outline lean protocols to conduct the clinical procedures thereby minimizing the need for physical witnessing (external personnel properly equipped, telematic witnessing, etc.).
- i. Minimize or avoid the practice of counselling by laboratory staff to patients. If it is unavoidable use the tele communication devices.
- j. Extra care should be taken to reduce exposure to native follicular fluid and sperm by dilution and safe disposal of fluids in individual closed containers, as quickly as possible.
- k. Diligently disinfect the outside of the shipments received including all the disposables and culture media bottles with non-embryo-toxic disinfectants.
- l. UVC light has the most energy and destroys the genetic material inside viruses and other microbes. Therefore, UVC light is used for disinfection. Other visible lights should be switched off while UV light is on. This type of disinfection may be useful for any IVF laboratory spaces. Exposure to UVC light is dangerous for people. Precautions are necessary as UVC sanitizers can damage your eyes and skin. (UVC should only be used once the day's work is over and all gametes/embryos are in incubators. Sufficient air exchanges are needed to flush away the ozone generated by UV irradiation).

10 b. Semen Testing/Processing Laboratory

- a. Semen freezing to be advised only in indicated cases and not as a regular back up for all OPU.
- b. Use a tray to receive the semen container from the patient including any paper documents or use the gloves while receiving the containers.
- c. Wipe exterior of container with suitable disinfectant when the sample is received before it is brought to the andrology laboratory.
- d. Use the sterile type II hoods for semen testing and processing for IUI/IVF.
- e. All body fluids including follicular fluid and semen should be handled/processed as potential source of SARS CoV-2. Appropriate sperm processing techniques should be adapted to reduce viral load (if present in the semen) as much as possible.
- f. Diligently clean the laboratory surfaces and collection rooms (after each visits) with non-embryo-toxic disinfectants. Detergent and alcohol-based disinfectants may be used to disinfect semen collection room if it is away from the laboratory.

- g. Off-site sample collection may be considered to minimize the partner/staff and other patients' exposure to each other. Clinics should consider the possibility of sample deterioration during commuting/transporting such a specimen from patient's place to the laboratory. Clinics that can manage in-house semen collection without compromising the staff and other patient's safety, may continue with the existing policy.
- h. The sperm counting chambers must be properly cleaned and disinfected after every use. Usage of disposable counting slides could be an alternative.

10 c. Cryopreservation

- a. High security straws and/or vapor phase storage tanks should be used for cryopreservation of samples from COVID-19 positive patients.
- b. Gametes/embryos generated after the ART labs restart are desirable to store in Separate cryotanks. Appropriate precautions should be taken during freezing.

11. LEVELS OF PPE FOR STAFF

- a. For procedures (OPU)– to use FFP2 or N-95 mask. Protection of eyes using goggles or face shield, cap, impermeable gown, double gloves and shoe covers is recommended.
- b. In embryology lab- use of FFP2 masks.
- c. For OPD –to use FFP2 or N-95 mask and face shield for safety.

12. VISITS AFTER ET

- a. To check for pregnancy (beta hCG at home and to be intimated over telephone).
- b. To be called for viability scan 4-5 weeks after ET.

13. TRAINING OF STAFF

- a. All efforts to be made by the clinic staff (including clinicians, embryologists, nurses and nursing orderly, receptionist, clerical staff, counsellors and OT attendants, technicians) for training on PPE and are updated on regular basis.
- b. Have read the SOP which are in place.
- c. All consenting to be done in a manner that does not emotionally stress the couple yet sensitizes them of the to the demanding situation.

14. CODE OF CONDUCT FOR PATIENT AND STAFF

- a. That they shall share all information truthfully to the clinic when filling questionnaire for triage.
- b. Staff and patients to restrict social life and interactions beyond clinic in order to reduce risk of infection at work place.
- c. Staff to read and abide by SOPs.
- d. All patients/husbands/family to be patient and cooperate in maintaining the SOPs.

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Appendix

1. Questionnaire for triage
2. Screening form
3. Consent form for IUI
4. Consent form for IVF
5. Patient Information Sheet

Abbreviations

IVF	In-vitro-fertilization
ICSI	Intra-cytoplasmic sperm injection
IUI	Intra-uterine insemination
TI	Timed intercourse
COH	controlled ovarian hyperstimulation
OHSS	Ovarian hyperstimulation syndrome
OPU	Ovum pick-up



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