SOP’s to guide patient flow and management at the Neonatology Unit, Department of Pediatrics, to help in the containment of the SARS-CoV2 related COVID-19 infection

Versions with minor changes will be suffixed with a dot followed by number, eg 5.1. Versions with major changes in policy will have the next whole number.

Users may kindly note that knowledge about SARS-Cov-2 is constantly changing. While every effort has been made to keep the Standard Operating Procedure up to date, the user must keep himself/herself abreast of changes in protocols as the situation evolves.

Please also bring any errors/corrections to the notice of the Head of Neonatology Unit.
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<td>Bi level Positive Airway Pressure</td>
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<td>BMW</td>
<td>Bio Medical waste</td>
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<td>HFNO</td>
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<td>High Frequency Oscillatory Ventilation</td>
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<td>ICMR</td>
<td>Indian Council of Medical Research</td>
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<td>IMV</td>
<td>Invasive Mandatory Ventilation</td>
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<td>Junior Resident</td>
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<td>LSCS</td>
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<td>Medical Termination of Pregnancy- Operation Theatre</td>
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<td>N.O.</td>
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<td>Nehru Hospital Extension (Block)</td>
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<td>SARI</td>
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<tr>
<td>Dr Naveen Sankhyan</td>
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<tr>
<td>Dr Sanjay Verma</td>
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<tr>
<td>Dr Karthi</td>
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<tr>
<td>Dr Surjit Singh</td>
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<td>Dr Kapil Goyal</td>
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<td>Dr Ishani</td>
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<td>Dr Ratho (HOD)</td>
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<td>Dr Ashish Bhalla</td>
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<td>Dr Vikas Suri</td>
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<td>Dr Sanjay Jain</td>
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<td>Dr Manisha Biswal</td>
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<tr>
<td>Rupinder Maini</td>
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<td>Meena Dutta</td>
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<td>Dr Arunaloke Chakraborty</td>
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<td>Dr Pankaj Arora</td>
<td>7087002215/ 9914792233</td>
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<td>Dr Ritesh Agarwal</td>
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<td>Dr Navneet Dhaliwal</td>
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<td>Dr Usha Dutta</td>
<td>8198877022/ 7087009610</td>
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<tr>
<td>Dr Shweta Talati (in-charge Pvt 3A, 4A, 5A)</td>
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<tr>
<td>Dr Tulika Gupta (in-charge Park View)</td>
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<tr>
<td>Dr RS Bhogal (in-charge Infosys Sarai for HA, SA)</td>
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<td>Dr Kapil Goyal (Infosys Sarai)</td>
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<td>Dr Bhavneet Bharti (in-charge guest houses, NINE)</td>
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<td>Dr GD Puri</td>
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<td>Dr Arun K Aggarwal</td>
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<tr>
<td>Dr Ashok Kumar</td>
<td>7087009600</td>
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<tr>
<td>Dr Manish Modi</td>
<td>7087009694/ 9876197533</td>
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<tr>
<td>Dr Neeru Sahni</td>
<td>7087009005</td>
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<tr>
<td><strong>Obstetrics COVID Team</strong></td>
<td></td>
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<tr>
<td>Dr GRV Prasad</td>
<td>9872872830, 7087009348</td>
</tr>
<tr>
<td>Dr Vanita Suri</td>
<td>7087009346, 9914209346</td>
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</tbody>
</table>
CASE DEFINITION OF COVID-19:

Suspected Case of Neonatal Covid-19²:

All neonates who meet the following criteria are suspect cases of neonatal Covid-19 and must be tested:

1. **History of exposure (Irrespective of symptoms):**
   - Mother had COVID-19 infection within 14 days before birth, or
   - History of contact with COVID-19 positive persons (including mother, family members in same household or direct healthcare provider) in the postnatal period
   - Timing of Covid test: At birth (if mother had COVID-19) or at detection of the history of contact with COVID-19 positive person (postnatal exposure). If a sample is not obtained at birth due to logistic reasons, it should be obtained as soon as possible. Rooming-in should not be postponed if testing is delayed.
   - If the first test is negative, a repeat test should be done after 5-14 days of birth/exposure. However, the test should be done immediately, if new symptoms (respiratory distress, lethargy, seizures, apnea, refusal to feed, diarrhea) appear.

2. **Irrespective of history of exposure:**
   - Presenting with pneumonia or SARI that requires hospitalization, with onset at more than 48-72 h of age, unless there is another underlying illness that completely explains the respiratory signs and symptoms.
   - **Features which suggest severe acute respiratory illness in a neonate are respiratory distress, with or without cough, with or without fever**
   - The decision to test irrespective of history of exposure must be taken at the level of faculty member/s in Neonatology.
   - Timing of test: immediate
   - If a neonate’s test comes positive, it should be repeated at 48 hr intervals till 2 tests are negative before discharge.

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²Clinical practice guideline, perinatal-neonatal management of Covid-19, FOGSI, NNF, IAP, v 2.0, 07/05/2020
Proven case of Neonatal Covid-19
Neonate with RT-PCR positive for SARS-Cov-2. Antibody tests may not be reliable in neonates.

Suspected case of Maternal Covid-19
Pregnant or postnatal mothers who meet the following criteria are suspect cases of Covid-19 and must be tested:
1. All symptomatic individuals who have undertaken international travel in the last 14 days (largely inapplicable as international travel has stopped)
2. All symptomatic contacts of laboratory confirmed cases
3. All patients with severe acute respiratory illness (fever AND cough and/or shortness of breath)
4. Asymptomatic direct and high-risk contacts of a confirmed case should be tested once between day 5 and day 14 of coming in her contact

In hotspots/clusters (as per MoHWF) and in large migrations, gatherings, evacuee centres
6. All symptomatic influenza-like illness (fever, cough, sore throat, runny nose)
   a. within 7 days of illness: rRT-PCR
   b. after 7 days of illness: antibody test (if negative, confirmed by rRT-PCR)
7. Pregnant women residing in clusters/containment areas or in large migration gatherings/evacuee centres in hotspot districts and presenting in labour or likely to deliver in five days should be tested for Covid-19 even if asymptomatic.

Hotspots
As of 6-5-20, there are 6 containment zones within Chandigarh union territory- Bapu Dham Colony, Labour Colony in Sector 30, Dhanas Kachi Colony, part of Sector 38, parts of Sector 52 and part of Shastri Nagar in Manimajra. Out of 100 residential pockets in Chandigarh (57 sectors, 22 villages and 21 colonies), 19 pockets have reported coronavirus cases and only 2 pockets (Babu Dham Colony and sector 30) had contributed more than 60% of all cases. For up-to-date information about Chandigarh, the reader must refer to chandigarh.gov.in/health_covid19.htm and Chandigarh administration’s dedicated website for Covid19: chdcovid19.in.

OBSTETRIC POLICIES

The policy regarding place of delivery for different types of patients has changed several times in the last few weeks, as it is a fluid and dynamic situation. The reader must keep himself/herself abreast of the latest changes. At the time of writing this version of the SOP, the policy was as follows:

Triaging
Triaging of all pregnant women who need admission and testing for Covid19 will be done at 2 areas:
1. antenatal clinic 2nd floor of B block OPD
2. screening area of gynaecology department- 3rd floor B block Nehru Hospital

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2 ICMR guidelines
3 Letter from HOD, Obstetrics (Gynae 615, dated 1-5-2020)
Sampling

- A pre-test counselling will be performed regarding the procedure and further managed depending on the report. The patients will be informed that there is a minimal risk of acquiring infection during hospital stay even if they test negative at admission. A written, informed consent will be taken.
- Sampling will be done in the screening area. SR and JR obstetrics posted in the screening area will coordinate for testing with virology department.
- Any patient requiring urgent intervention will be directly admitted to HDU/SLR/OT and sampling will be performed in HDU/SLR/OT. Patient will be managed in SLR until report is ready.

Management of patients

- Women for elective cesarean section or for elective induction of labour will be sent home after sampling with the advice to isolate themselves at home. The report will be communicated to them. Further management will depend upon the report.
- Women coming to hospital in labour/with acute complications of pregnancy requiring admission to hospital will be triaged as follows until report is ready:
  - asymptomatic for Covid and no immediate intervention needed: manage in maternity ward
  - asymptomatic for Covid with imminent delivery: manage in SLR
  - asymptomatic for Covid with high-risk conditions, eg eclampsia, APH, PPH: manage in SLR
  - symptomatic for Covid:
    - mild/moderate: shift to CD Ward
    - severe: shift to SARI ward (ward 22)
- The delivery of these patients will be conducted in respective areas and cesarean will be performed in MTP-OT now designated as “PUI OT”. If any patient is assessed to be surgical high risk, the patient can be operated in CLR-OT/ emergency OT as per discretion of 2nd on-call/senior unit consultant. All post-operative patients will be managed in maternity ward until Covid report is ready.
- Postpartum women who need admission will not be tested as a routine. Testing can be performed if indicated.
- If Covid testing of the cohort is negative: shift patient to CLR/gynaecology ward
- If any patient is reported Covid positive, immediately inform HOD obstetrics and gynaecology and PGI Covid team for further instructions.

PROTECTIVE MEASURES

General / Standard precautions for all:

1. Should always be routinely applied in all areas of health care facilities
2. Including:
   - frequent hand hygiene (including before putting on and after taking off PPE)
   - respiratory hygiene
   - use of PPE to avoid direct contact with patients’ blood, body fluids, secretions (including respiratory secretions) and non-intact skin
   - prevention of needle-stick or sharps injury
   - safe waste management
   - cleaning and disinfection of equipment
   - cleaning of the environment

Remember that the type and color of PPE can change from day to day, based on what is available in the supply. The PPE used in training is only for demonstration purposes and may not exactly match the PPE in your workplace.
Personal protective equipment (PPE)

Aerosol generating procedures of relevance to Pediatrics

The following procedures are currently considered to be potentially infectious AGPs for COVID area:

- Intubation, extubation and related procedures, for example manual ventilation and open suctioning of the respiratory tract (including the upper respiratory tract)
- Tracheotomy or tracheostomy procedures (insertion or open suctioning or removal)
- Bronchoscopy and upper airway procedures that involve suctioning
- Upper gastro-intestinal endoscopy where there is open suctioning of upper respiratory tract
- NIV; BiPAP and CPAP
- HFOV
- Induction of sputum (cough)
- High flow nasal oxygen (HFNO)
- Nebulization

N-95 respirators

- They should be well fitted, covering both nose and mouth with minimal leak around the circumference of the mask. The mask should not be allowed to dangle around the neck of the wearer after or between each use. It should not be touched once put on or removed in the COVID-19 ward. The respirator should be discarded if it is damaged, soiled (with secretions, body fluids), damp, or if the facial seal is compromised.

Safe ways for working for all health care workers

- Staff should be thoroughly trained in donning and doffing PPE.
- Staff should know what PPE they should wear for each setting and context (see the table).
- Gloves and aprons are meant for single-use and should be discarded as soon as the patient encounter ends. However, if any reuse material is supplied, it would be clearly instructed.
- Fluid repellent surgical mask and eye protection can be used for a session of work rather than a single patient contact.
- Hand hygiene should be practiced and extended to exposed forearms, after removing any element of PPE.
- Masks should not be removed in the working area.
- No one should work more than six hours at a stretch area inside a Covid area.
- Adult diapers may be used to avoid use of wash room during working hours.

Guidelines for the use of PPE by HCWs in suspected/confirmed COVID areas

<table>
<thead>
<tr>
<th>SI-NICU</th>
<th>Gloves* (2 pairs)</th>
<th>Fluid-resistant gown</th>
<th>Mask N-95</th>
<th>Goggles</th>
<th>Visor/ Face shield</th>
<th>Outer Gown</th>
<th>Plastic apron</th>
<th>Gum boots</th>
<th>Shoe cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour room in MTP-OT, CD ward &amp; NHE</td>
<td>✓ (2 pairs)</td>
<td>✓ (Coverall)</td>
<td>N-95</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Labour room in SLR</td>
<td>✓ (2 pairs)</td>
<td>✓ (3M gown without hood)</td>
<td>N-95</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>✓</td>
<td>x</td>
<td>✓</td>
</tr>
</tbody>
</table>

4 Modified from PGIMER guidelines, version 5, 11-5-20
Collection of nasopharyngeal/ oropharyngeal swab in any area

|            | ✓      | ✓      | N-95 | ✓      | ✓      | x      | x      | x      | ✓      |

Disposal of patient waste and used PPE

|            | ✓      | ✓      | N-95 | ✓      | ✓      | x      | x      | x      | ✓      |

HCWs transferring patients

|            | ✓      | ✓      | N-95 | ✓      | x      | x      | x      | ✓      |

Ambulance driver (NHE to NH, NHE to APC)

|            | ✓      | ✓      | N-95 | x      | x      | ✓      | x      | x      |

# Gloves should be sanitised with 70% alcohol, the way hands are sanitised with hand sanitiser. If gloves are visibly soiled, they should be changed for a fresh pair of gloves.

@ If looking after only babies of asymptomatic mothers in SI-NICU, the gown is a 3M blue gown without hood and one wears shoe covers over one’s personal shoes. If looking after babies of one or more symptomatic mothers in SI-NICU, the gown is a complete coverall with hood; one wears shoe covers over one’s personal socks and gumboots.

*Visor/face shield in SI-NICU to be worn only if one is wearing personal spectacles (and so cannot wear goggles) OR one is performing an aerosol generating procedure (in which case it can be worn additionally over the goggles and removed for disinfection after the procedure is over)

- Suspected or confirmed patients should have face covered by the acrylic suction box at all times, because masks cannot be applied on neonates. During intubation, they must be covered by the acrylic intubation box. During transport, they must be transported in the acrylic transport box.
- Attendants of suspected COVID patients should wear double surgical masks at all times and gloves while caring for the patient or handling patient samples.
- [Remember that the type and color of PPE can change from day to day, based on what is available in the supply. The PPE used in training is only for demonstration purposes and may not exactly match the PPE in your workplace]

**Guidelines for the use of PPE by HCWs in non-COVID areas**

<table>
<thead>
<tr>
<th></th>
<th>Gloves</th>
<th>Fluid-resistant gown</th>
<th>Mask</th>
<th>Goggles</th>
<th>Visor/Face shield</th>
<th>Outer Gown</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICU, NNN</td>
<td>✓</td>
<td>x</td>
<td>FFP-1</td>
<td>x</td>
<td>✓*</td>
<td>✓ sterile</td>
</tr>
<tr>
<td>NUPE</td>
<td>✓</td>
<td>x</td>
<td>N95</td>
<td>x</td>
<td>✓*</td>
<td>✓</td>
</tr>
<tr>
<td>CLR extension (outside SI-NICU)</td>
<td>✓</td>
<td>x</td>
<td>Surgical</td>
<td>x</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>NNN-ward, CLR, CLR-N, Gyne ward, private ward</td>
<td>x</td>
<td>x</td>
<td>Surgical</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Corridors and administrative areas</td>
<td>x</td>
<td>x</td>
<td>Surgical</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

- *In NICU, NNN, NUPE, the risk of exposure through aerosol generating procedures is low as suction box and intubation box are used. Additionally, neonatal care in NICU and NNN is mostly in incubators. Despite this, if the risk of exposure is felt to be high during an aerosol generating procedures, face shield can be used on a case-by-case basis.
- In NUPE, during suction, all neonates should have face covered by the acrylic suction box. During intubation, all neonates must be covered by the acrylic intubation box. During transport, they must be transported in the acrylic transport box.
Precautions while performing aerosol generating procedures

- Should preferably be done by a HCW who has recovered from COVID-19
- Remove all HCW from the room, except those needed for the procedure
- Close the door of the room
- Ensure that the exhaust fan is ON
- Ensure AC if any in another room is switched off. (As it will draw the air in)
- Switch off all ceiling fans in the area
- Ensure full PPE are worn as per guidelines
- Remove any high risk HCW from the room (e.g., Diabetic)

Risk stratification of mothers and PPE requirement

Ever since ICMR issued a guideline that all pregnant women (even if they are asymptomatic) must be tested for Covid-19, if they are likely to deliver within the next 5 days, there have a large number of deliveries of asymptomatic Covid suspect mothers. The newborn infants of these mothers are also considered suspect and are currently managed in SI-NICU, until the mother’s Covid report is negative. Since this group of asymptomatic mothers is considered to have a significantly lower risk than symptomatic mothers, the PPE prescribed for this group is also different.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Mother</th>
<th>Type of PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending NVD in CD ward</td>
<td>Symptomatic for Covid*</td>
<td>Full PPE (with face shield [preferred to goggles]) + plastic apron + outer cloth gown (+ shoe cover over gum boot in delivery area)</td>
</tr>
<tr>
<td>Attending LSCS in MTP-OT</td>
<td>Symptomatic or asymptomatic for Covid</td>
<td>Full PPE (with face shield [preferred to goggles]) + plastic apron + outer cloth gown (+ shoe cover over gum boot in delivery area)</td>
</tr>
<tr>
<td>Attending NVD in SLR</td>
<td>Asymptomatic for Covid</td>
<td>Partial PPE (also called “SLR-type PPE”) {with face shield [preferred to goggles]} + plastic apron</td>
</tr>
<tr>
<td>Attending LSCS in CLR-OT</td>
<td>Asymptomatic for Covid, but high surgical risk</td>
<td>Full PPE (with face shield [preferred to goggles]) + plastic apron + outer cloth gown (+ shoe cover over gum boot in delivery area)</td>
</tr>
<tr>
<td>Taking care of baby in SI-NICU</td>
<td>All babies in SI-NICU born to asymptomatic mothers</td>
<td>Partial PPE (also called “SLR-type PPE”) {with either face shield or goggles}</td>
</tr>
<tr>
<td></td>
<td>One or more babies in SI-NICU born to asymptomatic mothers</td>
<td>Full PPE (with either goggles or face shield)</td>
</tr>
</tbody>
</table>

*Symptomatic = fever or cough or respiratory distress or hypoxia

Full PPE= Surgical scrubs + Coverall with hood + 2 pairs of gloves + shoe cover on socks + gumboots + N95 mask + surgical cap for long-haired people + goggles or face shield

Partial PPE (SLR-type PPE)= Surgical scrubs + 3M blue gown without hood + 2 pairs of gloves + shoe cover on shoes + N95 mask + surgical cap for all + goggles or face shield
DONNING AND DOFFING PROTOCOLS IN NEONATOLOGY

Donning

Preparation for donning

- HCW must visit the washroom, eat something if hungry and drink one glass of water, because visits to washroom, eating or drinking will not be permitted during the six-hour duty shift.
- If there are any important phone calls to be made, eg. to family members, the HCW must call them before starting the six-hour shift.

Changing into surgical scrubs

- The HCW must reach the hospital in his/her personal clothes. It is recommended that HCW should wear socks and shoes. HCW must get a spare pair of socks, towel, comb and other toiletries if required.
- The HCW must bring a personal plastic bag and write name on it. This must be left in the changing room. It will be used for carrying washed socks, personal towel back home.
- Put all personal belongings, including mobile phone and pen, in personal lockers. Remove your personal spectacles and keep in locker in case you wish to don the goggles.
- MOBILE PHONES ARE NOT ALLOWED INSIDE SI-NICU
- Each category of staff will change into clean surgical scrubs in respective duty rooms/changing rooms.
  - Doctors (residents & faculty) and N.O.’s in duty room adjacent to CLR Extn shower room
  - HA’s and SA’s in CLR Extn duty room
- It is mandatory for all HCW to use the surgical scrubs available in donning room cupboard. HCW’s must not use personal scrubs brought from home or scrubs issued from any other ward, as this creates difficulties in accounting for the number of scrubs.
- Lock the locker and keep the key with you in the pocket of your scrubs.
- Continues to wear your own pair of shoes and socks.
- Proceed to CLR Extn donning area (this will be the common donning area for neonatal teams for SI-NICU, MTP-OT, CD ward and SLR)

Checklist in the CLR Extn donning area

Trained observer / “Buddy”

- The first thing HCW is going to do: inspect PPE to make sure that all components (correct size) are present and laid out in proper order.
  - Trolley with all components of PPE
  - Surgical disposable cap
  - Gum boots
  - Disposable shoe cover
  - Full body Coverall
  - Disposable plastic apron
  - Sterile cloth long sleeve surgical gown
  - N95 mask
  - Inner gloves
  - Outer gloves
  - Goggles
  - Face shield
  - 2-inch Durapore
• Permanent marker pen for writing name on N95 mask
• One Chair
• Hand sanitizer
• Full length mirror
• Rack for gum boots to dry

Donning steps for Full PPE:
The “Full PPE” is worn when attending all deliveries in MTP-OT and CD ward, and when SI-NICU has any babies born to symptomatic mothers.

1. If you have arrived in donning room wearing a surgical mark and disposable surgical cap, remove them now and discard in yellow BMW bag.
2. The observer (buddy) will check that there are no holes in your surgical scrub, and you are not wearing any personal items: no rings/watches/jewelry/chain/necklace/wrist bands; and your nails are trimmed, no beard, head hair is tidy and not falling on face or neck.
3. Perform Hand Hygiene with alcohol hand rub
4. Using the marker pen, write your name, category of staff [Fac/JR/SR/HA/SA/NO, mobile number, SINICU and number of times used on the N95 mask, as the mask will be sterilized and reissued to you by name after doffing. The 1st time you use it, write “1”, the 2nd time it comes back to you for use, strike off “1” and write “2”. Your name, ward and Nehru Hospital will ensure that the mask comes back to the right person at the right location.
5. Remove your personal shoes now and cover your personal socks with a disposable shoe cover, before you proceed to the next step. Leave your personal shoes in Donning area. HA will transfer shoes of all donned HCW and leave them in the short corridor leading up to the shower room- to be worn after doffing and shower.
6. Put a strip of Durapore circumferentially around the ankle end of your scrub suit. Fold the end of the strip on itself to make it easy to remove while doffing. This is to ensure that the scrub suit does not get pulled up while removing the gumboot during doffing.
7. Perform hand hygiene with alcohol-based hand rub, as there is a chance that your hands may have touched the floor or footwear accidentally.
8. Put on the first pair of gloves (inner gloves) after ensuring that hands are dry.
9. Put on the Coverall. The buddy can assist with wearing the suit. Start by inserting your feet through the leg sleeves of the coverall. Once you have pulled up the Coverall to your trunk, insert your hands through the hand sleeves of the Coverall. While zipping, take the zip all the way to the top and press the zip to lock it in place. Make sure that the inner gloves are tucked under the sleeves of the Coverall suit.
10. Do not put the hood of the Coverall on top of your head now
11. The buddy will help to place a strip of 2-inch durapore circumferentially to the wrist end of the Coverall suit sleeve, taking care to fold the end of the durapore strip on itself, to make it easy to remove during doffing.
12. Sit on the chair and put on the gumboots. Ensure your hand does not touch the floor accidentally while wearing the gumboots. Leave the leg sleeves of Coverall suit outside your gumboots, as the elastic will make it fit tightly to the gumboot. While wearing gumboots, ensure that your surgical scrubs remain inside the gumboots.
13. Perform hand hygiene with alcohol-based hand rub, as there is a chance that your hands may have touched the floor or footwear accidentally.
14. Next, put on N95 mask: Hold the opened mask with straps facing towards face. The front portion of the mask should be in the cupped hand. Put the bottom strap first over head and keep it below ears at back of neck. Top strap goes along the back of the head towards the crown of the head and check to make sure that there’s a seal (Seal check: Expiring and inspiring against firmly pressed mask over face to assess leak. While inhaling the mask should move with respiration, while exhaling there should not be any air leak).
15. Personnel with long hair can put disposable surgical cap. It should go over the straps of the N95 mask.
16. The next step is different depending on whether you are wearing goggles or face shield. If you wear spectacles and wish to continue wearing them, skip wearing the goggles, instead use face shield. If you do not wear spectacles, you can wear the goggles. Do not wear the goggles over your pair of spectacles.
a. If you are wearing goggles: Put on the goggles over eyes and secure it to the head using headband. The goggles should cover the eyes and snugly fit over the face; the upper part of the N95 mask should be covered by the lower part of the goggles.

b. If you plan to use face shield: there is nothing you need to do now, just go to the next step.

17. Put on the hood of the Coverall and pull it to cover head, hair, neck, ears, forehead. Sometimes, if the hood is too big for the size of your head, the front of the hood may slip onto your eyes. Use Durapore strips to keep the hood in place.

18. If you had planned to use the face shield, now put on the face shield on top of the hood of the Coverall. Adjust the strap to fit your head shape. The face shield should cover the front and sides of face, eyes, and should cross the chin.

Do not wear face shield on top of goggles.

19. If you are going to attend a delivery, wear a disposable surgical plastic apron, with the help of the buddy. If not, proceed to next step.

20. If you are going to MTP-OT or CD ward for a delivery, wear a longsleeve cloth surgical gown, to prevent the Coverall from being contaminated with mother’s or baby’s blood and body fluids. Tie only one easily removable knot. The longsleeve cloth surgical gown must not be worn when going to SI-NICU for work, as the heat and humidity can become oppressive.

21. The last item to be put on is the second pair of gloves (outer gloves). If you have worn a longsleeve cloth surgical gown for a delivery, make sure that the cuffs of the outer gloves cover the sleeves of the second gown and stay tight. Outer gloves must be worn with sterile precautions.

22. Now the HCW will turn around so that observer can inspect and go through range-of-motion assessment, to make sure that HCW can move freely and comfortably. The observer is also going to make sure that all areas of the body are covered and there are no holes or tears.

23. If you are going to the MTP-OT or the CD ward for a delivery, you will have to wear an extra disposable shoe cover on top of the gumboots just outside MTP-OT or tetanus room in CD ward before you enter the delivery area. You can sit on a chair to wear the shoe cover. Perform hand hygiene. You do not have to wear this disposable shoe cover if you are directly going to SI-NICU for work.

24. Now, before going to see a patient, HCW will disinfect his/her gloves with alcohol hand rub.

Donning steps for partial PPE (also called SLR PPE)
The “SLR PPE” is worn when attending all deliveries in SLR, and when SI-NICU has all babies born only to asymptomatic mothers. The SLR PPE has a 3M gown without hood.

1. If you have arrived in donning room wearing a surgical mark and disposable surgical cap, remove them now and discard in yellow BMW bag.

2. The observer (buddy) will check that there are no holes in your surgical scrub, and you are not wearing any personal items: no rings/watches/jewelry/chain/necklace/wrist bands; and your nails are trimmed, no beard, head hair is tidy and not falling on face or neck.

3. Perform Hand Hygiene with alcohol hand rub

4. Using the marker pen, write your name, category of staff [Fac/JR/SR/HA/SA/NO, mobile number, SINICU and number of times used on the N95 mask, as the mask will be sterilized and reissued to you by name after doffing. The 1st time you use it, write “1”, the 2nd time it comes back to you for use, strike off “1” and write “2”. Your name, ward and Nehru Hospital will ensure that the mask comes back to the right person at the right location.

5. Wear disposable shoe cover on top of your personal shoes. Do not take off your shoes.

6. Perform Hand Hygiene with alcohol hand rub

7. Put on the first pair of gloves (inner gloves) after ensuring that hands are dry.

8. Put on the 3M gown. The buddy can assist with wearing the gown.

9. The buddy will help to place a strip of 2-inch durapore circumferentially to the wrist end of the Coverall suit sleeve, taking care to fold the end of the durapore strip on itself, to make it easy to remove during doffing.

10. Next, put on N95 mask: Hold the opened mask with straps facing towards face. The front portion of the mask should be in the cupped hand. Put the bottom strap first over head and keep it below ears at back of neck. Top
strap goes along the back of the head towards the crown of the head and check to make sure that there’s a seal (Seal check: Expiring and inspiring against firmly pressed mask over face to assess leak. While inhaling the mask should move with respiration, while exhaling there should not be any air leak).

11. Everybody has to put on disposable surgical cap (irrespective of hair length). It should go over the straps of the N95 mask.

12. The next step is different depending on whether you are wearing goggles or face shield. If you wear spectacles and wish to continue wearing them, skip wearing the goggles, instead use face shield. If you do not wear spectacles, you can wear the goggles. Do not wear the goggles over your pair of spectacles.
   a. If you are wearing goggles: Put on the goggles over eyes and secure it to the head using headband. The goggles should cover the eyes and snugly fit over the face; the upper part of the N95 mask should be covered by the lower part of the goggles.
   b. If you had planned to use the face shield, now put on the face shield. Adjust the strap to fit your head shape. The face shield should cover the front and sides of face, eyes, and should cross the chin.

Do not wear face shield on top of goggles.

13. If you are likely to be in a situation with body fluid spills, wear a disposable surgical plastic apron, with the help of the buddy. If not, proceed to next step.

14. The last item to be put on is the second pair of gloves (outer gloves). Outer gloves must be worn with sterile precautions.

15. Now the HCW will turn around so that observer can inspect and go through range-of-motion assessment, to make sure that HCW can move freely and comfortably. The observer is also going to make sure that all areas of the body are covered and there are no holes or tears.

16. Now, before going to see a patient, HCW will disinfect his/her gloves with alcohol hand rub.

**Doffing**

**SI-NICU doffing area**

This is the centralized Neonatology doffing area.

**Doffing (Removing the PPE) area checklist in SI-NICU:**

- Trained observer/ Buddy
- Full length mirror
- Two chairs (Dirty chair and clean chair)
- Elbow action hand sanitizer (Separate alcohol-based hand sanitiser dispensers in clean and contaminated area)
- Box of clean, non-sterile gloves- on dirty side (for replacing inner gloves, in case they are found torn)
- Small scissor with rounded tips (in case inner gloves is torn, and one cannot remove it easily, scissor will be used to cut the glove)
- Rack for OT slippers. A pair of OT slippers- should be placed on the clean side of the red line, on the floor (facing the person doffing), in such a way that it can be immediately worn sitting on the clean chair.
- A red line separating contaminated and clean areas
- 2 sets of Yellow BMW bags – 1 set on dirty side and 1 set on clean side
- 1 swinging-lid large yellow bin on dirty side (for coveralls etc) and 1 pedal-operated yellow bin on clean side (for cap, gloves etc), EACH holding TWO yellow BMW bags (for double bagging)
- Perforated Red plastic bags (for laundry & gumboots)- on dirty side
- Intact Red plastic bags (for laundry & gumboots)- on dirty side
- Large bin with swinging lid (NOT pedal-operated) with 0.5% sodium hypochlorite solution for gumboots- placed on dirty side, within hand’s reach from the clean chair
- 1 yellow bucket with 2 yellow BMW bags on dirty side, located within hand’s reach from clean chair (for shoe covers)
• 1 large swinging-lid bin with 0.5% sodium hypochlorite solution to hold Red perforated laundry bags- placed on dirty side (for outer cloth gown)
• 2 large pedal-operated bins for goggles and face shields
  o One meant for goggles- placed on the clean side of the red line
  o One meant for face shield- placed on the dirty side of the red line
• Red plastic bags for the bins for goggles and face shield
• Ties (for tying BMW bags).
• Tray kept on the floor, with foot mat inside it and 0.5% sodium hypochlorite
• Negative suction/ Exhaust Fan

Ceiling fan should be switched off

**Outside SI-NICU doffing area checklist**
Immediately outside the doffing area, the following items will be available:

• A table
• Several open paper bags standing on the table. Ensure that bags are completely open, so that they look like vertical boxes.
• a stapler tethered to the table
• alcohol swabs
• Surgical masks.
• box of clean, non-sterile gloves (these are the last pair of new gloves)
• 1 small pedal-operated yellow bin with 2 yellow bags (for the last pair of clean gloves) and alcohol swab
• Bin for N95 masks
• Dry foot mat

**SI-NICU Doffing area shower area check-list**

• Surgical masks
• Swinging-lid large bins with 0.5% sodium hypochlorite solution to hold perforated laundry bags
• Perforated Red plastic bags for laundry
• Intact Red plastic bags for laundry
• Yellow bucket for surgical masks (worn from N95 table upto shower)
• Yellow BMW bags
• Ties (for tying BMW bags)
• Absorbent shower mat outside shower area
• Stool for HCWs wearing SLR PPE kits to sit and take off and put on shoes
• One pair of OT slippers (these can be reused by everybody going for shower without disinfection)

**SI-NICU Shoe wearing area, near shower area: check-list**

• Tub containing 0.5% sodium hypochlorite (for dropping OT slippers)
• Stool for sitting & wearing personal shoes

**Doffing steps for HCW wearing full PPE:**
The PPE are potential source of infection to HCWs. Doffing is equally or more important than donning as it is a high-risk activity and to be done at the designated area with enough time (Don’t rush through the steps of doffing).

1. **Ensure presence of trainer/buddy.** The buddy needs to wear full body gown, surgical mask, face shield, gloves, and shoe cover. The trained observer will help and guide HCW in safely doffing of the PPE step by step and discard it in appropriate BMW bin. The trained observer will stand at a distance of 2 meters from the HCW on the clean side.
   a. Usually another doctor or N.O. working on the same shift, will become the buddy. HA or SA can never be a buddy.
   b. If you are the last person doffing, wait for a fully donned person from the next shift to come and act as the buddy
c. If you are the last person doffing, and nobody is expected to come in the next shift (because there are no patients left in SI-NICU), arrange for someone sitting in donning room to guide you through the CCTV camera and speaker.

d. An HA or SA should never be last person doffing.

2. **Switch off ceiling fan/s** (including ceiling fans of adjacent rooms).

3. Before entering Doffing room from patient area, the HCW must be observed by the trained observer. HCW **first turns** around, and observer visually **inspects PPE** to see if it has visible contamination, cuts, or tears. And while doing this, observer should be in the doffing room at a safe distance (2 meters) from him/her. If alright, says “Everything looks fine”. If there are any obvious signs of contamination, the HCW self-disinfacts with 70% alcohol swabs.

4. HCW performs **hand hygiene** using alcohol-based hand rub. **[At every stage where alcohol-based hand hygiene is to be performed, simply cover all surfaces with alcohol hand rub, but do not perform the 6 steps of hand hygiene vigorously, as this may generate an aerosol]**

5. Remove **outer glove using “Glove in Glove” technique**. Peel off the outer glove of one hand touching only outer surface by thumb and index finger and keep the removed glove in the other hand. Now remove the second outer glove inserting one or two fingers inside it (not touching outer part) and discard both outer gloves in the **designated yellow BMW bag (in yellow swinging-lid bin) that will go for incineration**. Swing the lid open and close gently, so that it does not open and close with a jerk, as this may generate an aerosol.

6. **Inspect inner gloves for any tear. If no tear is present perform hand hygiene using** alcohol-based hand rub. If a tear is identified, remove the inner gloves following same steps as removing the outer gloves and wear a **new pair** of gloves and perform hand hygiene before proceeding to next step.

7. In the rare event that the inner glove has a tear, and it cannot be safely removed without manipulating the inner gown, you can carefully cut the inner glove with the small scissor as close to the margin of the gowns, without cutting the gown, leaving behind the wrist portion of the glove. Wear the new pair of gloves and continue. Later, when the inner pair of gloves is to be removed, remember to remove it along with the remaining part of the original inner glove.

8. If you are wearing the outer cloth longsleeve surgical gown (worn for deliveries in MTP-OT & CD ward), **remove the outer cloth surgical gown now**: after untying the knot (buddy can untie), pull the gown forward and away from the body to remove it from the top and roll from inside out, without touching outer surface, and put in **perforated Red laundry bag (kept in swinging-lid bin with 0.5% sodium hypochlorite)**. Swing the lid open and close gently, so that it does not open and close with a jerk, as this may generate an aerosol. If you are not wearing the outer cloth gown (working in SI-NICU), proceed to next step.

9. HCW performs **hand hygiene using** alcohol-based hand rub.

10. Remove disposable surgical plastic apron, if you were wearing one. Cut with scissor to easily remove the apron. **Put in yellow BMW bag that will go for incineration**. Swing the lid open and close gently, so that it does not open and close with a jerk, as this may generate an aerosol.

11. HCW performs **hand hygiene using** alcohol-based hand rub.

12. This step differs between those who are wearing a face shield versus goggles.

13. If wearing face shield: Remove **face shield** by bending forward. Avoid touching front surface of the face shield while removing. Hold it at the interface between the visor and the rear strap from both sides. Pull it over your head taking care that it falls away from your face. Put it gently in the Red BMW bag (kept in Red pedal-operated bin) in the dirty area, that will undergo alcohol followed by ETO sterilization. Press and release the pedal gently, so that it does not open and close with a jerk, as this may generate an aerosol.

   If wearing goggles: do not touch the goggles at this stage. They will be removed later. Proceed to next step.


15. Remove the **durapore** from the sleeve of the Coverall suit. Discard in **yellow BMW bag** that goes for incineration. Swing the lid open and close gently, so that it does not open and close with a jerk, as this may generate an aerosol.

16. Perform **hand hygiene using** alcohol-based hand rub

17. Remove **Coverall suit**:
a. For the initial part of the removal, you can be seated on the dirty chair, if you want.
b. Trace the zipper line upwards until you reach the zip. *Unlock the zip* and pull it slightly down by a few inches. This is done to facilitate removal of the hood.
c. Remove the hood of the coverall suit and let it fall backwards.
d. Unzip suit fully looking at the mirror so that you do not touch your skin in neck area.
e. Looking at the mirror, pull gown away from the neck and shoulders taking care that you do not touch the outside of the gown. Remove the gown from inside out in the order of top body → the sleeves → hips → legs.
f. After the stage when you have rolled the gown below your hip, *you can no longer sit on the dirty chair*, as it would contaminate the back of your surgical scrubs.
g. In standing position, roll the Coverall suit right down to the bottom, so that it is bunched up around the bottom of your gumboots. *Slide the leg sleeves of the Coverall suit over the gumboots, remove entire suit* over gumboots and let the Coverall suit fall on the floor. Step out of the Coverall suit, ensuring minimum contact between the outside of the gumboots and the inside of the coverall suit. At this stage, you will be standing in your surgical scrubs with your gumboots on your feet.
h. Pick the suit from the floor, holding it on its inner surface, and put it in the *yellow BMW bags for incineration*. Swing the lid open and close gently, so that it does not open and close with a jerk, as this may generate an aerosol.

18. Perform **hand hygiene** using alcohol-based hand rub.
19. Now, sit down on the **Clean Chair** on the other side of red line. **YOUR FEET SHOULD CONTINUE TO BE ON THE DIRTY SIDE OF THE RED LINE.**
20. Carefully remove the *gum boots* touching only the **external surface of gum boots** (do not touch inner surface of gum boots, as contaminated gloves could touch surgical scrubs), and not touching the floor. There is no need to disinfect the gumboots with 70% alcohol as it will immediately be put into 0.5% sodium hypochlorite. Keep your feet in the air.
   Move the swinging lid of the large bin containing **0.5% sodium hypochlorite** with your hand (this is not a pedal-operated bin). Put gumboots gently in this bin, ensuring that gumboots are immersed in the solution.
21. Once you have removed both gumboots, you will find that your shoe covers still remain over your feet with socks. You will now remove shoe covers- 1st the left one and then the right one- and put them in the **yellow BMW bags in yellow bucket, that will go for incineration**.
22. As you remove shoe covers, rotate yourself 90 degrees leftwards, while seated on the clean chair and make sure you **PLACE YOUR FEET DIRECTLY into the pair of OT slippers** kept on the clean side of the red line in doffing area. If you find that you are unstable at any point with both your feet in the air, you can remove the left shoe cover, put the shoe cover in the yellow BMW bag and place the left foot in the OT slippers on the inside, **before** you start removing the shoe cover from the right foot.
23. Perform **hand hygiene** using alcohol-based hand rub.
24. Get up. Remove the *goggles* and put it gently in the Red BMW bag (kept in Red pedal-operated bin) in the clean area, that will undergo alcohol followed by ETO sterilization. Press and release the pedal gently, so that it does not open and close with a jerk, as this may generate an aerosol.
25. Perform **hand hygiene** using alcohol-based handrub.
26. Remove the *surgical cap* (if one was wearing one) and discard in the **yellow BMW bags in pedal-operated yellow bin on the clean side that will go for incineration**. Press and release the pedal gently, so that it does not open and close with a jerk, as this may generate an aerosol.
27. Perform **hand hygiene** using alcohol-based handrub.
28. Remove the *strip of Durapore* placed on the ankle end of your scrub suit. Discard it in the *yellow BMW bags that will go for incineration*.
29. **You do not have to disinfect the top of your OT slippers.**
30. Remove the *inner gloves* as before, using ‘glove in glove’ technique (*Beware! don’t touch your face now*). Place the gloves in the *yellow BMW bags that will go for incineration*. Press and release the pedal gently, so that it does not open and close with a jerk, as this may generate an aerosol.

31. Perform *hand hygiene* on bare hands using alcohol-based hand rub.

32. Wear a *new pair of gloves* (surgical glove / non-sterile latex glove)

33. Walk to the exit door of the doffing area. You would be walking with OT slippers on. On the floor there is a tray, containing a foot mat, soaked in 0.5% sodium hypochlorite solution. *Stand on the foot mat for a period of at least 1 minute to disinfect the soles of the OT slippers.*

34. Exit the doffing area by pushing the door of the doffing area with your elbow. The table with supplies for doffing the N95 mask is located to your right, on the corridor.

35. Dry the soles of your OT slippers on the *dry mat* near the table.

36. Remove *N95 mask* (*The N95 mask* shall be removed just outside the doffing area to minimize exposure to aerosols inside the doffing area) – Ensure that you don’t touch the front exposed surface of the mask. Remove it by leaning forward, keep face down, grasp first bottom strap and pull it off your head. Then grasp the top strap and pull it off your head in a slow and steady pace (to not generate aerosols) without touching the outer surface of mask. Ensure that mask stays away from your body at all times. Drop the N95 mask carefully inside the *open paper bag* standing on the table.

37. Perform *hand hygiene* using alcohol-based hand rub.

38. *Fold the opening of the paper bag* on itself and apply 3 staples to seal the paper bag. Use the stapler attached to the table.

39. Perform *hand hygiene and drop* the paper bag in a *designated bin for used N95 masks*

40. *Swab the stapler* with an alcohol swab. Discard alcohol swab in yellow bag.

41. *Remove the final pair of gloves* as before using ‘glove in glove’ technique. Discard it in the *yellow BMW bag in the small pedal operated yellow bin* created near the N95 table, that will go for incineration. Press and release the pedal gently, so that it does not open and close with a jerk, as this may generate an aerosol.

42. Perform *hand hygiene* using alcohol-based hand rub

43. Final *inspection on surgical scrubs* (front and back) to see if there are any visible contamination, cuts, or tears is to be done by the observer.

44. Wear a surgical mask.

**Shower for HCW wearing full PPE**

1. Go to duty room and pick up your personal clothes, towel, comb, extra socks and toiletries (uniform, in the case of HA or SA) and proceed to shower room.

2. Wear your OT slippers inside the bathroom, when taking a shower

3. Push shower door open with your elbow. Enter the shower room.

4. Discard *mask* in *yellow BMW bag* in yellow bucket for incineration.

5. Gently place the *used surgical scrubs* in Red *perforated plastic bag in swinging-lid bin with 0.5% sodium hypochlorite*. Swing the lid open and close gently, so as not to generate aerosols.

6. Take a shower with soap and water, use individual towel and *change into personal clothes*.

7. If you wear spectacles, wash your spectacles with soap and water and dry them with the same towel that you used.

8. Wash your personal *socks with soap and water*. Carry them with you.

9. Wear fresh *surgical mask*

10. Dry the bottom of your OT slippers by wiping on the shower mat outside.

11. Walk to the end of the short corridor. You will find a tub of 0.5% sodium hypochlorite.

12. Pick OT slippers with your feet and *drop them into the tub*. Do not drop them by hand.

13. HA would have already kept your personal shoes near the tub area.

14. Sit on the stool

15. Wear the *extra pair of socks* you had brought in plastic bag and your *personal shoes*

16. Take the *right side of the CLR extn corridor* towards the exit of the corridor.
**Back to duty/changing rooms**

1. Go back to your duty rooms
2. Put your washed personal socks into the plastic bag which you had brought from home
3. Go to locker and collect personal belongings.
4. While going back to duty rooms, take care to avoid the area of corridor between CD ward and the CLR extension ward.
5. Leave the premises.

**Doffing steps for HCW wearing SLR PPE (partial PPE):**

The PPE are potential source of infection to HCWs. Doffing is equally or more important than donning as it is a high-risk activity and to be done at the designated area with enough time (Don’t rush through the steps of doffing).

1. **Ensure presence of trainer/buddy.** The buddy needs to wear full body gown, surgical mask, face shield, gloves, and shoe cover. The trained observer will help and guide HCW in safely doffing of the PPE step by step and discard it in appropriate BMW bin. The trained observer will stand at a distance of 2 meters from the HCW on the clean side.
   a. Usually another **doctor or N.O.** working on the same shift, will become the buddy. HA or SA can never be a buddy.
   b. If you are the last person doffing, wait for a fully donned person from the next shift to come and act as the buddy
   c. If you are the last person doffing, and nobody is expected to come in the next shift (because there are no patients left in SI-NICU), arrange for someone sitting in donning room to guide you through the CCTV camera and speaker.
   d. An HA or SA should never be last person doffing

2. **Switch off ceiling fan/s** (including ceiling fans of adjacent rooms).

3. Before entering Doffing room from patient area, the HCW must be observed by the trained observer. HCW **first turns** around, and observer visually **inspects PPE** to see if it has visible contamination, cuts, or tears. And while doing this, observer should be in the doffing room at a safe distance (2 meters) from him/her. If alright, says “Everything looks fine”. If there are any obvious signs of contamination, the HCW self-disinfects with 70% alcohol swabs.

4. HCW performs **hand hygiene** using alcohol-based hand rub. [At every stage where alcohol-based hand hygiene is to be performed, simply cover all surfaces with alcohol hand rub, but do not perform the 6 steps of hand hygiene vigorously, as this may generate an aerosol]

5. Remove **outer glove using “Glove in Glove” technique.** Peel off the outer glove of one hand touching only outer surface by thumb and index finger and keep the removed glove in the other hand. Now remove the second outer glove inserting one or two fingers inside it (not touching outer part) and discard both outer gloves in the **designated yellow BMW bag (in yellow swinging-lid bin) that will go for incineration.** Swing the lid open and close gently, so that it does not open and close with a jerk, as this may generate an aerosol.

6. **Inspect inner gloves for any tear. If no tear is present perform hand hygiene using** alcohol-based hand rub. If a tear is identified, remove the inner gloves following same steps as removing the outer gloves and wear a **new pair** of gloves and perform hand hygiene before proceeding to next step.

7. In the rare event that the inner glove has a tear, and it cannot be safely removed without manipulating the inner gown, you can carefully cut the inner glove with the small scissor as close to the margin of the gowns, without cutting the gown, leaving behind the wrist portion of the glove. Wear the new pair of gloves and continue. Later, when the inner pair of gloves is to be removed, remember to remove it along with the remaining part of the original inner glove.

8. Remove disposable surgical plastic apron, if you were wearing one. Cut with scissor to easily remove the apron. Put in **yellow BMW bag that will go for incineration.** Swing the lid open and close gently, so that it does not open and close with a jerk, as this may generate an aerosol.

9. HCW performs **hand hygiene using** alcohol-based hand rub.

10. This step differs between those who are wearing a face shield versus goggles.
11. If wearing face shield: Remove face shield by bending forward. Avoid touching front surface of the face shield while removing. Hold it at the interface between the visor and the rear strap from both sides. Pull it over your head taking care that it falls away from your face. Put it gently in the Red BMW bag (kept in Red pedal-operated bin) in the dirty area, that will undergo alcohol followed by ETO sterilization. Press and release the pedal gently, so that it does not open and close with a jerk, as this may generate an aerosol.

If wearing goggles: do not touch the goggles at this stage. They will be removed later. Proceed to next step.


13. Remove the durapore from the sleeve of the 3M gown. Discard in yellow BMW bag that goes for incineration.

14. Perform hand hygiene using alcohol-based hand rub

15. Remove 3M gown:
   a. Do not sit on the dirty chair, as back of gown may be exposed.
   b. Looking at the mirror, pull gown away from the neck and shoulders taking care that you do not touch the outside of the gown. Remove the gown from inside out in the order of top body → the sleeves → hips → legs.
   c. Put it in the yellow BMW bags for incineration. Swing the lid open and close gently, so that it does not open and close with a jerk, as this may generate an aerosol.


17. Now, sit down on the Clean Chair on the other side of red line. YOUR FEET SHOULD CONTINUE TO BE ON THE DIRTY SIDE OF THE RED LINE.

18. You will now remove shoe covers- 1st the left one and then the right one- and put them in the yellow BMW bags in yellow bucket, that will go for incineration.

19. As you remove shoe covers, rotate yourself 90 degrees leftwards, while seated on the clean chair and make sure you PLACE YOUR SHOES on the clean side of the red line in doffing area.

20. Perform hand hygiene using alcohol-based hand rub.

21. Get up. If wearing goggles, remove the goggles and put it gently in the Red BMW bag (kept in Red pedal-operated bin) in the clean area, that will undergo alcohol followed by ETO sterilization. Press and release the pedal gently, so that it does not open and close with a jerk, as this may generate an aerosol.

22. Perform hand hygiene using alcohol-based handrub.

23. Remove the surgical cap (if one was wearing one) and discard in the yellow BMW bags in pedal-operated yellow bin on the clean side that will go for incineration. Press and release the pedal gently, so that it does not open and close with a jerk, as this may generate an aerosol.


25. Remove the inner gloves as before, using ‘glove in glove’ technique (Beware! don’t touch your face now). Place the gloves in the yellow BMW bags that will go for incineration. Press and release the pedal gently, so that it does not open and close with a jerk, as this may generate an aerosol.

26. Perform hand hygiene on bare hands using alcohol-based hand rub.

27. Wear a new pair of gloves (surgical glove / non-sterile latex glove)

28. Walk to the exit door of the doffing area. On the floor there is a tray, containing a foot mat, soaked in 0.5% sodium hypochlorite solution. Stand on the foot mat for a period of at least 1 minute to disinfect the soles of your shoes.

29. Exit the doffing area by pushing the door of the doffing area with your elbow. The table with supplies for doffing the N95 mask is located to your right, on the corridor.

30. Dry the soles of your shoes on the dry mat near the table.

31. Remove N95 mask (The N95 mask shall be removed just outside the doffing area to minimize exposure to aerosols inside the doffing area) – Ensure that you don’t touch the front exposed surface of the mask. Remove it by leaning forward, keep face down, grasp first bottom strap and pull it off your head. Then grasp the top strap and pull it off your head in a slow and steady pace (to not generate aerosols) without touching the outer surface of mask. Ensure that mask stays away from your body at all times. Drop the N95 mask carefully inside the open paper bag standing on the table.
32. Perform **hand hygiene** using alcohol-based hand rub.
33. **Fold the opening of the paper bag** on itself and apply 3 staples to seal the paper bag. Use the stapler attached to the table.
34. Perform **hand hygiene and drop** the paper bag in a **designated bin for used N95 masks**
35. **Swab the stapler** with an alcohol swab. Discard alcohol swab in yellow bag.
36. **Remove the final pair of gloves** as before using ‘glove in glove’ technique. Discard it in the **yellow BMW bag in the small pedal operated yellow bin** created near the N95 table, that will go for incineration. Press and release the pedal gently, so that it does not open and close with a jerk, as this may generate an aerosol.
37. Perform **hand hygiene** using alcohol-based hand rub
38. Final **inspection on surgical scrubs** (front and back) to see if there are any visible contamination, cuts, or tears is to be done by the observer.
39. Wear a surgical mask.

**Shower for HCW wearing SLR PPE (partial PPE)**

1. Go to duty room and pick up your personal clothes, towel, comb, extra socks and toiletries (uniform, in the case of HA or SA) and proceed to shower room.
2. **Remove your shoes** outside the shower room.
3. Wear the **OT slippers** placed outside the shower.
4. Push shower door open with your elbow. Enter the shower room.
5. Discard **mask** in **yellow BMW bag** in yellow bucket for incineration.
6. Gently place the **used surgical scrubs** in Red **perforated plastic bag in swinging-lid bin with 0.5% sodium hypochlorite**. Swing the lid open and close gently, so as not to generate aerosols.
7. Take a shower with soap and water, use individual towel and **change into personal clothes**.
8. If you wear spectacles, wash your spectacles with soap and water and dry them with the same towel that you used.
9. Wash your personal **socks with soap and water**. Carry them with you.
10. Wear fresh **surgical mask**
11. Dry the bottom of your OT slippers by wiping on the shower mat outside and **leave OT slippers** there for next person to use.
12. Sit on the stool
13. Wear your **extra pair of socks** you had brought from home in plastic bag and your **personal shoes**
14. Take the **right side of the CLR extn corridor** towards the exit of the corridor.

**Personal care activities after doffing**

- After doffing, the HCW must drink one-two glasses of ORS
- HCW must eat something

**DISINFECTION OF CONTAMINATED ITEMS**

**Disposable bio-medical waste**

a. **Examples** (the list includes, but is not limited to)
   - Disposable inner/outer pair of gloves, outer disposable surgical gowns, disposable surgical scrubs, surgical caps, shoe covers, transparency sheets
b. **Sterilization methods:**
   - Incineration
c. **Requirements (should be available BEFORE start of procedure)**
   - In the Covid unit doffing area, N95 table area & shower area
   - SA donned in full PPE and heavy-duty long gloves
• N.O. (donned in full PPE) will supervise SA. N.O. will instruct SA based on steps in a checklist.
• Yellow BMW bags
• Big pedal-operated yellow bin with lid OR large volume swinging-lid yellow bin
• Ties to tie the bag- kept in a box
• Box containing “Covid-19 waste” white on red stickers (to be used for waste from proven or suspect Covid +ve patients). Stickers are available from Sanitation office opposite Adv Urology Centre, Nehru hospital.

d. Procedure
• Once a day, SA will wipe the inside and outside of the yellow bin with 0.5% sodium hypochlorite solution
• At the beginning of each shift, SA must place 2 yellow BMW bags (one inside the other to make it double bagged) in the big yellow bin. SA must ensure enough supplies of bags, ties, stickers are placed in the doffing area/shower area. (in areas where SA’s are present in every alternate shift, the SA must ensure this at the beginning and end of every shift)
• Person doffing will discard item gently in yellow BMW bag kept in yellow bin. If using pedal-operated bin, he/she must press or release pedal gently so that lid does not open and close with a jerk, as that may generate aerosols. If using swinging-lid bin, he/she must swing lid gently.
• After everyone in the previous shift has finished doffing and showering, SA will tie the inner yellow bag tightly.
• Then, SA will tie outer bag tightly
• SA will lift the bags from the bin.
• Under strict supervision by N.O., SA will apply the red sticker “Covid 19 waste” on the outer bag.
• SA will perform hand hygiene with alcohol-based hand rub
• N.O. will instruct SA to place bags in a safe area until it is dispatched for incineration
• Every morning at 10 AM, sanitation department will send an HA with a designated trolley to pick up the bags

Reusable cloth items

a. Examples (the list includes, but is not limited to)
Reusable surgical scrub/ reusable gowns/ bed linen/ other cloth items
b. Sterilization methods: 0.5% Na hypochlorite disinfection followed by laundry
c. Requirements (should be available BEFORE start of procedure)
In the SI-NICU doffing area, shower room and in SI-NICU sluice room (for bed linen)
• SA donned in full PPE and heavy-duty long gloves
• N.O. (donned in full PPE) will supervise SA. N.O. will instruct SA based on steps in a checklist.
• Perforated RED plastic BMW laundry bags (ie. Bags with holes). SA will make holes in a set of bags with scissors in advance.
• Large RED pedal-operated big bin with lids to hold bags OR large RED swinging-lid bins
• Intact RED plastic BMW laundry bags (without holes). Bags with and without holes must be kept in separate, easily identifiable bags to avoid mix-up.
• 0.5% sodium hypochlorite solution in the BMW bin
• Stout wooden stick (to push items into hypochlorite)
• Leucoplast roll (or equivalent) to label hypochlorite bin
• “Covid Recyclable” black-and-white stickers (to be used for recyclable items from proven or suspect Covid +ve patients). Stickers are available from Sanitation office opposite Adv Urology Centre, Nehru hospital.
• Ties to tie the bag kept in a box
d. Procedure
• Once a day, SA will wipe the outside of the bin with 0.5% sodium hypochlorite solution
At the beginning of the shift, SA will place one RED perforated BMW laundry bag in the designated BMW bin. SA will pour 0.5% sodium hypochlorite solution in the perforated laundry bag until the solution fills two-thirds of the bin. SA will replace the 0.5% hypochlorite solution with freshly made solution once a day.

N.O. will give label to the SA stating time at which sodium hypochlorite solution was made and this will be stuck on the container.

Person doffing (for scrubs, gowns) or SA (for bed linen) will place item gently in the above perforated BMW laundry bags, ensuring that the item is immersed in the hypochlorite solution. If using pedal-operated bin, he/she must press or release pedal gently so that lid does not open and close with a jerk, as that may generate aerosols. If using swinging-lid bin, he/she must swing lid gently. A stout wooden stick must be provided to push the items in, in case they float. The stick must be kept right next to the bin. SA must disinfect it with 0.5% sodium hypochlorite in each shift.

20 minutes after the last person in the previous shift has finished doffing and showering, SA will tie the perforated bag tightly.

SA will lift perforated laundry bag, drain out hypochlorite into the bin.

SA will count the number of laundry items and transfer into a double bagged intact RED laundry bag (one bag inside another).

SA will tie the inner intact laundry bag, followed by the outer intact laundry bag.

Under strict supervision by N.O., SA will apply the black-and-white sticker “Covid 19 recyclable” on the outer bag. SA will write the number of laundry items with ballpoint pen.

SA will perform hand hygiene with alcohol hand rub.

N.O. will make an entry into the register for laundry. He/she will call up laundry and inform that items from Covid +ve/suspect will be sent.

Laundry will send an HA with a designated trolley to pick up the laundry bags.

**Gumboots**

a. **Sterilization methods:** 0.5% Na hypochlorite disinfection

b. **Requirements (should be available BEFORE start of procedure)**

   **In the SI-NICU doffing area**
   - SA donned in full PPE and heavy-duty long gloves
   - N.O. (donned in full PPE) will supervise SA. N.O. will instruct SA based on steps in a checklist.
   - Large bin with swinging lid (not pedal-operated), containing 0.5% Na hypochlorite solution
   - Perforated RED plastic BMW bags (ie. Bags with holes). SA will make holes in a set of bags with scissors in advance and keep separate from the bags without holes.
   - Intact RED plastic BMW bags (without holes)
   - Leucoplast roll (or equivalent) to label hypochlorite bin
   - Ties to tie the bag kept in a box

   **In SI-NICU washing area**
   - Running water and adequate space for washing
   - Scissor to cut open bags
   - Plain plastic bags to carry gumboots back to donning area

   **In donning area**
   - Rack/Flat surface to keep gumboots for drying

c. **Procedure (To be supervised by N.O.)**

   - Once a day, SA will wipe the outside of the bin with 0.5% sodium hypochlorite solution
   - SA will place one perforated RED BMW laundry bag in the big designated BMW bin. SA will pour 0.5% sodium hypochlorite solution in the perforated laundry bag until the solution fills two-third of the bin and cover with lid. SA will replace the 0.5% hypochlorite solution with freshly made solution once a day.
• N.O. will give label to the SA stating time at which sodium hypochlorite solution was made and this will be stuck on the container
• Person doffing will gently swing the lid of the bin open with one hand and will gently place gum boots in the perforated bag, making sure they are immersed in the 0.5% hypochlorite solution. He/she will place the lid back gently.
• 20 minutes after the last person in the previous shift has finished doffing, SA will tie the perforated bag tightly.
• SA will lift RED perforated plastic bag, drain out hypochlorite into the bin completely and transfer the perforated bag with its contents into intact RED plastic bag.
• SA will unlock the door at the end of the corridor and take bag to the washing room
• SA will wash gumboots thoroughly with water and drain out all the water
• SA will put empty used bags in yellow bin of BMW
• SA will perform hand hygiene with alcohol hand rub
• SA will put the damp gumboots in a plastic bag and leave the plastic bag in clean part of corridor.
• SA will lock the door at the end of the corridor
• SA will perform hand hygiene with alcohol hand rub
• At the beginning of the shift, fully donned SA or HA who has not yet touched any contaminated item, will pick the bag and bring it to the donning area
• SA/HA will place the gumboots on a rack in the donning area to air dry
  (Person who is donning, will pick a completely dried pair of gum boots for donning)

Goggles and face shields

a. Sterilization methods: Rubbing alcohol (hospital-grade spirit) followed by ETO. [Do not use 0.5% hypochlorite as it has been shown to cause opacification and residual chlorine, if not thoroughly washed, stings the eyes]

b. Requirements (should be available BEFORE start of procedure)

  In the SI-NICU doffing area
  • HA donned in full PPE and heavy-duty long gloves
  • N.O. (donned in full PPE) will supervise HA. N.O. will instruct HA based on steps in a checklist.
  • Plain plastic BMW bags
  • Large RED Pedal-operated bins with lids to hold bags
  • RED BMW bags
  • Hospital spirit (rubbing alcohol)
  • Large gauze pieces
  • Plastic sheet to place goggles and face shields after disinfection with spirit
  • ETO sterilization bags (from CSSD) or green ETO bags
  • Strips of leucoplast pre-cut
  • Yellow and white draw sheets
  • Table to place draw sheets and ETO bags
  • Ties to tie the bag kept in a box
  • “Covid Recyclable” black-and-white stickers (to be used for recyclable items from proven or suspect Covid +ve patients). Stickers are available from Sanitation office opposite Adv Urology Centre, Nehru hospital.
  • Designated trolley

  c. Procedure
  • Once a day, HA will wipe the inside and outside of the designated bin with 0.5% sodium hypochlorite solution
  • At the beginning of each shift, HA must place 2 RED BMW bags (one inside the other to make it double bagged) in the big designated bin. HA must ensure enough supplies of bags, ties, stickers are placed in the
doffing area. (in areas where SA’s are present in every alternate shift, the SA must ensure this at the beginning and end of every shift)

- Person doffing will discard goggles and face shield gently in RED BMW bag kept in designated bin. Especially, he/she must not drop face shields, as they may break. He/she must press or release pedal gently so that lid does not open and close with a jerk, as that may generate aerosols.
- After everyone in the previous shift has finished doffing, SA will tie the inner bag tightly
- Then, HA will tie outer bag tightly
- HA will perform hand hygiene with alcohol hand rub
- HA will unlock the door at the end of the corridor and take back to the washing room
- HA will open the bag containing the goggles and face sheet and will keep a plastic sheet open on the platform
- HA will use a gauze soaked with spirit to swab all surfaces of the goggles and face shield. If there are any sponge components, they should be soaked with spirit.
- HA will place goggles and face shields on open plastic sheet. Spirit should be allowed to dry completely.
- HA will bring the goggles and for shields back to the donning room.
- HA will lock the door at the end of the corridor.
- HA will place goggles and face shields inside the ETO bags (from CSSD). HA will seal the ETO bag with sticky tape (leucoplast or brown tape or micropore)
- HA will perform hand hygiene with alcohol hand rub
- N.O. will call CSSD to fix time for receipt of items for ETO sterilization
- N.O. will make an entry into the register for ETO sterilization
- HA will carry the ETO sets to gamma knife center in Covid 19 trolley.
- CSSD Staff at gamma knife center will sterilize materials as per their SOP.
- In case ETO is unable to do, send GOGGLES in plasma sterilization bags to CSSD after informing Dr Shweta Talati. Do not send face shields for plasma sterilization.
- After bringing Covid 19 trolley back to the unit, HA must perform hand hygiene with alcohol hand rub

**OT slippers (used in doffing process)**

a. **Sterilization methods**: 0.5% Na hypochlorite disinfection

b. **Requirements (should be available BEFORE start of procedure)**

   In the SI-NICU shower area
   - SA donned in full PPE and heavy-duty long gloves
   - N.O. (donned in full PPE) will supervise SA. N.O. will instruct SA based on steps in a checklist.
   - Tub without lid (not pedal-operated), containing 0.5% Na hypochlorite solution
   - Leucoplast roll (or equivalent) to label hypochlorite bin
   - Plain plastic bags to carry OT slippers

   In SI-NICU washing area
   - Running water and adequate space for washing
   - Plain plastic bags to carry OT slippers

   In doffing area (clean section)
   - Rack to keep OT slippers for drying

d. **Procedure**

   - SA will place tub outside shower area, near the spot where personal shoes of all staff will be placed. SA will pour 0.5% sodium hypochlorite solution in the tub until the solution fills half of the tub. SA will replace the 0.5% hypochlorite solution with freshly made solution once a day
   - Once a day, SA will wipe the outside of the tub with 0.5% sodium hypochlorite solution
• N.O. will give label to the SA stating time at which sodium hypochlorite solution was made and this will be stuck on the container
• After shower, person doffing will gently place OT slippers in the tub, making sure they are immersed in the 0.5% hypochlorite solution.
• 20 minutes after the last person in the previous shift has finished showering, SA will pick the OT slippers from the tub, drain excess hypochlorite and place in a plastic bag. No need to tie the bag.
• SA will unlock the door at the end of the corridor and will take bag to the washing area
• SA will wash OT slippers thoroughly with water and drain out all the water
• SA will put the damp OT slippers in a plastic bag, bring it back to the clean section of the doffing area
• SA will lock the door at the end of the corridor
• SA will take OT slippers out of the bag and will place the OT slippers on a rack in the doffing area to air dry
• SA will perform hand hygiene with alcohol hand rub
  (Person who is doffing, will pick a completely dried pair of OT slippers, when required)

Procedure sets

a. Examples (the list includes, but is not limited to)
   Surgical sets, cut-down sets, lumbar puncture sets
b. Sterilization methods: Cidex (glutaraldehyde) and 0.5% Na hypochlorite disinfection
c. Requirements (should be available BEFORE start of procedure)
   • HA donned in full PPE and heavy-duty long gloves
   • N.O. (donned in full PPE) will supervise HA. N.O. will instruct HA based on steps in a checklist.
   • Perforated RED plastic BMW laundry bags (ie. Bags with holes). SA will make holes in a set of bags with scissors in advance.
   • Large red pedal-operated big bin with lids to hold bags OR large red swinging-lid bins
   • Intact RED plastic BMW laundry bags (without holes). Bags with and without holes must be kept in separate, easily identifiable bags to avoid mix-up.
   • 0.5% sodium hypochlorite solution in the BMW bin
   • Bucket with Cidex
   • Stout wooden stick (to push items into hypochlorite, if required)
   • Leucoplast roll (or equivalent) to label hypochlorite bin
   • “Covid Recyclable” black-and-white stickers (to be used for recyclable items from proven or suspect Covid +ve patients). Stickers are available from Sanitation office opposite Adv Urology Centre, Nehru hospital.
   • Ties to tie the bag kept in a box
   • Designated trolley
d. Procedure
   • Once a day, HA will wipe the outside of the bin and bucket with 0.5% sodium hypochlorite solution
   • HA will place one perforated RED BMW laundry bag in the big designated BMW bin. HA will pour 0.5% sodium hypochlorite solution in the perforated laundry bag until the solution fills two-third of the bin and cover with lid. SA will replace the 0.5% hypochlorite solution with freshly made solution once a day
   • HA will prepare fresh 2% Cidex solution in a bucket once in 14 days.
   • N.O. will give labels to the HA stating time at which sodium hypochlorite solution was made and date at which Cidex solution prepared and these will be stuck.
   • HA will immerse all metallic components (tray, surgical equipment etc) in Cidex for 20 minutes, and wash thoroughly with water
   • HA will immerse all cloth components (draw sheet etc) in 0.5% sodium hypochlorite for 20 minutes, drain the hypochlorite and remove the items
   • HA will discard all the disposable items (if any) into the yellow BMW bags for incineration
HA will pack above items in the set, under supervision of N.O.
HA will apply the black-and-white “Covid recyclable” sticker on the outside of the set
N.O. will inform CSSD that sets will be sent
HA will carry the set to CSSD for autoclaving

**Transport trolley, transport box, intubation box, Embrace gel pack**

a. **Sterilisation method**: 0.5% sodium hypochlorite

b. **Requirements (should be available BEFORE start of procedure)**
   - HA donned in full PPE and heavy-duty long gloves
   - N.O. (donned in full PPE) will supervise HA. N.O. will instruct HA based on steps in a checklist.
   - 0.5% sodium hypochlorite
   - Cotton swabs

c. **Procedures**
   - HA must disinfect these items immediately after transport of a baby to/from SINICU
   - HA brings the transport trolley with box outside doffing room
   - HA checks the box for any disposable items like Urobag, nasal prongs, linen etc. and dispose of them in relevant BMW bins
   - HA unlocks the door at the end of corridor for washing room
   - HA transports the trolley with box to the washing room
   - HA places the transport box aside, on a platform
   - HA wipes the entire surface of the trolley
   - HA removes the cloth cover of the *Embrace*, immerse in 0.5% hypochlorite for 20 min
   - HA washes the cloth cover thoroughly
   - HA wipes the gel pack of the *Embrace* with 0.5% hypochlorite solution
   - HA wipes inside & outside surfaces of transport box, intubation box with 0.5% hypochlorite
   - HA parks trolley with transport box and intubation box in the corridor, after drying
   - HA locks the door at the end of corridor for washroom
   - HA brings the gel pack of embrace and damp cloth cover to the donning room
   - Cloth cover is put to dry in the donning room

**Items whose disinfection protocols are under development**

Tyvek coverall gas plasma or ETO sterilization. Do not use or send for sterilization until protocol finalized.
Autoclavable coveralls: Autoclaving. Do not use or send for sterilization until protocol finalized.

**N95 RESPIRATORS**

There is a separate SOP for N95 respirators. Kindly refer to it.

**Any other items not covered above**

Use current protocols. Use double bags. Label appropriately as above.

**Check-lists for disinfection**

- Detailed stepwise checklists have been made based upon the above disinfection protocols
- The checklists have been organized based on the temporal sequence of activities of SA & HA
- They are divided into the following sections:
  - Disinfection of items generated in previous shift
  - Disinfection of items generated in current shift
- Preparation for disinfection of items generated in next shift
  - There are 2 folders in the SI-NICU: one containing blank checklists, and one containing filled checklists
  - The N.O. in SI-NICU must supervise the SA & HA as per the disinfection checklists and fill up the blank checklists and file them in the folder in each shift. All checklists must be signed at the appropriate place.

**Reconstitution of 0.5% Sodium Hypochlorite**

To reconstitute 0.5% Sodium Hypochlorite from hospital supply of 4% Sodium Hypochlorite

<table>
<thead>
<tr>
<th>Final volume</th>
<th>4% hypochlorite</th>
<th>Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 Litres</td>
<td>8 L</td>
<td>52 L</td>
</tr>
<tr>
<td>40 Litres</td>
<td>5 L</td>
<td>35 L</td>
</tr>
<tr>
<td>30 Litres</td>
<td>4 L</td>
<td>26 L</td>
</tr>
<tr>
<td>20 Litres</td>
<td>2.5 L</td>
<td>17.5 L</td>
</tr>
</tbody>
</table>

**NEONATAL RESUSCITATION AND TRANSPORT**

**Preparation for delivery and transport in all areas**

<table>
<thead>
<tr>
<th>Item</th>
<th>Requirements/Plan</th>
<th>Responsibilities for placing/disposal/decontamination</th>
<th>Supervision by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport Equipment</td>
<td>1. Indigenously designed trolley with transparent Aero-protect box 2. Oxygen Cylinder (cylinder has to be tied with the trolley permanently)</td>
<td>1. HA to keep ready for transport 2. HA to decontaminate outside &amp; inside of aero-protect box, surfaces of trolley and oxygen cylinder with 0.5% hypochlorite at end of transport 3. HA to take back trolley, aero-protect box and cylinder to delivery location after sanitization to be left in the delivery area for use for the next delivery</td>
<td>1. SR on Covid call 2. N.O. – SI-NICU 3. N.O. – SI-NICU and nurse of delivery area</td>
</tr>
<tr>
<td>Equipment required for each delivery (other than the fixed ones like warmer, blender, oxygen)</td>
<td>• Intubation tray - Face-mask (size 0 and 1), Ambu with reservoir, O2 tubing, Laryngoscope with blades (00, 0, 1), 2 mL syringe, Uro Bag, T-piece (green), and Tubing for indigenous CPAP, RAM Cannula • Appropriate ETT (2.5, 3, 3.5)- Preferably cuffed • Drug tray- Prefilled, diluted labelled syringes with drugs - Adrenaline, Saline flush, Dynaplast with non-sticky edges, Durapore • Embrace (for &lt; 34 weeks if available) • 10% D + Pedia drip set</td>
<td>N.O. arranges for all items.</td>
<td>Senior most doctor who goes for delivery</td>
</tr>
<tr>
<td>Item</td>
<td>Requirements/Plan</td>
<td>Responsibilities for placing/disposal/decontamination</td>
<td>Supervision by</td>
</tr>
<tr>
<td>------</td>
<td>------------------</td>
<td>-------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Resuscitation kit</td>
<td>A preassembled resuscitation kit has been made for emergency use in places where it is not possible to organise resuscitation equipment in advance. This is kept in the Covid almirah (NICU corridor)</td>
<td>SR Covid will take along to the concerned area</td>
<td>Covid consultant on call</td>
</tr>
</tbody>
</table>
| Respiratory Support en route | **CPAP:** Restricted Use (<1kg/<32 weeks with Downes score 4-6) else use Nasal prongs \( O_2 \)  
**Intubate** if deemed necessary (elective if <32 ks/1kg with Downes score >6) and shift on manual IPPR | For babies on CPAP: Resident shall accompany the baby and will ensure that nasal interface is in place and the CPAP is working properly.  
For intubated baby  
Resident shall transport the baby to the SI-NICU while doing manual IPPR | SR on Covid call |
| Warmth | • ≥ 34 weeks- Cover with the disposable sheets used to receive the baby  
• < 34 weeks – Use Embrace baby wrap if available; otherwise cover the baby in three cloth sheets | N.O. | Seniormost doctor attending delivery |
| Fluid | Avoid giving fluids/medications during transport unless a delay of more than 30 minutes is anticipated or baby needed extensive resuscitation (Chest compression)  
If unavoidable, Use Pedia Drip Det Doctor inside Delivery Room – fluid prescription  
Nurse – prepares and attaches fluid | | SR on Covid call |
| Personnel | Resuscitation residents  
For intubated baby- SR/senior JR to accompany if already not inside DR | • For uncomplicated delivery (>35 weeks) - N.O. will attend delivery (JR will be donned but wait outside as standby)  
• For (<35 weeks) - N.O. + JR (SR donned, standby outside)  
• For < 30 weeks gestation/ Fetal distress or any other risk factor that may warrant resuscitation – N.O. + SR | SR+ Consultant on Covid call |
<table>
<thead>
<tr>
<th>Item</th>
<th>Requirements/Plan</th>
<th>Responsibilities for placing/disposal/decontamination</th>
<th>Supervision by</th>
</tr>
</thead>
</table>
| Disinfection | • Laryngoscope without batteries and blades; AMBU Bag, Masks, Reservoir, T-piece (green): Dip in Cidex for 2 minutes and wash thoroughly with water  
• Uro Bag, and Tubing for indigenous CPAP, RAM Cannula, ET Tubes should be packed in plastic packets- If not opened then clean with alcohol swab from outside and let it dry. If the pack is opened, then discard it.  
• Adrenaline and NS- keep prefilled syringe and discard if remains unused  
• Dynaplast: Small pre-cut sticking should be kept in kit and should discard if unused.  
• Embrace cover and Cloth sheets: Remove the blue cover and dip it into 0.5% sodium hypochlorite solution for 30 minutes. Then send for laundry.  
• The items which are unused and are placed inside sealed plastic envelopes – Clean with alcohol swab and let it air dry | Nurse                                                  | SR on Covid call                                      |
Neonatal transport pathways

**CD ward or MTP-OT or SLR to SI-NICU**

- Delivery in tetanus room, CD ward
- Delivery in MTP OT
- Delivery in SLR

ANS of CD ward/ MTP-OT/SLR ward will call security control room (7005 or 6100) to send 2 guards to clear transport route of people and prevent movement until transport & sanitization complete

Shift the baby inside the indigenous trolley with acrylic transport box, warm with “Embrace” and exit to the corridor. HA will push trolley. All personnel will be fully donned.

- Walk along CD ward corridor to Passageway connecting CD ward to Blood bank
- Walk along the maternity ward corridor (follow the floor marking for dirty side) till the door of the maternity ward
- Walk along SLR corridor till the door of the Gyne ward. Turn right beyond CLR towards CLR Extn

Move to Indoor sample collection corridor (front of maternity ward) & walk straight, follow green floor markings) of the corridor till CLR Extn entrance door

- Walk along CLR extension corridor while being on right side (follow the floor markings)

Enter SI-NICU (through entrance door of 1st room - follow the floor markings) --> exit the first room --> walk through aluminium partition to reach 2nd room entrance door

Hand over baby to treating team in SI-NICU

If next delivery imminent: Team goes back to CD ward/MTP-OT/SLR area fully donned
If no delivery imminent: JR and N.O. of Covid delivery team doff completely, whereas HA enters SI-NICU to continue duty

ANS of CLR Extn calls sanitation (6406 or 7008) for sanitisation of the transport route and tells them start and end point of route.
15 minutes after route is sanitised, security guards disperse and route is open
SI-NICU to NHE Block

N.O. in SI-NICU/SLR/Maty ward will inform NHE about status of the baby and expected time to reach NHE. Pediatric team in NHE activated.

N.O. in SI-NICU/SLR/Maty ward will call NHE Covid ambulance (9404) to come to the door of CD ward block, Nehru Hospital. Will inform whether baby needs oxygen during transport

ANS CLR Extn will inform security control room (7005, 6100) to cordon transport route from SI-NICU/SLR/Maty ward up to CD ward ramp until transport & sanitization complete. Will call sanitation (6406, 7008) to sanitise the transport route immediately after baby is transported. Security guards will disperse after sanitisation.

Fully donned Covid delivery JR + HA ± Neo Sr will transport neonate in acrylic transport box on trolley following the green line until it ends at the CD Ward ramp on Level 3. They will transport the neonate by ramp to ground level, at the door of CD ward block near radiotherapy OPD, Nehru Hospital. Oxygen provided by oxygen cylinder attached to trolley

The box containing baby shall be shifted to ambulance. Trolley with oxygen cylinder will also be loaded into the ambulance. If baby is on CPAP/prongs/intubated, the same equipment/interface shall be continued. Oxygen will be provided from the ambulance oxygen

At NHE, Neonatal team will offload the transport box containing the baby and the trolley at C2 block gate. If baby is on CPAP/prongs/intubated, the same equipment/interface shall be continued. Oxygen will be provided from the oxygen cylinder.

Neonatal team will hand over the baby to the Pediatric team at the destination location in NHE. Will ask Pediatric team to call security control room and sanitization in Nehru Hospital to cordon and sanitise the route within Nehru Hospital on the return journey of the neonatal team (this is necessary as the neonatal team will not be carrying a phone).

Neonatal team returns to SI-NICU, by the same ambulance, following the same route.

HA of SI-NICU/CLR Extn will sanitise the trolley and the transport box
### CLR to NICU or NNN (non-Covid patients)

Shift the baby inside **transport incubator** & Exit from the door near CLR OT (**PGI staff lift**)  
If this lift is non-functional, use the big lift infront of the Gynecology ward  
Worst case of all lifts being non-functional, use the circular ramp to reach level 2 in front of the advanced urology center

- On exit from the lift, turn right and move through corridor and take first right  
  (You will see **Gastro ward**)  

- Move towards Gastro ward till the end and take the lift situated on your left  
  If lift non-functional, carry the wrapped baby --> climb up the stairs to reach **level 3 in front of NICU**

- Go to NICU or NNN

### NUPE to APC SARI ward

- Baby suspected when brought to triage APC 2D or suspected after admission to NUPE

- NUPE SR in consultation with Neonatology Consultant decides to shift the baby to 5C

- Baby is first shifted to Respiratory Isolation Room in 2B APC emergency **(2210-11)**

- NUPE SR provides telephonic consultation for ongoing management in respiratory isolation. NUPE SR calls APC SARI ward and organises transfer

- Respiratory isolation team transports neonate in acrylic transport box on trolley through APC 2D main door and lift No. 6 of C Block

- Baby is moved to APC SARI ward into the Pediatric isolation unit
**SI-NICU to Gynae ward (proven Covid negative patients)**

- N.O. of SI-NICU informs parents as well as Gynae ward N.O. about the transfer of the baby.
- SI-NICU N.O. will wrap the baby well in “Embrace” or clothes given by parents.
- SI-NICU N.O. will place the wrapped baby inside a decontaminated acrylic transport box and, with SI-NICU HA pushing the trolley, will bring it till the entrance door of CLR Extn. The undonned HA (regular HA of CLR-Extn) will push trolley from door to Gyne ward.
- The undonned N.O. (or back up delivery JR) shall accompany the baby to Gyne ward.
- The CLR Extn ward HA shall take back the transport box and trolley and leave at door of CLR Extn.
- Neo N.O. or JR will handover the baby to the Gyne ward N.O. and return back to the Donning Room. SI-NICU HA will collect transport box, trolley and take for decontamination.

**SI-NICU to NICU/NNN (proven Covid negative patients)**

- N.O. of SI-NICU informs parents as well as NICU/NNN N.O. about the transfer of the baby. NICU N.O. will confirm that Gastro lift is working. Do not transfer if that lift is not working.
- SI-NICU N.O. will wrap the baby well in “Embrace” or clothes given by parents.
- SI-NICU N.O. will place the wrapped baby inside a decontaminated acrylic transport box and, with SI-NICU HA pushing the trolley, will bring it till the entrance door of CLR Extn. The undonned HA (regular HA of CLR-Extn) will push trolley from door to CLR F block lift, take to first or gd floor, across to Gastro lift and up to NICU floor.
- The un-donned N.O. (or back up delivery JR) shall accompany the baby to Gyne ward.
- The CLR Extn ward HA shall take back the transport box and trolley and leave at door of CLR Extn.
- Neo N.O. or JR will handover the baby to the NICU/NNN N.O. and return back to the Donning Room. SI-NICU HA will collect transport box, trolley and take for decontamination.
NEONATAL COVID AREAS

Map

- Obs shower
- Obs Doffing room
- MTP-OT Delivery room
- Neonatal nursery
- Gyne ward
- SLR
- NICU
- CLR Delivery Area
- CD Ward delivery area
- MTP-OT Area
- Maternity Covid cubicles
- Obs Donning room
- Obs-Gyn Offices
- Ogb entrance
- Ogb screening
- CLR Extn N.O. duty room
- Neo Donning room
- SI-NICU
- Neo Doffing room
- CLR Extn HA SA duty room
- Neo Shower
- Duty room

Common part of path for attending delivery after donning and returning to SI-NICU
Attending delivery in MTP-OT
Attending delivery in CD ward
Shifting baby from CLR to NICU/NNN
Staffing pattern and responsibilities

**Staffing Pattern for SI-NICU and COVID Delivery**

<table>
<thead>
<tr>
<th>Time</th>
<th>Consultant</th>
<th>SR</th>
<th>JR</th>
<th>Nursing Officer</th>
<th>Nursing Officer</th>
<th>HA</th>
<th>SA</th>
<th>JR</th>
<th>Nursing Officer</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 AM-2PM</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2PM-8PM</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8PM-2AM</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2AM-8AM</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Responsibilities of Resident doctors & Nursing Officers**

- As soon as news of suspected Covid delivery in SLR, MTP-OT or CD ward is received, the Covid SR will immediately activate both the SI-NICU team and the Covid delivery team.
- The SR on COVID duty will attend the COVID deliveries (if required) in SLR, MTP OT, CD ward, as well as NHE. The details of number and type of personnel required for Covid delivery is given in Universal SOP for Transport and delivery.
- If there are no deliveries, s/he will supervise the S-NICU. S/he may not be required to be physically present in SI-NICU all the time, but should remain within the premises during duty hours.
- The JR in SI-NICU will be primarily responsible for management of neonates admitted there and shall take decisions in consultation with SR on duty for SI-NICU. The consultation may be in form of phone call/video call or in person visit.
- The JR on COVID delivery duty may be called for deliveries (if required, at discretion of SR on duty) in SLR, MTP-OT and CD ward.
- The N.O.s posted for COVID delivery shall be responsible for attending/assisting all COVID deliveries in MTP-OT and CD ward. The low risk deliveries will be attended by N.O. only and JR will be on standby. The decision of the risk assessment will be taken by SR on duty.
- JR and N.O. will bring baby back to SI-NICU; hand over to SI-NICU team. If there is another delivery imminent, they will go for the delivery. If there is no imminent delivery, they will completely doff in the SI-NICU doffing area and will exit.
- N.O. of Covid delivery duty may be called for attending delivery in NHE if the need arises. This decision will be on case to case basis in consultation with “Consultant on COVID duty”. This N.O. on duty need not attend elective C-sections done in MTP-OT, as they will be attended by Circulation N.O. of MTP OT.
- N.O. posted in SI-NICU shall be responsible for all aspects of nursing care for the babies admitted there. At present there are two N.O. posted in every shift. If the number of babies admitted in SI-NICU are less and manageable by one N.O., the second N.O. of the shift will sit inside donning room (in hospital scrubs+ surgical mask only) and shall be doing paper work of the Nursing activities as well as will document JR notes. The JR will dictate the notes to be written in the file over telephone and the same shall be cross checked by the SR. To decide which N.O. will go inside SI-NICU, will be based on the previous rotation of the N.O. If one has done inside duty in previous shifts, another will go for patient care and vice versa. In case both N.O.’s had done patient care duty or paper work only, the decision of which N.O. shall remain undonned shall be taken based on their mutual consensus or by the Consultant Incharge only. The roster shall be made in such a way that one among the combination already has done inside will do paper work and vice versa.
- Also, the N.O. sitting in donning room shall co-ordinate the laundry, CSSD, and supplies etc. as the donned nurse cannot come out during the entire shift.
- The N.O. in SI-NICU must supervise the SA & HA as per the disinfection checklists and fill up the blank checklists and file them in the folder in each shift. All checklists must be signed at the appropriate place.
• The HA and SA of the designated shift shall be accountable for finishing their designated tasks during the given shift. Their work shall be supervised by N.O. of that shift.

• The area N.O. has the primary responsibility of neonates born to asymptomatic mothers and who are roomed in with their mothers in SLR or maternity ward. She/he will be responsible for checking the vital parameters regularly, maintaining temperature, performing blood glucose by glucose meter, ensuring adequate breastfeeding and troubleshooting common breastfeeding-related issues. The N.O. will inform the Covid delivery JR in case any of these stable newborns have any problems. The JR will try and sort out problems telephonically. If they cannot be sorted out telephonically, the JR will visit the neonate, wearing partial PPE (SLR PPE) without face shield (unless some aerosol generating procedure is potentially required). In case such a neonate requires a higher level of care, it will be shifted to the SI-NICU.

Responsibilities of SA (sequence of activities)

• Report to the Covid-19 Nursing Officer of CLR-Ext.
• Goes inside donning room and clear all bins.
• Dons full PPE and heavy-duty long gloves (SA should be amongst the 1st few people to don)
• Carries 8 pairs of clean OT slippers along.
• First enters Clean Room of Doffing area from corridor (N.O. to give instructions)
  o Ensures at least 8 pairs of OT slippers on rack on clean side.
  o Checks 1 can of sterilium available. Replaces if finished.
  o Checks 1 open box (currently in use) of gloves & 1 closed box of gloves available in clean area of doffing room. Replaces if finished.
• Then goes inside SI-NICU. Sanitises floor of SI-NICU, clear all bins inside SI-NICU, sanitise floor of corridor leading to SI-NICU, and floor of CLR-N-Extn-I. Cleans suction bottles.
• Approximately one hour after entry, after everybody from previous shift has doffed and showered, goes to doffing area and performs “Disinfection of items generated in previous shift”, (BUT NOT goggles, face shields and procedures sets), as per the checklist, under supervision of N.O.
• Performs “Preparation for disinfection of items in next shift”, as per the checklist, under supervision of N.O.
• Sanitises floor of corridor from entry of SI-NICU to floor around N95 table, corridor leading up to shower and shower.
• Whenever there is 2nd SA available or if the single SA does not have work in SI-NICU (no patient), he/she will not be donned
  o That person will sanitise floor of donning room
  o Then sanitise remaining floor area of full CLR-Extn up to the back of the corridor, including patient toilets and washing room
  o Empty bins of all areas in CLR Extn except those covered by 1st SA
• 1st SA doffs along with the rest of the team
• Leaves at the end of the shift

Responsibilities of HA (sequence of activities)

• Report to the Covid-19 Nursing Officer of CLR-Ext.
• Goes inside donning room.
• First goes to shower room BEFORE donning (under instruction from N.O.)
  o Checks whether one open box (currently in use) and one closed box of surgical masks in shower room. Replace if finished.
  o Puts required number of scrubs. (total should be at least 18 at 8 am & 15 at 8 pm)
  o Ensures liquid bath soap is at least half full. Tops up if required.
  o Ensures 15 towels available (24-h requirement)
• Then, dons full PPE and heavy-duty long gloves
• MORNING HA goes to N95 table (under instruction from N.O.)
Ensures at least 30 brown bags on N95 table. (24-h requirement). If less, N.O. will provide remaining brown bags from stock.

Ensures at least 30 surgical masks on N95 table (24-h requirement). If less, N.O. will provide remaining masks from stock.

- **Then goes inside SI-NICU.** Sanitises all door handles, doors, knobs, telephones, ventilator knobs, drip stands, medicine trolleys, light switches, chairs, tables
- Cleans AC filter with soap & water. Wipes rest of AC with eco-shield.
- Sanitisies medical equipment with eco-shield
- Sanitisies sink in SI-NICU
- In case required, washes milk bottles, katoris, sanitisues induction cooker
- Performs Disinfection of procedures sets inside SINICU, under supervision of N.O.
- Carbolises shelves, walls, surfaces
- After approximately 3 hours from entry, again sanitis all door handles, doors, knobs, telephones, ventilator knobs, drip stands, medicine trolleys, light switches, chairs, tables. This step is optional and may be dropped if there is only a single HA, and he/she has to go for deliveries, samples or ETO/plasma.
- Then HA goes to doffing area and performs “Disinfection of items generated in previous shift” for goggles and face shields, as per checklist, under supervision of N.O.
- **Then sanitis N95 table**
- **Whenever there is 2nd HA available, or if the single HA does not have work in SI-NICU (no patient),** he/she will not be donned
  - That HA will sanitis shower door, other doors, knobs and handles in the area
  - Sanitisefurniture, doors, mirrors of donning room
  - Deposit samples
  - Deposit items for sterilisation
  - Sanitis doors, knobs, walls, telephones, bed rails, in rest of the ward
- **1st HA doffs along with the rest of the team**
- Leaves at the end of shift

### Functions of each area

There are 6 areas where neonates with suspected or proven Covid infection could be located.

<table>
<thead>
<tr>
<th>Area</th>
<th>Type of neonates</th>
<th>Responsibility of management</th>
<th>Supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roomed-in with mother in SLR</td>
<td>Mother Covid tested and asymptomatic. NVD. Baby: ≥35 weeks, ≥1.8 kg, clinically stable, mother capable of looking after baby. Baby delivered in SLR. Baby will be managed here unless proven Covid +ve.</td>
<td>N.O. in SLR (breastfeeding issues, warmth, monitoring glucose)</td>
<td>Covid delivery JR and SR</td>
</tr>
<tr>
<td>Roomed-in with mother in Maternity ward</td>
<td>Mother Covid tested and asymptomatic. LSCS in MTP-OT. Baby: ≥35 weeks, ≥1.8 kg, clinically stable, mother capable of looking after baby. Baby will be managed here unless proven Covid +ve.</td>
<td>N.O. in Maternity ward (breastfeeding issues, warmth, monitoring glucose)</td>
<td>Covid delivery JR and SR</td>
</tr>
<tr>
<td>SI-NICU</td>
<td>Mother Covid suspect.</td>
<td>N.O. &amp; JR in SI-NICU</td>
<td>Covid team SR and faculty</td>
</tr>
</tbody>
</table>
Baby: <35 weeks, or <1.8 kg, or clinically unstable, or mother incapable of looking after baby or mother symptomatic for Covid. Baby will be managed here unless proven Covid +ve

| APC SARI ward | Outborn neonates with suspected Covid will be managed here, unless they are proven Covid +ve | Pediatric JR in APC SARI ward | Pediatric SR in APC SARI ward and Pediatric faculty in APC Covid team. Neonatology Covid SR will provide consultation if required.
|---------------|------------------------------------------|-------------------------------|--------------------------------|
| NHE, roomed-in with mother in NHE isolation | Mother proven Covid +ve, delivered in or transferred to NHE. Baby: ≥35 weeks, ≥1.8 kg, clinically stable, mother capable of looking after baby. Baby will be kept with mother, irrespective of whether baby itself is Covid +ve or -ve. | Pediatric JR in NHE roster | Pediatric SR in NHE roster and Pediatric faculty on Covid duty. Neonatology covid SR & faculty will provide consultation if required.
| NHE, Pediatric set-up | Mother proven Covid +ve, delivered in or transferred to NHE. Baby: <35 weeks, <1.8 kg, or clinically unstable, or mother incapable of looking after baby. Baby will be kept here, irrespective of whether baby itself is Covid +ve or -ve. | Pediatric JR in NHE roster | Pediatric SR in NHE roster and Pediatric faculty on Covid duty. Neonatology covid SR & faculty will provide consultation if required.

- NHE: All proven Covid positive neonates will be managed here. Occasional exceptions could be neonates born to suspected mothers in Nehru Hospital who turn out to be Covid positive but are too unstable to be transported to NHE; or outborn neonates in APC SARI ward who turn out to be Covid positive but are too unstable to be transported to NHE. These should be the rarest of the rare situations, and the decision will be taken at consultant level in the best interest of the concerned neonate and other patients in the facility.

- Donning room control desk: An undonned N.O. and/or JR mans the control desk in the donning room. This control desk has (a) a landline telephone [6292], (b) patient files of all the patients in SI-NICU or maternity ward neonatal cubicles, (c) Nursing Observation Chart, (d) all investigation forms and special forms for patient files, (e) computer with Internet connection, (f) printer.

- HCW manning the donning room will be responsible for:
  - Filling the Nursing Observation Chart, in telephonic consultation with SI-NICU
  - Keeping the patient’s file up-to-date
  - Filling investigation forms and sending these forms by WhatsApp wherever required
  - Printing screenshots of baby’s pictures (as mentioned under communication with parents)
  - Undonned SR can communicate with parents from this phone
  - Remotely acting as the buddy to the person doffing by using the CCTV footage in the computer and instructing over speaker
  - ANS can monitor SI-NICU activities

As of 11-5-20, Pediatric (including neonatal) patients were being managed in main ICU, NHE. There is a proposal to develop the Hepatology HDU on level II, NHE as the Pediatric/neonatal ICU/HDU.
Baby’s footprint, gender, file

- The baby’s footprint will be taken on the register by the N.O. of the area in which the delivery took place.
- If the baby remains roomed in with the mother in either maternity ward or SLR, the N.O. of that area will show the gender of the baby to the relatives and take their signature on the register.
- If the baby is transferred to SI-NICU, the JR of SI-NICU will click a whole-body photograph, in which the gender is identifiable, on the SI-NICU smartphone and will send this to the undonned team member in the donning area. The father will be called to the donning area, shown the photograph, and he will sign confirming the gender of the baby in the baby’s hospital file.
- If the baby remains roomed in with the mother in either maternity ward or SLR, the N.O. of that area will give a slip to the relatives to get the baby’s file made under that respective ward.
- If the baby is transferred to SI-NICU, the slip will be provided by the N.O. in the donning area to a patient’s relative. The file will be made under SI-NICU.

Admission, transfer and discharge

- A new ward has been “created” in the hospital information system, called SI-NICU.
- N.O.s have to log into the HIS, using the username and password for SI-NICU to show admission, discharge and transfer of these neonates.
- User ID is adt_sinicu. Temporary password is 1234567.

Clinical care, Monitoring and Record maintenance

- To the extent possible, monitoring of neonates will be done electronically. The monitors in SI-NICU have been placed in such a way that they are easily visible from the central sitting area in SI-NICU. Avoid unnecessary physical examination and physical monitoring.
- Clinical care activities should be clustered as far as possible. Physical monitoring, observation, nonemergency ventilator changes, gavage feeding, blood and body fluid sampling, nonemergency fluid changes, starting and ending blood product transfusion, diaper changes etc should be planned out in advance by the JR, SR and N.O. and clubbed so that no more than 2 direct patient contacts are required in any six-hour shift.
- JR and N.O. should be flexible in doing each other’s activities, so that all medical and nursing activities can be completed in a single HCW contact with the patient.
- As far as possible, feeding should be 3 hourly rather than 2-hourly. One hourly feeding is prohibited.
- During the stay in SI-NICU, spoon feeding should be avoided. All feeding should be as gavage feeding. This is to prevent prolonged durations of contact with the neonate while spoon feeding. Most newborn infants are expected to stay for a maximum of 5 to 6 days, as they will either be transferred to a routine neonatal area (if the test is negative) or to NHE if the test is positive.
- For a Covid positive neonate managed in NHE, delay transition from gavage feeds to spoon feeds until one is absolutely sure that the neonates will actively take spoon feeds.
- In the rare event that a Covid positive neonate in SI-NICU stays on because it is too sick to be transported to NHE, it is highly unlikely that the neonates would be in a position to take spoon feeds. Continue gavage feeding until such time that the neonate is fit to be transported to NHE.
- The simplified version of Nursing Observation Chart will be used for SI-NICU and other areas where newborns are managed for proven or suspected Covid. The observations will be dictated over phone by the N.O. in SI-NICU to the un-donned person in the donning room.
- A clinical note must be written once in every shift. The clinical note must be dictated by the JR inside the SI-NICU to the un-donned person in the donning room.
- Radiological investigations, blood and body fluid investigations must be performed only when they are likely to alter clinical management.
• As far as possible all bilirubin monitoring must be done using transcutaneous bilirubinometer rather than sending blood samples. When a blood sample has to be sent for bilirubin, it should be sent to APC (see Pediatric Biochemistry SOP)

• ABG samples must be sent to APC SARI ward after calling up.

• Neonates must not be vaccinated during SI-NICU stay. However, if they get shifted to a routine neonatal area, they will be vaccinated there as usual.

### Reusables and consumables required at each place outside SI-NICU

<table>
<thead>
<tr>
<th>Item</th>
<th>Number</th>
<th>Basis of calculation of number of items required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical scrubs</td>
<td>18 in donning at 8 am</td>
<td>From 8 am to 8 pm:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5* per shift in SI-NICU x 2 shifts = 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 per shift for delivery team x 2 shifts x 2  = 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SR goes once x 2 = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consultant goes once x 2 = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plus 2 extra for contingencies x 2 = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL x 2 = 18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*assuming both NO’s wearing scrubs</td>
</tr>
<tr>
<td></td>
<td>15 in donning at 8 pm</td>
<td>From 8 pm to 8 am:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 per shift in SI-NICU x 2 shifts = 8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 JR per shift for delivery team x 2 shifts   = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 N.O. 12-h delivery shift showers &amp; re-scrubs* = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SR goes once x 2 = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plus 2 extra for contingencies x 2 = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL x 2 = 15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Over 12-h shift, scrub becomes very sweaty &amp; N.O. will have to shower &amp; wear fresh scrubs once</td>
</tr>
<tr>
<td>PPE</td>
<td>8 full PPE at 8 am</td>
<td>Full PPE &amp; SLR PPE in 2:3 ratio as per expected deliveries (can change over time, depending on delivery data)*#</td>
</tr>
<tr>
<td></td>
<td></td>
<td>From 8 am to 8 pm:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 per shift in SI-NICU x 2 shifts = 8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 per shift for delivery team x 2 shifts      = 8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(plus delivery team doffs &amp; re-dons once)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SR goes once                                 = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consultant goes once                         = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plus 2 extra for contingencies                = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL x 3 = 20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two-fifths# of 20 x 3 = 12</td>
</tr>
<tr>
<td></td>
<td>12 SLR PPE at 8 am</td>
<td>Three-fifths# of 20 x 3 = 12</td>
</tr>
<tr>
<td></td>
<td>8 full PPE at 8 pm</td>
<td>From 8 pm to 8 am (keeping it same as 8 am to 8 pm, to keep it simple)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two-fifths# of 20 x 3 = 8</td>
</tr>
<tr>
<td></td>
<td>12 SLR PPE at 8 pm</td>
<td>Three-fifths# of 20 x 3 = 12</td>
</tr>
<tr>
<td>Gumboots pairs in donning room</td>
<td>8 at beginning of every shift</td>
<td>Equal to full PPE &amp; to keep it simple</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(though strictly, 8 reqd for the 12-h period)</td>
</tr>
<tr>
<td>Item</td>
<td>Quantity/Details</td>
<td>Calculation</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>OT slippers pairs</td>
<td>8 at beginning of every shift</td>
<td>Equal to gumboots &amp; to keep it simple = 8</td>
</tr>
<tr>
<td></td>
<td>1 outside shower room at all times</td>
<td>This pair used by SLR kit HCWs = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Same pair used by all, just while showering. Does not require disinfection)</td>
</tr>
<tr>
<td>Glove boxes</td>
<td>1 in doffing dirty room at all times</td>
<td>For replacing torn gloves (will rarely be used) = 1</td>
</tr>
<tr>
<td></td>
<td>2 boxes (1 open, 1 closed) in doffing clean room at all times</td>
<td>These are fresh pair worn after removing inner pair</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 box in use = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 closed box in reserve (since high turnover) = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(must be replaced by another closed box, as soon as it has to be opened)</td>
</tr>
<tr>
<td>Surgical masks</td>
<td>30 on N95 table at 8 am for 24-h period</td>
<td>For 24-h period:</td>
</tr>
<tr>
<td></td>
<td>(24 h rather than per shift, to minimize HA having to go repeatedly to N95 table)</td>
<td>4 per shift in SI-NICU x 4 shifts = 16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SR goes twice = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consultant goes twice = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For contingencies = 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL = 30</td>
</tr>
<tr>
<td></td>
<td>2 boxes (1 open, 1 closed) in shower room at all times</td>
<td>These are fresh worn after shower</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 box in use = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 closed box in reserve (since high turnover) = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(must be replaced by another closed box, as soon as it has to be opened)</td>
</tr>
<tr>
<td>Towels</td>
<td>15 in shower room at 8 am</td>
<td>Assuming 50% of the 30 HCW will get own towel = 15</td>
</tr>
<tr>
<td>Brown paper bags</td>
<td>30 on N95 table at 8 am for 24-h period</td>
<td>For 24-h period:</td>
</tr>
<tr>
<td></td>
<td>(24 h rather than per shift, to minimize HA having to go repeatedly to N95 table)</td>
<td>4 per shift in SI-NICU x 4 shifts = 16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SR goes twice = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consultant goes twice = 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For contingencies = 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOTAL = 30</td>
</tr>
</tbody>
</table>

**Patient’s attendants**

- As far as possible, parents and attendants should not be allowed into the neonatal Covid patient care areas. If anyone is allowed in an exceptional situation, it should be with the full knowledge of the Covid consultant on call.
- If a parent or attendant is allowed inside, they should sit at a distance of at least 2 m from any neonate in the unit. The attendant must wear a surgical mask, gown, cap, gloves and shoe cover. The attendant will be permitted inside, only if there is an undonned doctor or N.O. in the donning room who can help the attendant with donning properly. A fully donned doctor or N.O. in the SI-NICU will supervise the attendant doffing.
Covid testing and patient movement

What is neonate’s test being done for?

Mother suspect Covid
- Wait until mother’s report available. Keep with mother or in SI-NICU. Don’t send baby’s test.
  - Mother’s report?
    - Mother -ve
      - Do not test baby. Keep with mother or NICU/NNN as indicated.
    - Mother +ve
      - Baby +ve
        - Transfer to NHEB. Manage there.
        - 48 h test -ve
          - Repeat test on day 5 of life
            - 5 d test -ve
              - Send with mother/NICU/NNN as indicated.
        - Baby -ve
          - Manage in NUPE
          - Send baby’s test at 48 h life. Result?
            - 48 h test -ve
              - Repeat test on day 5 of life
                - 5 d test -ve
                  - Send with mother/NICU/NNN as indicated.
            - 48 h test +ve
              - Send baby’s test immediately. Result?
                - Baby -ve
                  - Manage in NUPE
                - Baby +ve
                  - Keep in SI-NICU or APC SARI. Send baby’s test at 48 h after contact. Result?
          - 48 h test +ve
            - Send with mother/NICU/NNN as indicated.

Baby proven Covid +ve

Baby outborn, symptomatic, suspect Covid. Keep in APC SARI ward.

Baby in contact with proven Covid, other than mother
Advanced Pediatric Centre
Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh

PARENT CONSENT FORM
During the lockdown in the wake of the current Corona outbreak, I have come to the hospital for the treatment of my child.

I know that my child could be suspected/suffering from COVID19 and it may endanger doctors and hospital staff. It is my responsibility to take appropriate precautions and to follow the Protocols prescribed by them.

I know that I may be suffering/suspected from COVID 19, and I shall take all the precautions and Personal Protective measures as prescribed by the health care team.

I know that by bringing my child to the hospital I may get myself/my family or my child exposed to COVID 19 and I shall take all the responsibility for this. I shall not blame the doctors or the hospital if I or my child develops COVID 19 as a result of exposure due to coming to hospital.

I also know that I may get an infection from the hospital or from a doctor, and I will take every precaution to prevent this from happening, but I will not at all hold doctors and hospital staff accountable if such infection occurs to me or my accompanying persons.

I know that my child needs to be kept in quarantine and I shall minimize all my contact with the child. I shall follow all the hospital rules for isolation. If I cannot follow isolation for my child and inadvertently or knowingly come in contact with him/her, I shall follow quarantine for myself, I shall declare development of any signs or symptoms related to COVID 19 to nearest health facility and shall not blame the doctors or the hospital for developing the disease.

Name and Signature of the Patient’s Legally Acceptable Representative
Relationship with the patient
Phone No
Address

Name and Signature of the Doctor Administering Consent
Date
Time

6 Approved by PGI administration
सहामति फार्म

वर्तमान कोरोना प्रकोप के मददन्जर लॉकडाउन के दौरान, मैं अपने बच्चे के इलाज के लिए अस्पताल आया हूँ। मुझे पता है कि मेरे बच्चे को COVID19 से संदेह/रोग हो सकता है और यह डॉक्टरों और अस्पताल के कर्मचारियों को खतरे में डाल सकता है। उचित सावधानी बरतने और उनके द्वारा निर्धारित प्रोटोकॉल का पालन करना मेरी जिम्मेदारी है। मुझे पता है कि मुझे COVID-19 रोग/संदेह हो सकता है, और मैं स्वास्थ्य देखभाल टीम द्वारा निर्धारित सभी सावधानियों और व्यक्तिगत सुरक्षा उपायों का पालन करेंगा।

मुझे पता है कि मुझे COVID-19 रोग/संदेह हो सकता है, और मैं स्वास्थ्य देखभाल टीम द्वारा निर्धारित सभी सावधानियों और व्यक्तिगत सुरक्षा उपायों का पालन करेंगा।

रोगी की कानूनी रूप से स्वीकार स्वीकारिता का नाम और हस्ताक्षर मैं रोगी के साथ संबंध

फोन नंबर: पता और हस्ताक्षर सहमति लेने वाले डॉक्टर का नाम और हस्ताक्षर दिनांक: समय
Delivery room management

Pregnant women with Confirmed or Suspected COVID-19
Case review among care providers (nursing officers, obstetrics, neonatology) to decide on site of delivery as per existing site guideline.
Confirmed/suspected Covid +ve to be delivered in NHEB or MTP-OT

Activities to be done by mother before delivery
1. Nurse to ensure mother has performed hand hygiene
2. Nurse to ensure that mother wears a triple layer mask

Activities to be done by the neonatology team before delivery
1. Assemble the neonatal Covid team (Covid SR+JR+ PPE-trained nurse from CLR).
2. Inform Covid on-call consultant
3. Must ensure resuscitation trolley at least 2 m away from delivery table
4. Minimum number of personnel to attend delivery as required
5. All must wear PPE (n95 mask, face shield, apron, gown, gloves, cap, shoe cover)

Resuscitation
1. Delivery nurse should bring the baby to resuscitation trolley
2. Resuscitation as per NRP
3. Keep in mind that aerosol generating medical procedures (AGMP) include intubation and extubation, suctioning, cardiopulmonary resuscitation, application of any respiratory supportive therapy
4. Delayed cord clamping & skin to skin contact with the mother permissible

Transport of neonate from place of delivery to destination
1. Transport box must be thoroughly decontaminated before transport
2. Neonates must be transported in closed transport box only
3. Neonates delivering in SLR or CD ward or MTP-OT or NHEB who are stable, ≥35 weeks, ≥1.8 kg, must stay with mother, if mother can take care.
4. Neonates delivering in SLR or CD ward or MTP-OT who are unstable, or <35 weeks or <1.8 kg, or whose mother cannot take care, must be transported through level 3 corridor to SI-NICU. N.O. of delivery area must call security control room to send security guards to clear corridor of people completely before transport. N.O. of SI-NICU must call sanitation to get the transport path sanitized with 0.5% sodium hypochlorite after completion of transport.
5. Any relative accompanying the neonate must wear triple layer mask

Delivery team hands over baby to SI-NICU team

How to transport neonates born to mothers in CLR, who are Covid -ve or not suspected Covid
1. take the right-hand side lift located just outside CLR entry from F-block
2. if this lift is not working, take the baby through the C block lift
3. go to level I or level II and take the baby across to the lift in front of gastro F-block
4. transport to NICU or NNN as required
Suspected Covid mother, stable baby

If mother asymptomatic:
1. keep baby with mother
2. can breast feed
3. try to maintain 2 m distance, when not breastfeeding
4. mother wears triple-layer mask

If not already sent, send mother’s swab for Covid testing
2. Depending on mother’s result: send neonatal swab for Covid testing (method below)
3. Defer vaccination until after discharge
4. Make discharge summary in advance
5. Complete jaundice screening ASAP. Avoid all other screenings.
6. Do not allow attendants

If mother turns out Covid-ve
1. assume baby to be Covid negative, unless close, direct postnatal exposure to other Covid +ve
2. Keep baby with mother.

If mother turns out Covid +ve

Baby also Covid +ve
1. Both mother and baby transferred to NHEB.
2. Direct breastfeed.

Repeat Covid test every 2 days and act accordingly

Baby Covid -ve
1. Shift mother & baby to NHEB.
2. Keep 2 m distance, except while breastfeeding
3. Triple layer mask, hand hygiene, cough etiquette
4. If caregivers available, discharge to home quarantine for 14 days ASAP.
5. If can’t home quarantine, keep in PGI

Covid testing of neonate

Which neonates:
1. born to mothers with proven/ suspected Covid 19 infection within 14 days prior to delivery or 28 days after delivery
2. Symptomatic neonates exposed to close contacts with Covid 19 infection

When? As soon as possible

What sample?
1. Not mechanically ventilated: Preferred: combined throat (ie OP swab) and nasal swab. Alternate: NP
2. Mechanically Ventilated: lower respiratory tract aspirate, BAL

How to collect sample?
1. Combined throat (ie oropharyngeal) & nasal: Use only synthetic fibre swabs with plastic shafts. Separate swabs for throat and nose, but same viral transport medium tube. For throat: Tilt head back 70°. Swab both tonsillar pillars & posterior oropharynx. Avoid tongue, and gums. For nose: insert swab less than 1 inch until resistance met at turbinates. Rotate several times against nasal wall. Repeat in other nostril. Cut-off applicator tip after inserting in VTM tube.
2. Nasopharyngeal: Insert swab into nostril parallel to the palate. Swab should reach depth equal to distance from nostril to outer opening of ear. Leave swab in place for several seconds to absorb secretions. Slowly remove swab while rotating it.

How to store and send?
1. Place swab immediately in sterile tube containing 2-3 ML viral transport medium.
2. Transport to virology lab immediately. If transport delayed up to 72 h, store at 2-8°C. Beyond 72 h, store at -80°C.
3. See further details in section on sampling
Proven Covid +ve mother, stable baby

Mother proven Covid +ve will deliver in NHEB

1. After 48 h send neonatal swab for Covid testing (method mentioned elsewhere)
2. Baby stays in same room as mother
3. 2 m distance, except when breast-feeding
4. Mother wears triple layered mask, hand hygiene, cough etiquette.
5. Defer vaccination until after discharge
6. Complete jaundice screening ASAP. Avoid all other screenings.
7. Make discharge summary in advance
8. Allow one attendant, who herself does not require isolation (after taking informed consent). Should maintain 2 m distance, hand hygiene and triple layer mask.

Baby also Covid +ve

1. Encourage mother to breastfeed
2. Separation from mother no longer required
3. Minimum number of HCW to visit

Repeat Covid test every 2 days and act accordingly

Baby Covid -ve

1. Mother remains in NHEB.
2. Discharge to home quarantine for 14 days ASAP.
3. Mother continues maintaining precautions.
Proven or suspect mother, sick baby

Sick baby at risk of being Covid +ve. Risk could be due to 3 reasons:
1. acquired postnatally from mother
2. acquired postnataally nosocomial
3. less likely vertical transmission

Covid suspect mother, delivered in MTP-OT or CD ward

- Neonate managed in SI-NICU

Covid proven mother, delivered in NHEB

- Neonate managed in Pediatric set-up, NHE

1. All HCW must wear full PPE, at all times
2. Keep all neonates at least 2 m distance from each other
3. Face shield used only when aerosol generating procedures performed- intubation, suction, tracheostomy, CPR, manual ventilation
4. As soon as possible send neonatal swab for Covid testing (method mentioned elsewhere)
5. If not already known, send mother’s swab for Covid testing
6. Do not allow attendants.
7. Give formula milk during hospital stay
8. Follow sampling, environmental disinfection, equipment disinfection protocols given elsewhere

**Neonate Covid +ve**

- 1. Stays in NHEB
- 2. Repeat Covid test every 2 days

**Covid -ve x 2 d. Dischargeable**

- Discharge to home quarantine x 14 d. Breastfeed. If mother still Covid +ve, relatives take care of baby at home.

**Unstable**

- Stays in Pediatric set-up in NHEB

**Clinical status?**

- Dischargeable
  - Discharge ASAP to home quarantine for 14 days Breastfeed at home (hand hygiene, mask)
  - Becomes Stable, Covid +ve
    - Stays with mother. No separation. Until Covid -ve x 2

- Unstable
Neonate presenting to Pediatric Emergency (NUPE)

There are 3 sets of possibilities:

1. Neonate admitted for any condition in NUPE. On history, turns out mother is already Covid +ve.
2. Neonate in NUPE close and direct exposure to Covid +ve at home or hospital environment

1. HCWs immediately don triple layer mask, full sleeve gown, gloves, cap and shoe cover
2. Place neonate inside closed transport incubator or equivalent
3. Inform Covid19 response team/5C Covid Unit/ED isolation/respiratory room for transfer and testing
4. Transfer to ED isolation/respiratory room as soon as possible in closed transport incubator or equivalent
5. NUPE SR provides guidance to Pediatric team for management in respiratory isolation
6. NUPE SR co-ordinates transfer to 5C
7. The remaining procedure as per APC emergency guidelines

1. Neonate presents to APC with
   a. History of exposure (irrespective of symptoms)
      Mother had Covid19 infection within 14 d before birth OR
      History of contact in postnatal period with persons (mother, family members in same household or direct health care provider) with Covid19 infection
   b. Irrespective of history of exposure
      Presenting to emergency or OPD with pneumonia or severe acute respiratory illness with onset >24 h age that requires hospitalization, provided there is no other underlying illness that explains the respiratory signs and symptoms

1. Directly shift from Triage to ED isolation/respiratory room without admitting in NUPE
2. If missed in Triage, shift as soon as detected to ED isolation/respiratory room. Follow guidelines mentioned in the box on left hand side.
3. NUPE SR provides guidance to Pediatric team for management
4. NUPE SR co-ordinates transfer to 5C

1. Once bed in 5-C arranged, inform the resident in 5C that patient will be shifted soon
2. The resident from 5C will come down to ground floor in the designated lift and stay inside the lift
3. ER respiratory room resident will transport neonate enclosed transport incubator or equivalent up to the designated Covid lift
4. Baby will be taken up by lift to 5C by the 5C resident
5. Neonate will be taken care of in 5C
6. Rest similar to neonatology SOP on “Proven or suspect mother, sick baby”
Flow of neonates with respect to NHE

Covid +ve mother delivery in NHE

Gestation ≥ 33 wks, singleton/twin

Delivery attended by Pediatric team in NHE

Gestation ≤ 32 wks, triplets or more, any other complex situation

Delivery attended by Pediatric team in NHE with phone/video consult by Neo SR

Baby condition?

Baby stable

Stays with mother in NHE. Mother maintains contact precautions, mask etc. Pediatric team manages.

Baby unstable

Managed in NHE, Pediatric setup. Pediatric team manages, with phone/video consults from Neo team.

Covid-19 test: 48 h & 5 d

Covid-19 test +ve

Mother & baby stable. Mother able to take care.

Baby unstable/ mother unable to take care.

Baby stays with mother in NHE. No special precautions.

Covid-19 test -ve

Baby stable, mother Covid +ve, relatives available to take care

Baby discharged to home quarantine

Baby unstable, mother Covid +ve

Baby managed in Pediatric setup, NHE. Strict contact precautions.

Baby stays with mother in NHE. Mother maintains strict contact precautions.

Covid suspect mother delivery in Nehru hospital; or Covid suspect neonate admitted in APC SARI

Covid-19 test at scheduled time

Covid-19 test +ve

Baby transported to NHE in Covid ambulance along with attendant. Informed consent from Covid -ve mother/attendant

Baby managed in NUPE (APC)/ Neonatology

Covid-19 test -ve

Pediatric team takes care in NHE, with phone/video consults from Neo team
## Airway management in the delivery room

### Preparation
- **PPE donned personnel** - Airway operator *(Most experienced person)*, Nurse
- **SpO2 monitor**, Suction tubing and catheter attached to wall suction (check pressure and working)
- **Intubation tray** - Face-mask (all sizes), Ambu with reservoir, O2 tubing, Laryngoscope with blade (00,0,1), 2mL syringe
- Bag, T-piece, and Tubing for indigenous CPAP, RAM Cannula
- Appropriate **ETT (2.5,3,3.5)** - Preferably cuffed
- **Drug tray** (nurse) - Prefilled, diluted labelled syringes with drugs - Adrenaline, Saline flush, Dynaplast with non-sticky edges, Durapore

### Assessment
- Assess need for PPV
- If yes - Proceed further

### Positioning
- Apply shoulder roll
- Use **intubation box** to cover head & thorax and a **disposable sheet** under head as the bed may get contaminated by secretion
- Ensure Intubation tray, RAM Cannula, Suction catheter & ETT inside the hood

### PPV
- Airway operator - Assess need for PPV
- Start PPV with Bag and appropriate size mask and looks for chest rise
- Nurse - Attaches Spo2 probe and reservoir if needed
- **Assess for need of Intubation/CPAP/Npo2**

### CPAP/Nasal Prongs
- **CPAP**: Restricted Use (<1kg/<32 weeks with Downes score 4-6) else use Nasal prongs O2
- Nurse - Fills urobag with water and attaches to Oxygen source
- Airway operator - Attaches interface and fixes it with durapore

### Intubation
- Proceed for laryngoscopy if deemed necessary *(elective if <32 ks/1kg with Downes score >6)*
- Suction if necessary
- Visualize glottis & **intubate** upto desired depth
- Nurse - Check for symmetrical chest rise/air entry
- Once sure of correct position, Nurse **inflates ET cuff with 1-1.5 ml air**

### Post-intubation management
- Airway operator holds the ETT & nurse fixes with dynaplast
- Airway operator continue IPPR and nurse **removes the hood**
- Hood kept for cleaning using **1% sodium hypochlorite**
- Shift to SI-NICU using Indigenously designed trolley with intubation box
- Follow SOP for DR Management and Transport
Rapid sequence intubation in SI-NICU

**Preparation**

- **PPE donned personnel** - Airway operator (Most experienced person), airway assist, nurse
- **SpO2 monitor** attached, ventilator with disposable circuit & expiratory filter (kept on standby), Suction tubing and catheter attached to wall suction (check pressure and working)
- **Intubation tray** (leftside of patient head) - Face-mask, Ambu with reservoir, Laryngoscope with blade (00,0,1), 2mL syringe
- **Intubation trolley** (atleast 2 M from patient) - 0.5 mm size smaller & bigger ETT.

**Positioning**

- Apply shoulder roll
- Use **intubation box** to cover head & thorax and a **disposable sheet** under head as the bed may get contaminated by secretion
- Ensure Intubation tray, suction catheter & ETT inside the hood

**Pre-medications**

- IV Atropine - 0.02 mg/kg

**Pre-oxygenation**

- Preoxygenate with CPAP/Nasal prongs
- If unsuccessful, give positive pressure breaths with AMBU bag and mask assembly

**Induction/Paralysis**

- Once SpO2 is maintained in gestation appropriate range, **administer drugs**
- IV Midazolam - 0.1 mg/kg (Only for term)
- IV Fentanyl - 2 mcg/kg
- Wait for cessation of respiration (30-40 sec)

**Placement with proof**

- Proceed for **laryngoscopy** after SpO2 is maintained in desired range
- Suction if necessary
- Visualize glottis & **intubate** - look for mist
- Airway assist **inflates ET cuff with 1-1.5 ml air**, attaches ventilator
- Look for chest rise, heart rate and SpO2

**Post-intubation management**

- Airway operator holds the ETT & nurse **fixes** with dynaplast
- Airway operator **removes the hood**
- Hood kept for cleaning using 1% sodium hypochlorite
- **Disposable Sheet** to be rolled without touching inner surface and disposed
- Airway assist **titrates ventilator** setting
Management of suspected/ proven Covid pneumonia in the neonate

**When to use CPAP**
- No prophylactic CPAP
- Neonates < 34 weeks/< 1800 grams with Respiratory distress (Downes score 3 or more)
- Gestational age < 35 weeks + Apnea

Maximum Settings (beyond which consider intubation): PEEP- 8 cm H₂₀, Flow- 5L/min, Fio₂- 60%

**When to Use Nasal Prongs oxygen**
- Neonates < 34 weeks/< 1800 grams with Mild Respiratory distress (Downes score ≤ 2)
- Gestational age ≥ 34 weeks with Mild to moderate respiratory distress (Downes score <6)

Maximum Flow: < 35 weeks- 1 L/min, ≥ 35 weeks- 2 L/min

**When to consider Intubation**
Any neonate with suspect/proven COVID having
1. Severe respiratory distress (Downes score >6) Or
2. Failed to maintain age appropriate Spo₂ despite maximum CPAP support (PEEP- 8 cm H₂₀, Flow- 5 L/min)

**Action plan:**

**Step 1:** Take airborne precautions (Complete PPE) – Coverall suit, Hood, leg covers, Fit tested N95 respirator, full sleeve gown, face shield/goggles, double gloves

**Step 2:** Assessment for intubation: Clinical + Pulse oximetry + Radiograph

**Note:** Prefer early intubation; is preferred; NIMV & HFNC must be avoided at all costs due to high failure rate, risk of aerosol generation and ineffective interface.


**Mechanical ventilation:**
- Use only disposable ventilator circuit.
- Use autofill humidification chamber through close circuit, preferable by gravity. It can be done by hanging the sterile water bottle > 50 cm above the chamber. **Never** open the humidification Chamber.
- Keep ventilator circuit attached to the machine and ready.
- Put the ventilator in stand-by mode. Do not turn on the ventilator until the circuit is connected to the ETT after endotracheal intubation.
- Use bacterial/viral filter at the expiratory limb end and inline closed suction with the circuit.
- Avoid disconnecting the circuit as far as possible
- If disconnection unavoidable for some reason, attach the bacterial/viral filter to the ETT
- Ventilation mode and settings as per protocol

**Supportive Care and Medications**
Apart from the routine management of any pneumonia, kindly take care of the following:
1. If bronchodilators required
   a. Do not use nebulizers.
   b. If no alternative available, use MDI through spacer and face mask for spontaneously breathing infants.
   c. Prefer giving intravenous bronchodilators.
2. Other viral pneumonias
   a. Simultaneously investigate for H1N1 and other viral markers as they can be close mimics.
   b. Empirically add oseltamivir to the antimicrobial regimen in all cases of suspected Covid
3. Medications: Do not use steroid
SAMPLE COLLECTION AND HANDLING

General principles

- **The need for sample collection**: If there is an urgent requirement of specific laboratory investigations, then the Clinician should first discuss with designated Nodal officer (Faculty/ SR) telephonically or through the WhatsApp group.

- **Sample collection**: Sample should be collected in a proper container that should be leak-proof and must be appropriately labeled and secured in a Ziplock pouch with absorbent material such as tissue paper. This secondary container should be handed over to trained HA who shall be disinfecting the zip lock pouch by wiping with surface disinfectant and shall be carrying the sample in vaccine carrier/ Plastic container to the designated laboratory. (The Secondary zip-lock packs of different sizes would be made available by the Hospital Administration Department). The zip lock should be then kept in a special “Bio Hazard labeled thermacol box” provided in the isolation facility.

- **Test Requisition form**: Test Requisition Form should be sent by WhatsApp group or scanned copy through e-mail so as to minimize the risk of transmission through fomites.

- **Patient details on sample container**: after writing the patient’s name on the container (eg vaccutainer), paste a strip of cellotape on it, as labs often clean the container surface with alcohol and that tends to smear the writing.

- **Storage of samples**: Designated space should be made available in the respective departments for the storage of samples and inventory to be maintained. Leakage of sample to be informed immediately and the sample should be discarded as BMW Management Policy of the Department.

- **Processing of samples**: If the sample is required to be opened then the same should be done in a Certified Biosafety Cabinet by a designated trained laboratory staff member after taking all biosafety precautions i.e. Mask, Gloves, Gowns, Lab coats, Eye protection etc.

- **Donning and doffing using area**: Should be demarcated in the vicinity of the laboratory along with documentation of training. Big autoclavable bag in dustbin should be there along with thread to tie. This should be sent for autoclaving near to the lab and then for incineration in a yellow bag.

- **Designated time and machine and workforce should be identified.**

- **Processing of sample (Exclusive Hematology & Biochemistry Lab, APC)**: Since Hematology samples do not require any vigorous sample separation or aerosol generation for processing CBC hence the sample will be processed taking Universal precautions as to any other sample. The lab staff shall not panic if such samples are sent but process them wearing normal gloves and normal surgical mask and the report shall be validated by us through LIS.

- **In the case of Biochemistry samples**, since serum separation involves aerosol generation during centrifugation, it is recommended that the samples for routine biochemical investigations may be sent in heparin vacutainers to avoid centrifugation step.

- **The HA carrying the sample will accompany the designated person to Room No. 3322 and will place the sample in a box designated for Coronavirus samples and will leave.**

- **The lab staff who shall be opening the vacutainer and processing the sample shall wear gloves, N95 mask, gown and eye protection equipment.**

- **Reporting of results**: Validated in the HIS system and reports to be routed through nodal officers.

- **Sharps container**: Needles or other sharp items must not be cut or destroyed after use. They must be put into a sharps container (available in SI-NICU) and these sharps containers must be placed into the double yellow bags that go for incineration.
Sequential order of drawing samples

<table>
<thead>
<tr>
<th>Order of draw</th>
<th>Vial</th>
<th>Colour code</th>
<th>Amount of blood sample</th>
<th>Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adult container</td>
<td>Pediatric container</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Culture bottle</td>
<td>Dark grey cap bottle</td>
<td>1 ml</td>
<td>1 ml Blood culture</td>
</tr>
<tr>
<td>2</td>
<td>Sodium citrate</td>
<td>Blue Vacutainer</td>
<td>Black mark</td>
<td>Black mark Coagulation studies</td>
</tr>
<tr>
<td>3</td>
<td>Plain for serum</td>
<td>Red Vacutainer (adult)</td>
<td>Max 3 ml</td>
<td>0.5 ml All biochemistry tests</td>
</tr>
<tr>
<td>4</td>
<td>Heparin</td>
<td>Green adult vacutainer and Pediatric microtainer</td>
<td>Max 2 ml</td>
<td>0.5 ml Electrolytes only</td>
</tr>
<tr>
<td>5</td>
<td>EDTA</td>
<td>Purple adult Vacutainer and Pediatric microtainer</td>
<td>Max 3 ml</td>
<td>0.5 ml Complete blood counts, 3 transfusion testing, Procalcitonin, all hormones</td>
</tr>
<tr>
<td>6</td>
<td>Sodium fluoride</td>
<td>Light grey adult Vacutainer and Pediatric microtainer</td>
<td>Max 2ml</td>
<td>0.5 ml Plasma glucose</td>
</tr>
</tbody>
</table>

Pediatric biochemistry lab

SOP for resident doctor/nursing officer in SI-NICU

- Test Requisition Form (with suspect Covid written on it) should be sent by WhatsApp to Dr. Savita (9872642288)
- Dr. Savita will forward the form to the concerned technician on duty
- Timing of receiving samples is 9:30 AM to 11:30 AM and 6 PM to 7 PM, everyday
- Sample should be collected in heparin vacutainer
- A Covid Transport Biohazard Thermocole Box has been placed in the SI-NICU. A test tube rack has been placed in the thermocole box securing the vacutainers to avoid any spillage (Heparin for Biochemistry and EDTA for Hematology)
- Make sure vacutainers stay upright
- The 1st sample being sent from SI-NICU will carry the label (Sample No. 1 with date) and subsequent samples with numbers 2, 3 et cetera, if any with the same date. Eg. Sample no. 3, 7/4/20
- The 2nd sample of patient 1 (if it needs to be sent) will carry the label 1A, 1B, 1C etc and same process will be followed for patients 2, 3 and so on. Eg. Sample no. 3C, 7/4/20
- For samples being sent from the Neonatology Unit, the above numbering system will be preceded by “N-“. Eg N-3A, 7/4/20
- The requisition form will also be labelled on top as Sample no. with date, and suffix A, B etc and prefix N- corresponding to the sample. Further details like name, Ward, CR number etc; clearly mentioning Covid19 report positive/negative/report pending

SOP for HA

- Designated HA from SI-NICU will hand over the heparin vacutainer to the designated HA in the lab
After receiving, the HA in the lab will place the vacutainer in the rack marked for Covid 19

**SOP for lab personnel**

- Let the sample stand in the rack until the plasma separates on its own
- If the samples need to be centrifuged, then place the Vacutainer in the centrifuge, run the centrifuged at 3000 rpm for 10 minutes and wait for 10 minutes before removing the sample from the centrifuge. Place it back on the rack.
- Slowly unscrew the cap of the vacutainer and place it in the designated sample rack of the autoanalyser in a specific tray marked for the purpose and take this tray to autoanalyser for processing the sample
- Decontaminate work surfaces and equipment with appropriate disinfectants
- Remove the disposable PPE and discard in yellow bag
- Secure the surgical scrub in autoclavable bag to be sent for autoclaving
- The Covid-19 positive samples, after processing, will be autoclaved separately

**Pediatric Hematology lab**

**SOP for resident doctor/nursing officer in SI-NICU**

- Test Requisition Form (with suspect Covid written on it) should be sent by WhatsApp to Dr. Prateek Bhatia (9417186867)
- Dr. Prateek will forward the form to the concerned technician on duty
- Timing of receiving samples is 9:30 AM to 11:30 AM Monday to Saturday
- Sample should be collected in EDTA vacutainer, labelled, wrapped and placed in thermocole box
- **A Covid Transport Biohazard Thermocole Box** has been placed in the SI-NICU. A test tube rack has been placed in the thermocole box securing the vacutainers to avoid any spillage (Heparin for Biochemistry and EDTA for Hematology)
- Make sure vacutainers stay upright
- Samples will be received in lab number 4112, level 4A (including non-OPD holidays)
- Lab attendant on duty - Ravinder/ Hardeep (9779255857, 9914761985)

**SOP for HA**

- Designated HA from SI-NICU will hand over the heparin vacutainer to the designated HA in the lab
- After receiving, the HA in the lab will place the biohazard box in a marked receiving shelf
- HA will take sample out and keep in a designated separate sample tray

**SOP for lab personnel**

- Lab technician, wearing gloves and surgical mask, will label the tube with lab ID number and will transfer the tray to processing room
- In lab number 4106, level 4-A, the sample tray will be placed in a designated area near the automated analyser
- Technician on duty, wearing surgical mask and gloves, will unwrap the tube, wipe with sanitiser and place in analyser
- **Cap not to be opened**
- Technicians are Harjinder (9855439994), Kiran (8427845868), Nand Lal (8872451353)
- Lab staff will wipe all areas- tube/tray/analyser with sanitiser liberally
- Result to be shown to Dr Prateek and validated after his approval
- **No slides to be made unless absolutely necessary**
- After processing the sample, run disinfection button post sample run cleaning in Hematology analyser
- Lab attendant will put sample Vacutainer in autoclavable bag and then put in yellow BMW disposable bag
- After doffing PPE all personnel will place items in yellow bag and tie it securely
- Followed by hand washing and sanitisation
Microbiology lab, Research Block A

- The SOP for sending microbiology samples still a work in progress
- As of now, the test requisition form (with suspect Covid written on it) should be sent by WhatsApp to Dr Harsimran Kaur (9914415678).
- Called Dr Harsimran Kaur to tell her that the sample will be sent.
- Put sample in a Ziploc pouch and send it through SI-NICU HA to room number 208

Other Research Block samples

- As a general rule, speak to a consultant first as different tests may have different requirements depending on biohazard involved.
- At the very least, sample must be placed in a Ziploc pouch. If lab wants the form to be sent by Whatsapp, do so. Otherwise send a paper for. “Covid suspect” must be written on the form.
- HA from SI-NICU will take the sample and deposit at the appropriate place.
- If the sample is sent from NHE, follow NHE protocols.

As per circular (dated 8-5-20) issued by HOD, Hematology, Research Block-A, only the following tests are being offered for Covid suspect cases. The samples may be sent directly to the emergency lab room number 24 in Ziploc pouches with the HA.

<table>
<thead>
<tr>
<th>Tests</th>
<th>Lab</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT-INR</td>
<td>Emergency Lab</td>
<td>Tri sodium citrate vacutainer</td>
</tr>
<tr>
<td>Coagulation screen-PT aPTT, fibrinogen</td>
<td>Emergency Lab</td>
<td>Tri sodium citrate vacutainer</td>
</tr>
<tr>
<td>Fibrinogen assay by clotting method</td>
<td>Emergency Lab</td>
<td>Tri sodium citrate vacutainer</td>
</tr>
<tr>
<td>D-dimer assay quantitative</td>
<td>Emergency Lab</td>
<td>Tri sodium citrate vacutainer</td>
</tr>
<tr>
<td>Erythrocyte sedimentation rate</td>
<td>Central hemogram lab</td>
<td>EDTA</td>
</tr>
<tr>
<td>Complete blood counts (barring peripheral blood smear)</td>
<td>Emergency lab</td>
<td>EDTA</td>
</tr>
<tr>
<td>Reticulocyte count</td>
<td>Emergency lab</td>
<td>EDTA</td>
</tr>
</tbody>
</table>

ABG samples

- ABG samples will be analysed in APC SARI Ward (5C).
- These will be performed on a portable i-STAT machine with limited availability of cartridges, hence, samples should be sent judiciously and sparingly.
- Call APC SARI ward to tell them that you will be sending a sample.
- Sample can be sent in ABG capillary placed inside a Ziploc pouch. Will be carried by HA and handed over at the staff entrance gate in APC SARI Ward.

Sending Covid-19 test

- First inform Dr Mini P Singh (7087008173, 9357784144) or Dr Kapil Goyal (8872288864) or Dr Ishani (9435147632), Department of Virology, that you wish to do the test. Earlier there were specific time slots, but with the increase in demand for tests, they can be contacted at any time of the day. Now they carry contacted anytime from 8 AM to 10 PM.
- An HA will be sent by Virology with an outer transport container, an inner secondary container, VTM vial (this is the primary container), parafilm and swab sticks. HA will hand over VTM vial, parafilm and swab sticks to the SI-NICU staff and wait outside.
• The resident doctor will obtain the swab sample. Only synthetic fibre swabs with plastic shafts will be used.

• What sample?
  1. Not mechanically ventilated. **Preferred:** combined throat (ie oropharyngeal swab) and nasal swab, alternate: nasopharyngeal
  2. Mechanically Ventilated: lower respiratory tract aspirate, BAL

• When to send Covid 19 PCR sample in the neonate?
  o If the indication is that the baby is born to a Covid +ve mother: Baby’s test must be performed at 48 hours, and if it is negative, then again at 5 days (any time from day 5 to day 14). Until the 2nd test is reported negative, the baby must be kept in an isolation area.
  o This If the indication is that the baby is symptomatic and is itself suspected to have Covid: baby’s test must be performed as soon as possible only once. Until that test is reported negative, baby must be kept in an isolation area.
  o If the mother is Covid suspect at the time of delivery: wait until the mother’s report comes. If the mother is Covid negative, do not send the baby’s sample. If the mother turns out to be Covid positive, send the 48 hours and the five-day samples as above.

• How to collect sample?
  1. Combined throat (ie oropharyngeal) & nasal: Use only synthetic fibre swabs with plastic shafts. **Separate swabs for throat and nose, but same viral transport medium tube.**
     *For throat:* Tilt head back 70°. Swab both tonsillar pillars & posterior oropharynx. Avoid tongue, and gums.
     *For nose:* insert swab less than 1 inch until resistance met at turbinates. Rotate several times against nasal wall. Repeat in other nostril. Cut-off applicator tip after inserting in VTM tube.
  2. Nasopharyngeal: Insert swab into nostril parallel to the palate. **Swab should reach depth equal to distance from nostril to outer opening of ear.** Leave swab in place for several seconds to absorb secretions. Slowly remove swab while rotating it.

<table>
<thead>
<tr>
<th>Nasopharyngeal swab</th>
<th>Oropharyngeal swab</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Nasopharyngeal swab" /></td>
<td><img src="image2" alt="Oropharyngeal swab" /></td>
</tr>
</tbody>
</table>

• How to send?
  1. Place swab immediately in sterile VTM vial containing 2-3 ML viral transport medium.
  2. Screw cap the VTM vial
  3. Swab the external surface with alcohol swab
  4. Hand over VTM vial to virology department staff, and they will do the following steps
     a. Seal the neck of the vial with parafilm
     b. Wrap with tissue paper
     c. Place it in the secondary container.
d. Place the secondary container in the outer container & transport to virology lab

- How to store in SI-NICU refrigerator?
  1. Always keep 1-2 VTM vials in the SI-NICU refrigerator at 4 to 8°C. These may be used beyond office hours, in case it is feared that the patient may not survive the night.
  2. Once sample taken, seal the neck of the VTM vial with parafilm, wrap in tissue paper.
  3. Keep VTM vial inside a large Falcon tube, which serves as the secondary container.
  4. Keep Falcon tube inside a box, upright.

**Transport and storage conditions for various types of Covid 19 samples**

<table>
<thead>
<tr>
<th>Specimen type</th>
<th>Collection materials</th>
<th>Transport to laboratory</th>
<th>Storage till testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasopharyngeal and oropharyngeal swab</td>
<td>Dacron or polyester flocked swabs*</td>
<td>4 °C</td>
<td>≤5 days: 4 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;5 days: -70 °C</td>
</tr>
<tr>
<td>Bronchoalveolar lavage</td>
<td>sterile container*</td>
<td>4 °C</td>
<td>≤48 hours: 4 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;48 hours: −70 °C</td>
</tr>
<tr>
<td>Tracheal aspirate, nasopharyngeal aspirate or nasal wash</td>
<td>sterile container*</td>
<td>4 °C</td>
<td>≤48 hours: 4 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;48 hours: −70 °C</td>
</tr>
<tr>
<td>Sputum</td>
<td>sterile container</td>
<td>4 °C</td>
<td>≤48 hours: 4 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;48 hours: −70 °C</td>
</tr>
<tr>
<td>Tissue from biopsy or autopsy including from lung</td>
<td>sterile container with saline</td>
<td>4 °C</td>
<td>≤24 hours: 4 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;24 hours: −70 °C</td>
</tr>
<tr>
<td>Serum (2 samples – acute and convalescent)</td>
<td>Serum separator tubes</td>
<td>4 °C</td>
<td>≤5 days: 4 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;5 days: −70 °C</td>
</tr>
</tbody>
</table>

**Form to be filled for sending Covid-19 sample**

Please see next page
The ICMR-NIV form is being used by PGI Virology department for sending samples

**Clustering of tasks:**

- All the procedures to be done on a suspected patient need to be planned by the resident prior to entering the isolation area. All those procedures (respiratory sample collection, examination, and blood sampling) will be done bundled together to prevent repeated use of masks and PPE. The time fixed for sample collection is between 9:30 to 10:00 AM.
- The blood samples collected should be placed in Yellow thermocol box and transported to biochemistry and hematology labs and transferred to other Yellow thermocol box stationed in respective lab till analysis.
- The collection, disinfection and transport will be according to SOP laid down for lab samples.

---

7 ICMR-NIV guidelines, adapted from WHO
**INSTRUCTIONS:**
- Inform the local / district / state health authorities, especially surveillance officer for further guidance.
- Seek guidance on requirements for the clinical specimen collection and transport from nodal officer.
- This form may be filled in and shared with the IDSP and also ICMR-NIV nodal officer in advance.

### PERSON DETAILS
- **Name of patient:** ..................................................  
- **Address:** ...............................................................  
- **City:** .................................................................  
- **State:** .................................................................  
- **Age:** ...... Years ...... Month  
- **Gender:** Male □ Female □  
- **Date of birth:** ....../....../...... (dd/mm/yyyy)  
- **Mobile/phone:** ......................................................  
- **Email:** .................................................................  

### EXPOSURE HISTORY (2 WEEKS BEFORE THE ONSET OF SYMPTOMS)
- **Recent stay/travel in area (Wuhan, China):** Yes □ No □  
  If yes, stay/travel duration with date  
- **History of visit to wet/seafood market:** Yes □ No □  
  From:....../....../...... to:....../....../......  
- **Close contact with confirmed case:** Yes □ No □  
- **Recent travel to any other country:** Yes □ No □  
  Travel place: ...............................................................  
- **Health care worker working in hospital involved in managing patients:** YES / NO,  
  Hospitalization date: ....../....../......  
  Discharge date: ....../....../......  

### CLINICAL SYMPTOMS AND SIGNS
- **Date of onset of symptoms:** ....../....../......  
- **First symptom:** ......................................................  

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever at evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cough</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breathlessness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sore throat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sputum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sign</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheeze</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stridor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal flaring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crepitation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower chest indrawing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessory muscle use</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### UNDERLYING MEDICAL CONDITIONS
- **COPD:** □  
- **Chronic renal disease:** □  
- **Malignancy:** □  
- **Diabetes:** □  
- **Hypertension:** □  
- **Heart disease:** □  
- **Asthma:** □  
- **Other:** .........................................................  

### IMMUNOCOMPROMISED CONDITION
- **Yes / No**  

### HOSPITALIZATION, TREATMENT AND INVESTIGATION
- **Hospitalization date:** ....../....../......  
- **Diagnosis:** ......................................................  
- **Differential diagnosis:** .......................................  
- **Atypical presentation:** Yes / No  
- **Unusual / Unexpected course:** Yes / No  
- **Outcome:** Discharge / Death / Other: .........................  
- **Outcome date:** ....../....../......  

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibiotics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPAP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronchodilators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antivirals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steroids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### INVESTIGATION FINDINGS
- **Haematocrit:** ..................................................  
- **Hb:** ..........  
- **WBC (leukocyte count):** .......................................  
- **Differential Leukocyte count:** Lymphocytes (%): ..........  
  Monocytes (%): ..........  
  Neutrophils (%): ..........  
- **Basophils (%):** ..........  
  Eosinophils (%): ..........  
  Platelet (Thrombocyte) count:  
- **ESR:** ..........  
- **Investigation details:** Chest X-ray: Yes □ No □  
  (findings): .....................................................  
- **Blood culture findings:** .......................................  
- **Other investigation details:** ..................................  

### SPECIMEN INFORMATION FROM REFERRING AGENCY
- **Specimen type**  
- **Collection date**  
- **Label**  
- **Specimen ID**  
- **Test performed**  
- **Result**  

1. BAL/ETA/
2. TS/NPS/NS  
3. Blood in EDTA  
4. Acute sera  
5. Convalescent sera  

<table>
<thead>
<tr>
<th>Name of Doctor: ..................................................</th>
<th>Hospital Name/address: ...........................................</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone/mobile number: ..........................................</td>
<td>Signature and date: ................................................</td>
</tr>
</tbody>
</table>

**PLEASE REFER THE CASE DEFINITION CHECKLIST ON PAGE 2. FOR SPECIMEN COLLECTION GUIDELINES, VISIT www.niv.co.in**

For any sharing of information or for any query, contact Dr. Yogesh Gurav Scientist E (020-26006290/26006390).

Page 1 of 2
ICMR-National Institute of Virology, Pune
Specimen Referral Form for 2019 Novel Coronavirus (2019-nCoV)

Name of the patient: ............................... Age: .......years...........months

Note: Please ensure that the case definition should be strictly followed.
     Please encircle the correct response (Yes/No)

CASE DEFINITION

1. Severe Acute Respiratory Illness (SARI), with
   * history of fever  YES / NO
   * cough  YES / NO
   * requiring admission to hospital  YES / NO
   WITH
   * no other etiology explains the clinical presentation  YES / NO
     (clinicians should also be alert to the possibility of
     atypical presentations in patients who are immunocompromised);
   AND
   * A history of travel to Wuhan, Hubei Province China in the 14 days prior to symptom onset. YES / NO
   * the disease occurs in a health care worker who has been working in an environment where patients with severe acute respiratory infections are being cared for, without regard to place of residence or history of travel YES / NO
   * the person develops an unusual or unexpected clinical course, especially sudden deterioration despite appropriate treatment, without regard to place of residence or history of travel, even if another etiology has been identified that fully explains the clinical presentation. YES / NO

2. Individuals with acute respiratory illness of any degree of severity who, within 14 days before onset of illness, had any of the following exposures:
   * close physical contact with a confirmed case of nCoV infection, while that patient was symptomatic; YES / NO
   * a healthcare facility in a country where hospital associated nCoV infections have been reported; YES / NO
   * direct contact with animals (if animal source is identified) in countries where the nCoV is known to be circulating in animal populations or where human infections have occurred as a result of presumed zoonotic transmission*. YES / NO

* To be added once/if animal source is identified as a source of infection

EMAIL ID OF THE HEALTH AUTHORITY (FOR SENDING THE REPORT): ..............................................................

Name of Doctor: ................................. Hospital Name/address: ....................................................

Phone/mobile number: ........................ Signature and date: ............................................................

PLEASE REFER THE CASE DEFINITION CHECKLIST ON PAGE 2. FOR SPECIMEN COLLECTION GUIDELINES, VISIT www.niv.co.in

For any sharing of information or for any query, contact Dr. Yogesh Gurav Scientist E (020-26006290/26006390).
PHARMACOTHERAPY (OPTIONS AVAILABLE)

No medications are recommended for the specific treatment or adjunctive therapy of Covid-19 infection in neonates. If pharmacological treatment is offered in an extreme or unusual situation, it must have concurrence of at least 2 consultants and should be discussed with Dr Nusrat, Clinical Pharmacology. A high risk informed consent should be taken from the parents.

<table>
<thead>
<tr>
<th>Drug name</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ribavarin</td>
<td>IV 8 mg/kg 8 hourly x 14 days</td>
</tr>
<tr>
<td>Lopinavir/ Ritonavir</td>
<td>Low dose: 200/100 mg BD</td>
</tr>
<tr>
<td></td>
<td>High dose: 400/100 mg BD for 6-15 days</td>
</tr>
<tr>
<td>Remdesivir</td>
<td>200mg IV on day 1 followed by 100 mg daily x 5-10 days</td>
</tr>
<tr>
<td>Chloroquine</td>
<td>Adult: CQ 500 mg BD x 10 days</td>
</tr>
<tr>
<td>Hydroxychloroquine</td>
<td>HCQ 400 mg BD x 5 days</td>
</tr>
<tr>
<td>Tocilizumab</td>
<td>2 doses: 8 mg/kg 12 h apart</td>
</tr>
<tr>
<td>Convalescent plasma</td>
<td>3 ml/kg/dose once a day for 2 days</td>
</tr>
</tbody>
</table>

RADIODIAGNOSIS AND IMAGING SOPs

At the time of writing this version of the SOP, Radiodiagnosis was not in a position to provide any services in SI-NICU or Maternity ward isolation.

TRANSFUSION MEDICINE SOPs

- The communication regarding the blood requisitions for patients with suspected or confirmed COVID-19 to be done by the clinical resident at 7087009480 (Crossmatch section JR/SR on duty). For any concerns/issue the faculty incharge may be contacted: Dr. Lakhvinder Singh (7087003372) and Dr. Sheetal Malhotra (7087008220).
- Crossmatch section JR/SR will ask the clinical resident to email the image/picture of the appropriately filled and signed requisition form at bloodbankpgi@gmail.com to prevent fomite transmission.
- The blood sample should be in an EDTA evacuated tube (3 ml) which is to be sent to the department from the ward in a leak proof zip lock pouch only from the ward by a HA in a small box or container.
- The blood components would be issued from the Blood Bank only at the time of transfusion requirement.
COMMUNICATION WITH PARENTS

- Landline phones with 0 dialling facility have been provided in the SI-NICU (0172-2756272) and in the donning area (0172-2756292). In addition, a smart phone has been provided in the SI-NICU (cell number 7087858788). The smart phone has 30 GB data/month and conference call facility.
- Mobile phone numbers of the parents will be made available to the Covid neonatal team before delivery. Neonatal team should find out whether parents have mobile data plan and WhatsApp on their mobile phones. Additionally the phone number of a responsible non-quarantined family member should be taken. Phone numbers should be saved on the SI-NICU smart phone. Mother’s name can be saved as it is. Father’s name should be saved as “Mother’s name Husband”. Similarly, other family members names can be saved as “Mother’s name Relationship”.
- Covid SR on-call should do telephonic/video antenatal counselling of the parents. Face-to-face counselling should be avoided. A simple bilingual pamphlet explaining the various possible postnatal scenarios should be sent by Whatsapp to the parents.
- The usual process of showing the baby to the mother/family member and getting them to sign confirming the gender of the baby, may not be possible under the prevailing circumstances. Instead, a full body picture of the baby (so that gender is identifiable) must be taken with the SI-NICU smartphone as soon as the baby reaches the SI-NICU and sent by WhatsApp to the father and donning room HCW along with this standard bi-lingual message “This is the picture of your baby boy/girl, baby of [name of mother], [CR No. of mother] and [CR No. of baby]. Kindly confirm by replying.” When the father (or relative) comes to hand over the baby’s file in the donning room, he signs on the file that he has been informed that the baby’s gender is male/female.
- Parents and other family members will not be allowed to visit the SI-NICU
- Once in 24 hours, the SI-NICU SR shall call the parents and update them. In case a baby deteriorates, the onus will be on the SR to contact the parents and inform them.
- Parents will be provided the landline number of the SI-NICU 0172-275 6272. They will be allowed to call at any time of the day or night. Routine phone calls made by the parents will be handled by either the JR or the N.O.. The JR or N.O. should not comment on anything more than whether the baby is static, improving or worsening. For more details, the parent should speak to the SR. If the SR happens to be in the Covid unit or donning area, he/she will take the call. If not, the call should either be redirected to the SR or the parent should be provided a landline number on which the SR is available.
- Most parents will be anxious to know the baby’s Covid-19 test report. This should be communicated by the SR to the parents after confirming the accuracy of the result. In case the test result is ambiguous, the SR must discuss with the consultant on-call before talking to the parents.
- If the baby’s Covid report is positive, discuss with the SI-NICU consultant on-call, and decide about plans for shifting to NHE block. After the plans are formalised, call up the parents and tell them about shifting plan and whether the baby will be with the mother (if she already happens to be there) in the NHE block. If the mother is not already in NHE block, discuss that the mother or any other relative (preferably female) is expected to come and stay with the baby in NHE. Discuss the precautions that the attendant would have to take; mention that the attendant would be at an increased risk of contracting Covid infection (unless previously infected and recovered); and that the attendant would have to sign an informed consent. Specifically, tell them that no family member should come to take a glimpse of the baby during transport, as the baby is Covid positive and it could be risky.
- SI-NICU doctors and N.O.s must be gentle and professional when dealing with parents. They must appreciate that inability to see the child is likely to make parents even more anxious and emotionally labile than otherwise. SI-NICU staff must not let their own anxieties and fears about Covid colour their conversations with the parents.
- Every opportunity should be used to educate the parents and family members about the importance of social distancing, hand hygiene, cough etiquette and wearing a mask. It is important to maintain cautious optimism and reassure the parents that the majority of newborn infants do not have a vertical transmission from the mother.
• A 30-second video clip of the baby, while in a restful condition, shot in good lighting should be sent through WhatsApp to one of the parents at around 12:00-12:30 pm every day by the JR or N.O. inside SI-NICU.
• Family meetings should be kept to a minimum and should never be face-to-face. For a family meeting, it is preferable that only those family members who anyways live together can assemble at one phone, so that social distancing is not an issue. Use the WhatsApp video call feature on speakerphone mode. If several family members, who do not ordinarily live together, wish to participate, ask one of the parents to provide all the phone numbers. Set up a WhatsApp group call. Up to 4 participants can be added. For this, first place a one-on-one video call, then tap the add participant button on the top right corner of the phone, select the 2nd participant and then tap the add button. If WhatsApp is not possible, use conference call facility of the routine phone call to speak to several family members who do not ordinarily live together.
• If any family member violates the restriction on visiting, sounds aggressive or troublesome, or if the parents sound depressed, the JR must immediately escalate the issue to the level of SR, and if it cannot be solved it should be escalated without delay to the level of consultant.

ENVIRONMENTAL CLEANING

Environmental cleaning is part of Standard Precautions, which should be applied to all patients in all healthcare facilities. Ensure that cleaning and disinfection procedures are followed consistently and correctly.
Cleaning environmental surfaces with water and detergent and applying commonly used hospital disinfectants (such as sodium hypochlorite) is an effective and sufficient procedure. (Reference: Health Organization. (2019). Infection Prevention and Control during Health Care when Novel Coronavirus (nCoV) Infection is Suspected. WHO/2019-nCoV/IPC/v2020.1)

Cleaning agents and disinfectants
1. 0.5% sodium hypochlorite can be used as a disinfectant for cleaning and disinfectionThe solution should be prepared fresh.
2. Leaving the solution for a contact time of at least 10 minutes is recommended.
3. Alcohol (e.g. isopropyl 70% or ethyl alcohol 70%) can be used to wipe down surfaces where the use of bleach is not suitable, e.g. metals.

Personal Protective Equipment
PPE to wear while carrying out cleaning and disinfection works
1. Wear heavy duty/disposable gloves, disposable long-sleeved gowns, eye goggles or a face shield, and a medical mask (please see the PPE document for details)
2. Avoid touching the nose and mouth (goggles may help as they will prevent hands from touching eyes)
3. Disposable gloves should be removed and discarded if they become soiled or damaged, and a new pair worn
4. All other disposable PPE should be removed and discarded after cleaning activities are completed. Eye goggles, if used, should be disinfected after each use, according to the manufacturer’s instructions.
5. Hands should be washed with soap and water/alcohol-based hand rub immediately after each piece of PPE is removed, following completion of cleaning.

Cleaning guidelines

1. Where possible, seal off areas where the confirmed case has visited, before carrying out cleaning and disinfection of the contaminated environmental surfaces. This is to prevent unsuspecting persons from being exposed to those surfaces.

2. When cleaning areas where a confirmed case has been, cleaning staff should be attired in suitable PPE. Disposable gloves should be removed and discarded if they become soiled or damaged, and a new pair worn. All other disposable PPE should be removed and discarded, after cleaning activities are completed. Goggles, if used, should be disinfected after each use, according to manufacturer’s instructions. Hands should be washed with soap and water immediately after the PPE is removed.

3. Mop floor with routinely available disinfectant.

4. Wipe all frequently touched areas (e.g. lift buttons, hand rails, doorknobs, arm rests, tables, air/ light controls, keyboards, switches, etc.) and toilet surfaces with chemical disinfectants and allow to air dry. 0.5% sodium hypochlorite solution can be used. Alcohol can be used for surfaces, where the use of bleach is not suitable.

5. Clean toilets, including the toilet bowl and accessible surfaces in the toilet with disinfectant or 0.5% sodium hypochlorite solution.

6. Wipe down all accessible surfaces of walls as well as blinds with disinfectant or bleach solution.

7. Remove curtains/ fabrics/ quilts for washing, preferably using the hot water cycle. For hot-water laundry cycles, wash with detergent or disinfectant in water at 70ºC for at least 25 minutes.

8. Discard cleaning items made of cloth and absorbent materials, e.g. mop head and wiping cloths, into biohazard bags after cleaning and disinfecting each area. Wear a new pair of gloves and fasten the double-bagged biohazard bag with a cable tie.

9. Disinfect buckets by soaking in disinfectant or bleach solution, or rinse in hot water before filling.

10. Disinfectant or 0.5% sodium hypochlorite solution should be applied to surfaces using a damp cloth. They should not be applied to surfaces using a spray pack, as coverage is uncertain and spraying may promote the production of aerosols. The creation of aerosols caused by splashing liquid during cleaning should be avoided. A steady sweeping motion should be used when cleaning either floors or horizontal surfaces, to prevent the creation of aerosols or splashing. Cleaning methods that might aerosolize infectious material, such as the use of compressed air, must not be used.

11. Biohazard bags should be properly disposed-off, upon completion of the disinfection work.

Frequency of cleaning of surfaces:

1. **High touch surfaces**: Disinfection of high touch surfaces like (door handles and knobs, telephone, bedrails, ventilator knobs, drip stands, nursing counters, medicine trolleys, stair rails, light switches, wall areas around the toilet) should be done every 3-4 hours.

2. **Low-touch surfaces**: For low-touch surfaces (walls, mirrors, etc.) mopping should be done at least once daily.

Precautions to take after completing the clean-up and disinfection

1. Staff should wash their hands with soap and water immediately after removing the PPE, and when cleaning and disinfection work is completed.

2. Discard all used PPE in a double-bagged biohazard bag, which should then be securely sealed and labelled.

3. The staff should be aware of the symptoms and should report to APC-nodal officer if they develop symptoms.
### Protocols for disinfection in SI-NICU

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency</th>
<th>Agent</th>
<th>Responsibility</th>
<th>Supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door handles and knobs</td>
<td>Every 3-4 hours</td>
<td>0.5% sodium hypochlorite</td>
<td>HA</td>
<td>ANS/N.O.</td>
</tr>
<tr>
<td>Doors</td>
<td></td>
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<tr>
<td>Telephone</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ventilator knobs</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bedrails</td>
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<tr>
<td>Drip stands</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing counters</td>
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<tr>
<td>Medicine trolleys</td>
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<tr>
<td>Light switches</td>
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<tr>
<td>Chairs</td>
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<td>Tables</td>
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<td></td>
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</tr>
<tr>
<td>Walls</td>
<td>Once a shift</td>
<td>0.5% sodium hypochlorite</td>
<td>HA</td>
<td>ANS/N.O.</td>
</tr>
<tr>
<td>Shelves</td>
<td></td>
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</tr>
<tr>
<td>Surfaces</td>
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<td></td>
</tr>
<tr>
<td>Mirrors</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Wall areas around the toilet</td>
<td>Once a shift</td>
<td>0.5% sodium hypochlorite</td>
<td>SA</td>
<td>ANS/ N.O.</td>
</tr>
<tr>
<td>Floor</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>BMW waste bins (as and when emptied)</td>
<td>Once a shift</td>
<td>0.5% sodium hypochlorite</td>
<td>SA</td>
<td>ANS/ N.O.</td>
</tr>
<tr>
<td>Stethoscope</td>
<td>After every use</td>
<td>70% Alcohol</td>
<td>Bedside N.O.</td>
<td>ANS</td>
</tr>
<tr>
<td>BP cuff</td>
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<tr>
<td>Thermometer</td>
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<tr>
<td>Injection Tray</td>
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</tbody>
</table>

**Mobile phones**

Mobile phones are not allowed inside any area dealing with proven or suspected Covid patients.

**DEATH**

- Inform Neonatology faculty member on call for Covid about the death
- Person handling a dead body of proven or suspected case of Covid-19 must wear full PPE

**The following must be done**

- N.O. will remove all tubes, drains and catheters. If any cutting is required, use rounded end scissors.
- N.O. will disinfect any puncture, holes, or wounds (including those resulting from removal of catheters, drains etc.) with 0.5% sodium hypochlorite and dress with gauze and leucoplast to make it impermeable.
- Handle sharps with extreme caution. Do not re-sheath any needles. They should be disposed in a sharp’s container.
- N.O. will plug oral, nasal orifices to prevent leakage of body fluids
- Manipulate the dead body as little as possible
- N.O. will place the dead body in a leak-proof transparent plastic body bag and zip it fully.
- If the family of the patient wishes to view the body, they may be allowed to do so at this time, wearing double surgical mask, long sleeve cloth surgical gown, gloves, disposable surgical cap, shoe covers.

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9 MOHFW, DGHS, EMR division: Covid 19: guidelines on dead body management, 15/3/20
- Allow as few members as possible.
- Do not allow anyone above the age of 60, or with comorbidities such as diabetes mellitus, cardiovascular diseases, malignancies, immunosuppression.
- Family members should not be allowed to touch the body.
- They should be encouraged to be at least 1-2 meters away

- After family has seen, as these are adult-size bags, they must be folded on themselves. HA will then wrap this bag in mortuary cloth sheet and put the covered body into another body bag, so 2 body bags will be used. **Body bag will be used for transferring body.**
- HA will decontaminate the exterior of the outer body bag with 0.5% sodium hypochlorite.
- **HA will wash hands immediately with liquid soap in case of accidental contact with blood or body fluids from the dead body**
- Fill death certificates (as in any other death)
- Inform Dr. Sanjay Verka (Nodal officer) and Dr Raman (Consultant Hospital administration, 7087003308) about the COVID positive/suspect status. They will get the Red Cross Van and will activate the MC officials posted in crematorium.
- SA will transport dead body in a designated trolley to the mortuary with the necessary papers. SA must be fully donned in PPE. The shortest possible route must be taken. People should be completely cleared off the route in advance. If the body is shifted from APC or NHE, it must be done in a designated Covid ambulance.
- Trolley should be brought back by SA to the ward by the same route.
- All corridors and lifts used during transport must be mopped with 0.5% sodium hypochlorite as soon as possible (sanitation department must be informed in advance)
- After return, trolley should be disinfected with 0.5% sodium hypochlorite.

**The following activities are prohibited**
- Washing the body
- Performing autopsy [unless unavoidable due to medico-legal reasons]
- Embalming the body
- Opening or unzipping the body bag after zipping

**Activities to be done after sending the dead body to mortuary**
- All disposable items should be put in double yellow BMW biohazard bags (one bag inside the other), labelled with a red sticker “Covid-19 waste” if proven Covid-19 positive, tied and sent for incineration. Outer surface of the bag should be disinfected with 0.5% sodium hypochlorite. [See details in section on disinfection]
- All reusable items (bed linen, gowns etc.) should be placed in perforated laundry bags in bins containing 0.5% sodium hypochlorite for 20 minutes, then the perforated bag should be transferred with its contents into an intact laundry bag, labelled with a red sticker “Covid-19 waste” if proven Covid-19 positive and sent for the laundry. [See details in section on disinfection]
- All surfaces of the isolation room - floors, bed, links, side tables, intravenous stands etc. - should be wiped with 0.5% sodium hypochlorite, allowing a contact time of 20 minutes.
- If it was a suspected Covid case and Covid testing results were awaited, the body must be kept in mortuary until test result available. If Covid test comes back negative, the body can be cremated in the usual way. If the Covid test comes back positive, the procedure mentioned below will be followed.

**Cremation of proven Covid 19 patients**
Inform the family about the following (Mortuary staff will take care of the details):
- Body must be cremated at Sec 25 Crematorium or burial ground
- Time to be fixed after informing Medical Officer Health of MC Chandigarh. Dr Amrit Pal Singh: 8712900002
- Body to be sent along with patient’s attendant/s (Limit the number to 1 or 2)
- Body will be handed over to Police at Crematorium
• Cremation will be done by municipal corporation staff

HEALTH CARE WORKERS

Symptomatic HCW
• As per the ICMR guidelines, all symptomatic healthcare workers must be tested for Covid.
• Symptomatic healthcare workers must immediately report to the Covid screening OPD in either New OPD block (outside) or Nehru hospital Emergency (24x7).

Asymptomatic exposed HCW
• HCWs who come in contact with a Covid positive case without donning PPE must be quarantined in PGIMER for a period of 14 days. During this period, the HCW must monitor his/her own temperature keep a watch on symptoms suggestive of a viral infection.
• In PGIMER, currently, asymptomatic exposed doctors and nurses are being quarantined in Nehru Hospital private wards
• HCWs who come into contact with another asymptomatic HCW who has been in contact with a Covid positive patient, does not need to do anything.

Hydroxy chloroquine prophylaxis for APC HCW
Offered to Frontline workers at risk of contact with COVID suspected / confirmed patients

Procedure:
1. Get an ECG at Room No.1003, Advanced Cardiac Centre [Designated technician with precautions]
2. Meet Dr Praveen [8728831787] at NHE, Ground Floor Reception area [first room at the right side once you enter the building]
3. Sign in an informed consent
4. Get the first dose – directly observed therapy
5. Subsequent weekly doses and further procedure will be advised
Contact Dr Karthi N, Pediatrics (9814376716) / Dr Ritin, Internal Medicine (9818700713) for any queries.

Mental health issues
• Working with Covid-proven or Covid-suspect patients is stressful. Do not hesitate to seek with mental health issues.
• Prof Sandeep Grover, Department of Psychiatry, looks after mental health issues of HCW (7087009807, 9316138997)
• Mental health helpline number is 7087001098, 7087008700

Accommodation while on Covid 19 duty
• All those who are working in Covid 19 wards, with full PPE and who have had no breach of PPE, and who have access to an independent room and toilet in their own home, and can isolate themselves from their family members, are encouraged to go back to their own homes.
• Doctors and nurses, who are on duty in blocks of shifts upto a week in Covid 19 wards, AND WHO HAVE TAKEN CARE OF COVID POSITIVE PATIENTS BUT HAVE NOT HAD ANY BREACH OF PPE, and who are unable to go back to their own homes during this period, can avail of accommodation in private wards, Nehru Hospital.
• This facility is not available to those who have only taken care of suspected Covid positive patients, or who have been on reserve duty or back-up duty
• Once their 7-day block of shift duties is over, they will be shifted to a quarantine block in Park View Hotel, sector 24.
Those who wish to avail of accommodation have to contact the concerned PGI committee (7087001115 NHE COVID CONTROL ROOM or Dr Usha Dutta 8198877022 or 7087009610)

Protocol for availing PGI accommodation for those on Covid +ve duty

- On Duty in NHE/ contact with COVID+ve patient
- Download accommodation request form from PGI website COVID portal
- Fill the form
- Take Picture on your phone
- Whatsapp
- Submit later at accommodation site, when you go there for accommodation

For Master list
Send copy to Dr. Swapnajeet Sahoo
COVID CONTROL ROOM, NHE
88772727744

Doctor/Nurses/TA

For On-Duty accommodation
In Private ward 3A, 4A, 5A send to Dr. Shweta Talati (9417276931)

For accommodation in Park view (at end of 7-d block of duties) send to Dr. Tulika Gupta (9815610227)

HA/SA/ Security

For accommodation in Duty/Quarantine accommodation in PGI Infosys SARAI send to Dr R.S. Bhogal (9780371499)
Undertaking form for duty period

- All HCWs are advised to go back to their personal accommodation as far as possible
- For those unable to do so, we will try to provide accommodation subject to availability
- For allotment of accommodation, the Accommodation Request Form along with Undertaking must be signed by the duty personnel and countersigned by the supervising faculty [Electronic approval is acceptable]
- Due to resource constraint setting, accommodation can only be allotted to those individuals on active COVID duty (not back up staff)
- Please bring all items of your personal daily needs for the duration of duty and quarantine

- Get form from PGIMER website → Fill → send by Whatsapp to 8872727744 for e-approved by Swapanjeet Sahu, Covid control room, → allotment will be done by Dr. Shweta/ Dr Tulika.

UNDERTAKING

(To be filled in at the time of application for PGI accommodation during COVID-19 duty)

✓ I certify that I am directly taking care of COVID-19 confirmed cases
✓ I certify that I do not have an independent room at my home where I can safely isolate myself without jeopardising the safety of my family members
✓ I am aware of the following rules that I am to follow during my stay at my designated accommodation:
  o Not to come out of room except for going to and back from duty
  o Not to have any visitor or friend / visit common areas
  o Not to misuse any facility
  o Will be provided with main meals (breakfast, lunch and dinner) at fixed timings.
  o One bed with linen, toilet facility and 2 litres of water per day
  o Food will be provided outside the room on a table
  o No cleaning staff will be provided for daily room maintenance for safety concerns
  o Follow local rules so that nobody is put at any form of risk

Name _______________________________
Signature ____________________________
Date and Place _________________________
Accommodation form for HCWs Covid-19 positive on duty (NHE)

Accommodation required for
· Duty period from _________ to _________
· Quarantine period from _________ to _________

(Tick both if you need both)

<table>
<thead>
<tr>
<th>Name:</th>
<th>Age</th>
<th>Gender</th>
</tr>
</thead>
</table>

Contact details (Address)

<table>
<thead>
<tr>
<th>Tel No</th>
<th>Designation</th>
<th>Department</th>
</tr>
</thead>
</table>

Category Faculty / SR/JR / Nurse / Technician

Area of posting (NHE ward/NHE ICU/ NHE Emergency)

<table>
<thead>
<tr>
<th>Date of start of duty</th>
<th>Date of end of duty</th>
<th>Shift timing</th>
</tr>
</thead>
</table>

Type of accommodation already present:
· Hostel
· Home

Send by WhatsApp to Dr. Swapnajeet Sahoo on 8872727744

Key contact details:

<table>
<thead>
<tr>
<th>Transport</th>
<th>Dr. Tulika Gupta (9815610227)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parkview issues</td>
<td>Dr. Tulika Gupta (9815610227)</td>
</tr>
<tr>
<td>Pvt. Room issues:</td>
<td>Dr. Shweta Talati(9417276931)</td>
</tr>
<tr>
<td>NHE issues:</td>
<td>Dr.Swapnajeet Sahoo (8872727744)</td>
</tr>
<tr>
<td>Any other issues</td>
<td>Dr. Usha Dutta (8198877022)</td>
</tr>
<tr>
<td>COVID testing on day 12th of quarantine</td>
<td>Dr. Lakshmi (9872628236)/ Dr. Sugandhi (9897740325)</td>
</tr>
</tbody>
</table>

For office use only

Accommodation for COVID duty assigned · Yes · No

Site____________________ Room Number_______________________ Signature__________
कोरोना वायरस की घर आधारित देखभाल के लिए

दिशा निर्देश

14 दिनों की अवधि के लिए घर पर सीमित होना चाहिए और परिवार में सार्वजनिक और अन्य सदस्यों के साथ निकट संपर्क से बचना चाहिए।

घर की देखभाल के लिए मार्गदर्शक सिद्धांत:

1. बीमारी के बारे में सूचित किया।
2. घर पर रहें; खुद को एक अलग और अच्छी तरह हवादार कमरेमें अलग करें परिवार के अन्य सदस्यों से।
3. दूसरों के साथ घनिष्ठ संपर्क से बचें। अपरिहार्य, हमेशा कम से कम दो मीटर की दूरी बनाए रखें।
4. आने जाने वालों से बचें।
5. चेहरा छूने से बचें।
6. हाथ मिलाने से बचें और साबुन और पानी से बार-बार हाथ धोएं। साबुन और पानी की अनुपलब्धता के मामले में, Hand Rub हाथ के घिसने का उपयोग किया जा सकता है।
7. बहुत सारे तरल पदाथर्।
8. खांसी शिकाराचार का पालन करें।

*खांसी या छींकने पर मुंह और नाक को Tissue से ठंकना; यदि आपके ऊपरी बांह या कंधे पर टिश्यू/ हैंडशेक उपलब्ध नहीं है, तो खांसी/ छींक नहीं आती है, सीधे हाथों पर खाँसना/ छींकना नहीं चाहिए।

*खांसी या छींक आने पर दूसरों से दूर हो जाए।

*इधर-उधर नाकन ना छींके।

सांस लेने में कठिनाई जैसे लक्षण हैं तो कुप्या निकटतम सरकारी स्वास्थ्य सुविधा से संपर्क करें। किसी भी अन्य जानकारी के लिए जिला निगरानी कार्यालय से संपर्क करें। कोरोना वायरस हेल्पडेस्क नंबर - 9779558282 (APC, PGIMER, CHANDIGARH)
Guidelines for Home based care of 2019-nCoV

Novel Corona Virus (2019-nCoV)

Any person(s) suggestive of 2019-nCoV, should be confined at home for a period of 14 days and avoid close contact with public and other members in the family.

**Guiding Principles for home care :**

1. Be informed about the illness.
2. Stay home, preferably isolate himself / herself in a separate & well-ventilated room. Avoid common areas frequented by other members of the family.
3. Avoid close contact with others. If inevitable, always maintain at-least two metres distance.
4. Avoid having visitors.
5. Avoid frequent touching of face.
6. Avoid hand shaking and wash hands frequently with soap and water. In case of non-availability of soap and water, commercially available hand rubs can be used.
7. Take plenty of fluids.
8. Follow cough etiquettes -
   * Cover mouth and nose with a tissue/ handkerchief when coughing or sneezing; In case tissue/handkerchief is not available cough/ sneeze onto your upper arm or shoulder; coughing/ sneezing directly onto hands should not be done.
   * Turn away from others when coughing or sneezing.
   * Do not spit/blow nose here and there, use a water filled receptacle for collecting sputum, thereby minimizing aerosol generation.

Monitor your health for appearance of symptoms like fever, cough and/or breathing difficulty. If you develop any of these symptoms Please do contact the nearest Government Health Facility.

For any further information Please contact District Surveillance Office.
(Coronavirus- Helpdesk no-9779558282)
(APC,PGIMER,CHANDIGARH)