Some recommendations about the anesthetic management of children in this era of Covid19 pandemia.

Warning : these are reflexions of an informal group to help colleagues facing the current difficult and unique situation. They are meant to help making clinical management decisions based upon the epidemic situation and the political decisions taken in your country, and the equipment available (e.g., special masks) in your hospital.

Moreover, although children seem to be relatively protected from the severe pulmonary complications of this infection, they are one of its main vectors. The measures proposed are therefore mainly meant to protect the caregivers and the other patients.

Precautions : the concept of protective mask is large : ideally, it should be a FFP2 or N95 type mask. But, if this is not available or kept for those caring for patients in the ICU, we can use

- surgical masks : one for the child, one for yourself
- two superimposed surgical masks on your face
- a surgical mask and a faceguard in plexiglas (physical barrier)

In addition :

- hands should be carefully washed with an hydro-alcoholic solution before and after wearing gloves

- the examination and operationg room, keyboards, screens, tables, wires, goggles and sthetoscopes etc should cleaned with an alcoholic solution after each case

- disposable gloves, gown , footwear and charlotte should be worn ; they should be thrown away immediately after each case

- after removing protective equipment, avoid touching your hair or face before washing hands.

- we should observe each other for potential unvoluntary breaks in barrier measures and kindly ask for correction when needed

Some rules :

1 Only emergencies and cases that cannot be postponed (e.g., cancer surgery) should be admitted to the OR

2 All children (even asymptomatic) whose a family member suffers from SARS-2 and children presenting with an URI with or without fever must be considered as vectors of Covid 19. But remember that the disease can also start as abdominal pain, vomiting and headache in childhood !

3 All suspect children should be examined by a caregiver wearing a facemask, gloves and a gown

4 Patients with confirmed or suspected 2019-nCoV infected cases:

- should **NOT** be brought to holding or PACU areas
- should be managed in a designated OR
- should be recovered in the OR or transferred directly to ICU**,** ideally into a negative pressure room.

5 Ensure a high quality Heat and Moisture Exchanging Filter (HME) is placed between the face mask or the tracheal tube and the breathing circuit during anaesthesia or the reservoir bag during transfers to avoid contaminating the ventilator or the surrounding atmosphere. Avoid using non-rebreathing circuits : they require high fresh gas flows and are difficult to clean (or additional waste of plastic). Use a circle circuit with an additional viral-bacterial filter inserted in the expiratory limb of the circuit to avoid contaminating the ventilator. The CO_2 /anaesthetic gases sampling tube should be placed between the HME and the ventilator.

6 Airway management : the aim is to perform intubation/extubation as safely as usual and to avoid any cough or dispersion (aerolozisation) of secretions in the atmosphere. Therefore :

- the most experienced anesthesia professionals available should perform intubate, if possible. No trainee intubation for sick patients.
- avoid awake fiberoptic intubation, unless specifically indicated.
- consider using a video-laryngoscope if available to be at a longer distance from the child's oropharynx
- consider manual ventilation with small tidal volumes (just enough to rise the child's chest wall) before intubation.
- re-sheath the laryngoscope immediately post intubation (double glove technique)
- extubation is a very delicate step : careful suction of the oropharyngeal cavity should precede either deep or awake extubation, trying to avoid cough and vomiting. Some teams consider extubating under a transparent plastic drape acting as a physical barrier against aerolozisation of the patient's secretions.
- seal all used airway equipment in a zip-locked plastic bag. It must then be removed for decontamination and disinfection.
- all disposable airway equipment, suction catheters and tubings mmust be trown away for destruction (inciniration)

Adapted from :

Kamming D, Gardam M, Chung F. I. Anaesthesia and SARS.

Br J Anaesth 2003; 90:715-18