COVID-19 is an unprecedented global health crisis which has severely impacted both the economy and everyday life. Locally, to combat its spread and contain the SARS-CoV-2 virus, the Singapore government’s Multi-Ministry Taskforce (MMT) instituted a ‘Circuit Breaker’ (CB) period which started on 7 April 2020. This effectively shut down the physical economy, leaving integral activities such as grocery shopping, delivery and essential medical services open, and keeping the population at home apart from stepping out for access to integral activities and for solo exercise, effectively socially isolating households physically. This CB period, which was originally meant to end on 4 May 2020, was subsequently extended to 1 Jun 2020 in a further announcement made on 21 April 2020, where further tightening measures were also instituted.

The Current Situation

On 19 May 2020, the MMT announced the decision to progressively lift Circuit Breaker measures in 3 phases, namely: Phase One (“Safe Re-opening”), Phase 2 (“Safe Transition”), and Phase Three (“Safe Nation”). Phase One, beginning from 2 June 2020, is a cautious resumption of economic activities that do not pose a high risk of transmission, while maintaining social distancing and household isolating measures.
With regards to healthcare services, the Ministry of Health (MOH) followed up on the MMT’s announcement with a circular on the same day which outlined the tiered resumption of healthcare services that had been deferred during the CB period (MOH CIRCULAR NO. S 129/2020 and 130/2020: TIERED RESUMPTION OF HEALTH SERVICES DURING & AFTER COVID-19 CIRCUIT BREAKER PERIOD).

This was followed up by an announcement on 22 May 2020 on its website (see RESOURCES) In this circular, MOH stated that Phase One include resumption of healthcare services based on medical necessity where they cannot be deferred for >4 weeks, with patients who are well or with stable conditions continuing to have their treatments deferred (See Annex A for Plastic Surgery procedures allowed by MOH before and after the Circuit Breaker period). The justification for this was maintaining sufficient capacity and resources in the healthcare institutions and community to cover ongoing COVID-19 operations. Aesthetic services have not been considered for resumption in Phase One, with botulinum toxin injection, fillers injection and thread lifts specifically mentioned as disallowed.

Phase Two started on 19 June 2020 allowing resumption of all healthcare and aesthetic services with safety measures and distancing in place. Subsequent progression to Phases Three would depend on the evolving COVID-19 situation, and the MMT’s assessment of the situation.

At any point in time during the while carrying the SARS-CoV-2 virus, patients can be asymptomatic. As physicians, we have an obligation to prioritize patient health and medical needs before non-essential services, and to make sure (both personally and in line with government guidelines) the pandemic curve remains flat. The guiding principles for safe and responsible reopening of PRAS services thus are (in no particular order):

1. Maintain health and safety of all patients
2. Maintain health and safety of medical and support staff
3. Preservation of health care resources

The tools that we should use to achieve this are:

1. Effective personal hygiene
2. Effective social distancing
3. Efficient and enhanced workflow measures
Objectives of Guideline

The objective of this guidelines aims to support the framework provided by MOH, with additional measures that help to ensure safe practice of Plastic Surgery, specifically to mitigate against COVID-19 spread, in all settings. These guidelines are based on best current available knowledge, and should be taken in context with the latest MOH directives (see Resources on page 11 for list of specific MOH circulars) and local hospital guidelines.

The practice of plastic surgery encompasses pre-consultation to post-surgical follow-up and the guidelines have detailed measures for every part of the patient's journey which has been divided into:

1. Considerations for Daily Operations
2. Considerations for Pre-consultations
3. Considerations for Consultations and Physical Examination
4. Considerations for Outpatient Procedures
5. Considerations for Inpatient Procedures
6. Maintenance and Analysis of Practice
Recommendations of Procedure types according to Phases

Phase 1 (Safe Re-opening)
- As per Annex A
- Defer elective non-essential surgeries that require admission for now so as not to create a strain on medical resources.

Phase 2 (Safe Transition)
- As per Annex A
- All clinic and ambulatory based procedures with considerations as detailed in place
- All other major surgeries meeting criteria as per Annex B. Those falling under Annex A supersede Annex B requirements.
- At this phase, the system strain on medical resources has been flattened for a significant amount of time such that there is a stable positive margin of available COVID-19 healthcare resources and equipment.

Phase 3 (Safe Nation)
- All procedures/surgeries, with consideration of instillation of enhanced hygiene measures as detailed previously.
(1) Considerations for Daily Operations

(a) Maintain contact tracing records for both staff and patient
   - Mandatory staff and patient check-in and check-out, either using a SafeEntry QR code or entered manually.
   - To keep up-to-date with the guidelines of respective hospital (if practice is within the auspices of a hospital) or Ministry of Health guidelines.

(b) Temperature screening and reporting of symptoms
   - All staff and patients are to have their temperature screened upon entering the premises.
   - Staff are not to report for work when feeling unwell. Staff who are unwell with Acute Respiratory Symptoms (ARS) such as fever, cough and runny nose must avoid contact with others and seek immediate medical attention.
   - Staff on Sick Leave for ARS must stay at home for the full duration of their Sick Leave and not come to work. If staff still feel unwell even after the Sick Leave, they are to seek further medical attention and not report to work.

(c) Safe distancing measures
   - All staff not required on premises should be allowed to work from home, and should only go to the office when it is demonstrably necessary. Telecommuting should be adopted to the maximum extent.
   - Implement processes to ensure the right staff, in the right place, at the right time.
   - Streamline workflow and stagger working and break hours.
   - Workplace set up should be optimized for both staff and patients to ensure physical separation and minimal contact, with appropriate signages.
   - Consultations should be staggered to avoid crowding in the clinic
   - Implement contactless processes wherever possible. Examples include contactless payments, digital MCs and digital prescriptions.
   - Meetings should be conducted via tele-conferencing wherever possible.

(d) Masks and hygiene
   - Patients and staff must wear a mask at all times. Masks may be removed while consuming food or drink but must be put back on immediately after. It is not mandatory for Inpatients to wear a mask when in bed. However inpatients should wear a mask when stepping out of bed and when outside of their cubicle.
   - Proper hand hygiene must be performed before and after touching any person or surface.
   - Hand sanitizers must be made available at all patient fronting and clinical areas of the premises.
(2) Considerations for Pre-consultations

(a) Communication with patient

➢ Besides clinical requirements, any pre-consult communication with the patient should include explanation of how the COVID-19 situation has affected processes in the clinic, while reassuring them of the robust measures put in place.

(b) Pre-appointment call

➢ Where possible, patients should be contacted and screened for COVID-19 risk factors (travel and contact history according to prevailing MOH suspect-case definition) as well as ARS before their appointments.
   o Any patient with positive COVID-19 risk factors should have their appointments deferred for at least 14 days.
   o Any patient with ARS, should have their appointments deferred for at least 21 days.
   • All patients should be advised to present to their GP or the emergency department should they develop COVID-19 symptoms pre- or post-visit.

(c) Scheduling of appointments

➢ All new appointments should be pre-scheduled. No walk-ins should be accepted apart from emergencies or unexpected post-surgical complications.

➢ All follow-up appointments should be staggered to prevent crowding of the waiting room and minimize inter-patient contact.

➢ Patients should be allowed only ONE accompanying persons, and preferably from the same household.

(d) Reception and waiting area

➢ All patients must fill in a health and travel declaration on arrival in accordance with prevailing MOH Guidelines.

➢ Creation of colour-coding signage for patient guidance.

➢ Patients in the waiting room should be socially distanced (1 m apart in general areas, 2 m apart in fever areas).
(3) **Considerations for Consultations and Physical Examination**

(a) **Consider remote consultations where possible**
- Adequate documentation, confidentiality and security should be maintained
- Examples of cases amenable to teleconsult:
  - Initial consultations where clinical examination is not imperative
  - Post-procedural follow-up consults after initial recovery period
  - Surveillance consults

(b) **History-taking**
- Healthcare staff to wear surgical masks at all times
- Patient to wear cloth or surgical masks at all times
- Appropriate hand hygiene.
- Maintain social distancing at all times during the history taking.

(c) **Physical examination**
- Physician to wear gloves and masks at all times. *If there is potential for aerosol generation from the patient and exposure to COVID-19 then full PPE (N95 mask, gloves, gown, and eye protection) should be worn by the attending staff.*
- Except for examination of the lower face, patients are to keep their masks on at all times.
- Need for chaperone for examination of sensitive body regions still maintained.
- Used instruments should be put in a plastic sealable bag for transport to the decontamination area.

(d) **Consent**
- Add informed consent for the possibility of inadvertent exposure to COVID-19 during the procedure which could lead to increased morbidity and mortality. This can be done as part of your current consent form or as an addendum (see example from the American Society of Plastic Surgeons at [https://www.plasticsurgery.org/documents/medical-professionals/COVID19-Informed-Consent.pdf](https://www.plasticsurgery.org/documents/medical-professionals/COVID19-Informed-Consent.pdf)).
(4) Considerations for Outpatient Procedures

(a) Patient selection
- Patients who are unwell should have their procedures postponed.
- Avoid performing ambulatory surgeries where post-procedural admission is more than remotely possible.

(b) Sedation procedures
- If sedation is required, supplementary oxygen should still be provided to the patient, with apparatus placed under a surgical mask as much as possible.
- The surgical field/drape may be adapted to cover oral/nasal cavities.
- The healthcare staff monitoring the patient's condition and airway should have the appropriate PPE including N95 mask or equivalent.

(c) PPE during procedure
- Patients should wear a surgical mask at all times during procedures performed under local anesthesia, apart from when needing access to the lower face.
- Staff should wear PPE during procedures. This includes surgical mask, eye protection, gowns and gloves.
- When performing aerosol generating procedures (AGPs), or the patient is a suspected/confirmed COVID-19 case, staff should wear N95 mask in addition to the usual PPE. Please refer to MOH Circular No. 164A/2020 on Guidance on Surgical Management during COVID-19 Pandemic (page 11) for details on AGPs and appropriate PPE use.

(d) Post-op and recovery
- All surfaces should be cleaned immediately after the procedure.
- All used instruments should be cleaned as appropriate, e.g., wiped down directly after use. It is recommended to spray an enzymatic spray on used instruments to facilitate removal of protein material. Used instruments should then be placed in a closed container for further sterilization.
- Patients should be discharged directly from the procedure room. All instructions and prescriptions should be available at the time of discharge in the patient's room. Patients requiring post-procedural observation should be nursed in a single or separated room with appropriate dividers in place.
- Any accompanying persons should be informed towards the end of the procedure and should only come to receive the patient when he/she is discharged.
(5) Considerations for Inpatient Procedures

(a) Pre-anaesthesia and Consent

- During initial consultation, patients will be stratified according to their risk profile (Annex B). Decision on surgical procedure and anaesthesia type should be weighed together with necessity, benefits and risks.
- Regional/tumescent anesthesia with or without conscious sedation should be regarded as the first option for elective surgery during the post COVID-19 curve as it avoids invasion of the trachea-bronchial tract and protects the asymptomatic patient from lung complications.

(b) Induction

- Anaesthesia Induction should be performed with minimum number of medical staff in the operating theatre (OT).
- All staff in the OT at the time of induction should be wearing full PPE including eye protection, gowns, gloves, and at least N95 mask or equivalent level of airway protection.

(c) During procedure

- Keep number of staff in the OT to an absolute minimum necessary.
- If surgery is performed on the body a plastic drape should be put under the head and another plastic drape should be placed above the chest to create a tent isolating the face area.
- For sedation procedures surgical field/ drape may be adapted to cover oral/nasal cavities.
- For aerosol generating procedures (e.g. head and neck procedures, facial fractures, procedures around the oropharynx) operating personnel should be wearing full PPE including eye protection, gowns, gloves, and at least N95 mask or equivalent level of airway protection.
  - Minimize aerosol generation through minimizing high speed drilling and sawing, irrigation, suctioning and monopolar cautery.

(d) Post-procedure

- All surfaces should be cleaned immediately after the procedure.
- **All used instruments should be cleaned as appropriate, e.g., wiped down directly after use. It is recommended to spray an enzymatic spray on used instruments to facilitate removal of protein material. Used instruments should then be placed in a closed container for further sterilization.**
- Patients should be discharged directly from the procedure room wherever possible. All instructions and prescriptions should be available at the time of discharge in the patient's room. Patients requiring post-procedural care should be nursed in a single or separated room with appropriate dividers in place.
(6) **Maintenance and Analysis of Practice**

(a) **Detailed documentation and patient log**
   - This will help with:
     - Protection of clinic and staff
     - Government contact tracing measures
     - Dealing with any potential medico-legal issues

(b) **Follow-up with patient**
   - Where possible, all consultations as well as procedural patients should be followed up at least 2 weeks post-visit for health status and ARS.
   - This can either be done in person or via teleconferencing/phonning

(c) **Communication with MOH**
   - Maintain an open channel of communication with MOH to both receive latest updates regarding the COVID-19 situation, as well as provide statistics for analysis and audit as needed.
   - Keep updated with the local hospital guidelines.

(d) **Continual implementation**
   - Processes should be continually monitored and improved to optimize treatment capacity, limit healthcare worker exposure, limit unnecessary use of PPE, and ensure patient safety.
Resources

- Considerations for The Resumption Of Aesthetic Surgery, Treatments And Visits In Covid-19 Pandemic - Statement Of The International Society Of Aesthetic Plastic Surgery

- Recommendations on Organizational Adaptations for Scheduling, Patient Flow And Use Of PPE In Ambulant Surgery Centers (ASCs) And Covid19-Free Zones In Hospitals From The International Society Of Aesthetic Plastic Surgery


- [https://www.plasticsurgery.org/for-medical-professionals/covid19-member-resources/resumption-of-elective-surgery](https://www.plasticsurgery.org/for-medical-professionals/covid19-member-resources/resumption-of-elective-surgery)


- **MOH Circular No. 137/2020 Safe Management Measures at Healthcare Facilities during Post COVID-19 Circuit Breaker Period**

- **MOH Circular No. 164A/2020 on Guidance on Surgical Management during COVID-19 Pandemic for details on AGPs and appropriate PPE use**

- **MOH Circular No. 152/2020 on Resumption of Health Services, Safe Management and Visitor Policy in Phase Two of Post Circuit Breaker**
Annex A: Plastic surgery procedures allowed by MOH before and after the Circuit Breaker period

Not deferred during CB period:

1. Treatment of infectious diseases
2. Trauma services
3. Burns
4. Procedures required to prevent deterioration of the patient's condition
5. Cancer services when delayed would increase the chances of relapse or deterioration
6. Wound dressing

For resumption from 2 June 2020 (procedure cannot be deferred for >4 weeks)

1. Reconstructive surgery post-surgical resection/trauma (i.e. facial fractures)
2. Corrective surgery in symptomatic patients (i.e. eyelid weighting in facial nerve palsy)
3. Ventral hernia repairs
4. Treatment for conditions which will worsen significantly without intervention, with risk of potential long-term sequelae
Annex B: ISAPS Check List for Patient Selection

- Age < 65 years
- ASA 1-2
- NYHA I-II
- Exclusion of:
  - Arterial hypertension
  - Cerebral vascular disease
  - Ischemic and valvular heart disease
  - Cardiac arrhythmia
  - Diabetes Mellitus
  - End stage kidney disease
  - COPD/ Asthma
  - Obesity BMI >40
  - Estimated Procedure Time > 3 hours
  - Risk of procedure low
  - Risk of need for long-term care low
Acknowledgements

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