TIPS AND ADVICE FOR OPENING A COVID-19 ROOM

Version 1 - 25 March 2020

This document has been created to help those hospitals wishing to open a Covid-19 room. It is based on our admittedly limited experience and any new findings or discoveries should be added as they arise.

- It should firstly be stated that this will not be an easy task and you will - as you most likely know quite well by now - be welcoming patients with severe symptoms whose condition may deteriorate very quickly.
  Once a patient has been admitted to the Covid-19 room you should identify whether or not they will require life support as well as ensuring all relevant information is readily available for both medical and paramedical professionals.
  On our end we will state via all media (medical/Orbis, nurse prescriptions/Actipidos, written messages/security):
  1) which patients will need resuscitating.
  2) which patients are NTBR: not to be resuscitated but care to be provided (ATB, anticoagulants, lab work).
  3) which patients are LATA (active care either limited or terminated): with midazolam/morphine prescriptions frequently from the outset or in any event those planned prescriptions to be explained to caregivers (avoid calling residents/night shift doctors). Do not hesitate to ask for assistance from the mobile palliative care unit.
- For those patients who will need resuscitating and having spoken with intensive care/resuscitation teams, initial experience would suggest that resuscitators should be notified whenever the patient requires oxygen therapy over 3 l/min to keep saturation at 93-94% as the patient's condition may very quickly (ie. a matter of hours) deteriorate, particularly during days 7-10 of symptoms appearing. Reports from local organisations would indicate another option would be transferring the patient to Pneumology (if you are not a service frequently dealing with pneumology cases and access within your organisation is a possibility).
- We have included the telephone number for the nurse's station in the event where despite the call going through staff cannot answer promptly (for "will need resuscitating" patients but also for family members of LATA patients who may be in the room as well).
- **Prescribe oxygen** and monitor respiratory rate (RR) in the prescription writing software, with an O2 sat target of 94-96%. Also include the words: *"appel médecin si débit d'O2 > 4 à 6L/min pour obtenir les objectifs de saturation ou si FR> 25 (à adapter à la situation)"* [Contact doctor if O2 flow is over 4-6 l/min to achieve saturation objectives or in the event RR is over 25 (adapt to the given scenario)] and train nurses to keep an eye on patients' RR and O2 sat levels at all times.
- As a general rule **visits are not authorised** although inasmuch as possible exceptions should be made for end-of-life cases.
- Whenever a patient is admitted family members will frequently arrive in a state of panic. They are not allowed to enter the unit and should remain in the area outside of the unit. You should quickly provide them with surgical masks, speak with him, take their contact details and ask them to promptly return home, given them instructions to follow. Thoroughly wash your hands after taking the bag of belongings to be given to the patient.
- Make arrangements to call each patient's confidential contact with updates every day at a time to be set by doctors (around 2-3pm, prior to to new shifts coming in, etc.);

ORGANISATIONAL CONSIDERATIONS FOR THE ROOM

- **The redistribution of medical and paramedical teams should strongly be considered.**
    - In our case we have had to to double the number of residents and senior doctors in rooms as well as the number of nurses and caregivers (one for every 4-5 patients).
    - Your organisation's senior management should very quickly anticipate how it will compensate for staff numbers redistributed to other services where activities have been reduced or consider recourse to the health reserves.
    - Consider quickly setting up one security station per building.
    - Psychologically prepare yourself for an astronomical workload, particularly evenings and weekends. For residents and senior doctors we have done our best to commit to them having one day off each week.

- **The redistribution of materials should also be taken into consideration** (collect blood pressure meters, thermometers (which stop working the more they get disinfected, so we've started using individual disposable thermometers), glucometers) from services with reduced activities and appointment areas, which should be all but deserted at this point. Based on our experience, the minimum required to run a room with 18 beds is: 4 DynaMaps, at least 4 thermometers, 4 glucometers, 4 portable O2 sat monitors and at least 10 tips for electrical syringes (you'll need two of these for one end-of-life patient - these get used up very quickly). The ideal scenario would be one portable O2 sat monitor and one thermometer per professional. By way of example this would enable CV residents/senior doctors to run a last round of patients with a portable O2 sat monitor to hand and this is tremendously useful.
- There is no consensus concerning stethoscope use, with two options available:
    - Disposable stethoscopes, which should remain in the room at all times: auscultation quality is very mediocre in this sense, which is problematic given the symptoms we're dealing with and even more so bearing in mind the ear tips of the stethoscope could be coated in the virus. The workaround we have developed is rubbing them down with an alcohol-based solution.
    - Use your own stethoscope but being sure to clean it with disinfect wipes (or soap and water).

- **Dressing and undressing:** We have prepared a 30 minute video on dressing and undressing, as this is not easy to do under the best of circumstances and even worse during a stressful situation. The hygiene team are frequently busy with more pressing matters so cannot train up other medical staff. Tutorials are available on YouTube at https://youtu.be/UHEATN2pN_8 or https://youtu.be/QFrVBgq82LY.
    - We have been wearing disposable pyjamas and a surgical mask (subject to changes in recommendations) all day long, which we have changed into a new set of every four hours.
    - Whenever going around taking vital signs and where no stains or other dirty spots have been noted, we have stopped changing surgical gowns, hair nets, eye guards and surgical masks. This means we can work more quickly (or spend more time on a patient!) whilst consuming less supplies and most importantly preventing mistakes from occurring.
    - **With respect to gloves**: these are only recommended if you will be in contact with biological liquids. If worn they should be removed at the end of their specific use, then wash your hands with an alcohol-based solution (wearing gloves at all times is an environmental contamination factor - gloves cannot be disinfected as easily as bare hands can be). If you do have to use gloves, we have washed ours down with an alcohol-based solution immediately following their removal.

- For invasive care (nose/throat swabs, aerosols) an FFP2 mask should be worn. You will then need to remove the surgical gown, hair net, eye guards and mask whenever you leave the room.

  A tip for eye guards (at the very least those used in Parisian public hospitals): the temple bands are adjustable (so if they start to slide off more often than not all you have to do is shorten the temple bands). These eye guards are not single-use only and should be disinfected (10 minutes soaking in disinfectant solution or wiped down with wipes).

Laminated copies of dressing/undressing procedures should be posted on the entry door as well as inside of the Covid-19 room to ensure self-control.

Keep in mind at all times that YOUR HANDS are the MAIN VECTOR (if not the only vector) of transmitting the disease so **your hand hygiene must be beyond irreproachable**. NEVER, EVER touch your face without having applied an alcohol-based solution first. Remember we unconsciously touch our face dozens of times an hour.

- **Surgical masks for patients: prioritise distribution of masks with rubber bands** over those with cloth bands (these are considerably faster and easier to get on patients, particularly those on oxygen therapy). There is no general consensus for medical staff use.

- **Medical visits:** our suggestions (to be adapted to each individual case):
  - Morning doctor/nurse rounds: we suggest having each two-person nurse team take their rounds, alternating with doctors for the end purpose of preventing there being too many people in the room.
  - We divide up visits every morning, so each patient is seen by a single doctor (either a resident or senior doctor). The only time we double up (resident + senior doctor) is for new patients being admitted in the evening or for cases which are harder to manage. At the end of the morning (around 12:30) we conduct a debrief of all of the patients to confirm what care and treatments will be given.
  - For the time being resident doctors tend to see the same patient from one day to the next, however senior doctors tend to “jump around” so all patients are seen by senior doctors every 28-72 hours, maximum (this will surely vary case to case for other organisations).
  - Prior to their visit each doctor should review all of the case files then see patients one by one without changing their attire (obviously no written documents or computer equipment should be taken into these rooms). Doctors must therefore make any changes to prescriptions quickly after seeing patients, so as not to forget anything. An arrangement where the senior doctor works in tandem with someone (even a non-resident) who is outside of the room entering changes should also be mooted.
  - Some teams have proposed having patients wear surgical masks (except where this is physically not possible) whenever a health professional enters their room.
  - Lastly, abide by clinical common sense at all times (do not skimp on differential diagnoses, such as for lung embolisms, patient referred for resuscitation who improves after treatment for an acute lung oedema, etc.).

- **Nurses’ rounds:** nurses should do their rounds in pairs, as follows: one nurse should get dressed in the room, the other outside with the stopwatch (to take RR readings - as watches are prohibited). They should take their readings, noting any elements which are missing.

- **Equipment to be kept outside rooms:**
  - **A drip stand outside** to hang clean equipment on: surgical/FFP2 masks, clean eye guards, hair nets, gloves, long-sleeved gowns, and alcohol-based solutions.

    - **A trolley outside** for dirty items: disinfectant bath (or wipes) for eye guards, your stethoscope and wipes for the door handle.
    - Where possible a table or similar structure should be placed at the entry to the room to set trays etc. on without necessarily having to get into full PPE for more able-bodied patients.

- **Equipment to be kept inside rooms:**
    - DASRI yellow dustbin (avoid using the type with a pedal fitted, as this can be a source of aerosol exposure - use basic bins instead.)
    - An A4 size board with a pen attached to it (a pencil with a 30 cm plaster wrapped around will do the job perfectly) for notes (even though this is in the dirty area it can be viewed without having to get into full PPE). This sheet of paper is particularly important whenever doctors do their rounds. It's the old way of doing things but they get a good review of goings-on in the one single document in the room.
    - Mask(s) for the patient (based on their condition).

- We have included the patient care station phone number in the file hung in rooms, which gives patients a sense of security and means certain basic problems can be addressed without having to get into full PPE, etc. Patients can also be called (e.g. support psychologists, social workers, etc.). As such there is a telephone directory for each room displayed in the doctors' and nurses' offices.

- Obviously there is a preference for Covid-19 patients to be a single rooms, although **it is possible to have two Covid-19 patients in double rooms.**

- **We have our names written on our pyjamas and also on the surgical gown** (a plaster and black felt pen will work in a pinch). Patients are under duress and are seeing an endless parade of masked people dressed in blue or green, who they can't even identify as being a man or woman, doctor/nurse, someone they've seen before or someone new. This is very difficult psychologically, particularly for the elderly. It is also very difficult for members of the different teams to identify each other as we're performing so many different roles now.

- Ask non-resident doctors or anyone else available (a tall task, we know) to spend 15 minutes a day with each elderly or highly dependent patient for a chat so patients get a sense of forming a relationship. We must be vigilant however as patient care can become sub-optimal (patients not placed in chairs, little or no assistance eating, etc.) as our workload is so extreme. Where possible, help patients ring their family via Facetime/Skype/WhatsApp.

- **Most importantly clean and disinfect everything all the time:** door handles, telephones, keyboards, mice, switches, etc.). This is also a very good moment to tidy up the resident doctors' office.

- **Air out rooms** (windows in rooms should be able to be opened, although not too widely to prevent suicide attempts; also offices) to keep the virus from circulating as much as possible. The minimum recommendations in place are opening windows for 10 minutes every hour. Bear in mind however that for some buildings (generally speaking newer buildings) recommendations may be different, so contact technical services to find out more.

Doors to rooms should normally be kept closed, although they may be left opened if needed, although do note this increases risk of transmission by droplets.

- **Avoid aerosol use as much as possible**, except those situations where use is imperative (particularly for decompensated asthma cases): prioritise use of an inhalation room (four puffs of sablutamol in an inhalation room for four hours max) wherever possible.

- One small practical problem: what exactly should you do about your mobile? Some options we've come up with:
    - Keep your gown over your pyjamas (so leave your phone in the doctor's/nurse's office).
    - Keep a small pencil case under your pyjamas where you can store it and the earbuds.
    - Attach a paper/cotton "wash cloth" to your pyjamas.
    - Do not answer calls when providing care. Remember to wash your hands before and after using your phone.

GENERAL ORGANISATIONAL CONSIDERATIONS

- In addition to the mountain of e-mails we send each other we also hold **daily meetings** (by telephone, as there is no way to have meetings in person, with cases of intra-team viral transmission being very frequent). This keeps all of us informed of what has happened during morning and afternoon crisis meetings so all teams know have got the most up-to-date news. It must be borne in mind that things are changing at break-neck pace, so what was true in the morning may not necessarily be true in the evening or the day after.

- **Due consideration should also be given to the fact caregivers should be able to leave their children at school or a crèche or similar structure is set up.** Of particular note is what Assistance Publique have done in this respect and more generally at least what is being done in Paris and surrounding areas. Some have called for students to volunteer to step up in this respect. This is a vital point of consideration.

- **Concerning meals**, ideally these should be taken alone and in your office (so take a pack lunch with you and listen to a bit of music to keep your spirits up). For paramedical personnel, try to keep numbers in the office at 5 or under. Keep at least one metre between individuals. Medical and paramedical staff who have been in contact with Covid-19 positive patients should eat alone.

- **Stress management**
    - **We have started offering hypnosis sessions and general consultation appointments** from senior Psychology service doctors, as managing stress levels is important.
    - The staff room has been converted into a recreational room with yoga mats and table tennis (surgical masks must be worn when playing though - do not get too competitive and remove them!), with a maximum of five people in the room at one time.
    - Spoil yourself with chocolate, sweets and have brioche for breakfast some days.
    - Keep your speaking tone and general manner calm: don't run, don't shout, etc.
    - More specifically we should be there for each other as the stress is intense. Be particularly careful around non-residents and student nurses.

- **Considerations for management: make free WiFi and television available.** This gives patients the chance to Facetime/Skype/WhatsApp with their family.

MANAGING END-OF-LIFE PATIENTS

- This should be taken into consideration from the outset (ie. highest level of importance).
- The details of both the confidential contact as well as who to contact in the case of death should be properly included in the patient's case file.
- Visits from loved ones:
    - Have them wear a mask prior to entering the unit if they are not wearing one already.
    - We had one end-of-life patient who had three daughters, so we authorised three visits which were done successively. This was not a good idea because it required more care time (each time we had to show each one how to get dressed and undressed and help them during the process) and the other confidential contacts were waiting in the hallway, potentially contaminating surfaces or professionals walking past them. Ultimately it is also probably less anxiety-inducing for the family as well if they are all in the room together.
- **Whenever sedation is effective and the patient is comfortable the amount of oxygen should be reduced** to a maximum of 4l as oxygen therapy is no longer of interest for the patient (it is only really there for the family) and at larger doses it increase risk of transmission (abundance of aerosols).
- Lastly have specific procedures in place for patients who have died (pacemaker removal, etc.).

Lastly, and inasmuch as possible: LOOK AFTER YOURSELVES. Take a bit of time for yourself every day - you deserve it!

☺

TAKE HEART AND KEEP YOUR HEADS UP (this too shall pass).

The Hôpital Cochin (Paris) internal medicine team (specifically Nathalie Costedoat-Chalumeau, Luc Mouthon, Tali-Anne Szwebel, Nathalie Morel, Nadjime Ismail)
Camille Taille (pneumology, Hôpital Bichat - Paris).
French Public Hospital Hygiene teams.
And everyone else who has contributed with their tips or advice, thank you.