GUIDELINES ON MANAGEMENT OF CORONA VIRUS DISEASE 2019 (COVID-19) IN SURGERY

A. SCREENING

This is based on MOH recommendations of screening for COVID-19 which is generic across all disciplines

a. How to screen (refer Annex 1)

Ask 3 questions to all patients

- Do you have any fever or acute respiratory infection (sudden onset of respiratory infection with at least one of: shortness of breath, cough or sore throat)?
- Do you have any history of travelling to or residing in affected countries in the past 14 days?
- Do you have any contact with a confirmed COVID-19 case within the past 14days?

b. Where to screen

A tall possible entry points

i. Clinic
ii. Patient Admission Centre

c. Who to screen?

Every patient

d. If tested positive

Kindly refer to the ID team as per MOH protocol

B. INFORMATION FOR SURGICAL UNITS

a. SurgicalTeam

Each Surgical unit should ideally have a core team to manage COVID-19 and the team should comprise of at least:

- One Specialist
- Two Medical Officers
- Two Staff Nurses

This identified team should be on standby for all suspected patients and should ideally be optimally trained in handling the personal protective equipment (PPE), sample-taking and packaging apart from the management COVID-19 patients.

b. Universal precautions

i. The number of staffs managing a suspected or confirmed patient should be kept to a minimum

ii. These patients should wear a properly fitted N95 mask

iii. If a patient is in distress, the medical personnel should be able to provide care but would have to wear PPE during treatment as long as they are in contact with the person

iv. In cases requiring surgical intervention, a Medical Officer or a specialist should be involved and all staffs must use PPE

v. It is of good clinical practice to treat the body fluids, tissues, mask and other apparatus in contact with the patient as having potential biohazard and should be disposed as per current available recommendations (as for RVD patients)

vi. The operating theatre should be cleaned as per biohazard based on current available protocols.

Steps to wear PPE	**Steps to remove PPE**
Handrub	Remove gloves
Wear N95 mask (Should be fit checked)	Hand rub and hygiene
Wear face shield / goggle	Remove gown
Wear disposable gown (Ensure back is covered)	Hand rub and hygiene
Wear double gloves	Remove mask
	Hand rub and hygiene

c. Transfer and documentation

i. Any suspect patient under investigation (PUI) must first be given a mask.

ii. All staffs managing a suspected or confirmed patient should wear PPE and these patients should be transferred based on the identified pathway.

iii. The staffs involved in the screening and investigations performed should clearly be documented as per MOH standards.

iv. It is important to shield patients and minimize exposure to others wards to avoid lockdown.

d. Designatedsuiteforsuspectedandconfirmedpatients

i. All Surgical units should have a fully equipped and a designated site within a specific ward for the management of patients with COVID-19. **Although a negative pressure environment is ideal for management of such patients, this should be reserved for those confirmed to be infected.*

ii. The location of such wards should ideally be nearest to the point of entry which is either at the patient admission centre or the isolation ward but this should depend on the resources of the individual hospitals.

iii. Each Surgical unit is recommended to have their own management pathways based on their own logistics and resources.

e. Dedicated operation theatre

i. All tertiary hospitals should have a dedicated operating theatre for patients suspected with COVID-19. This theatre should ideally be fully equipped and although negative pressure ventilation is recommended, it is more essential for patients requiring general anaesthesia and hence this will depend on the resources and each individual hospital. Most operation theatres have its own air handling units.

ii. The location of this theatre should ideally be easily accessible from the point of contact but this once again should depend on the individual logistics and resources of each hospital. The benefits of having this theatre nearby to the point of entry will also facilitate emergency surgery if required.

f. Family and Visitors

i. If the patients are suspected or confirmed to have coronavirus, there should be minimal risk of exposure to others and hence the exposure to family in such exceptional circumstances are minimized.

g. Elective surgeries

i. All elective surgeries should be postponed as to divert our available resources for those suspected or confirmed to have COVID-19.

C. EMERGENCY SURGERY

a. The evidence on how best to manage a surgical patient is still limited

b. Minimizing exposure to staff

There commended number of staff to manage these patients during surgery is 6:

- One Specialist
- One Medical Officer
- One Anaesthetist
- One Anaesthetist Medical Officer
- One Scrub Nurse
- One Circulating Nurse

c. Anaesthesia

i. If a patient requires a surgical intervention, regional anaesthesia is highly recommended as this will be a safer option as compared to general anaesthesia.

ii. However, if the only possible option is general anaesthesia, this should ideally be performed in a negative pressure setting with the routine biohazard measures implemented during and post procedure. The patient can then be transferred via a portable ventilator. This however should be based on the individual logistics of each hospital.

iii. Intubation and extubation should be done wearing full PPE which include PAPR or its equivalent (N95 well fitted and face shield / goggle) when PAPR is not available.

iv. The extubation of such patients should also be done in a negative pressure setting as to minimize the risk of aerosol transmission.

v. Post-operatively, these patients should be managed in the isolation ward as per protocol. Consider thrombo-prophylaxis throughout the hospital stay.