



جمعية الجراحين الكويتية
Kuwait Association of Surgeons



WOMEN SURGEONS
GP & UWAIT



KUWAIT CHAPTER

Kuwait Association of Surgeons and Women Surgeons Committee, American College of Surgeons Kuwait Chapter Joint Recommendations for Return to Elective Surgery Guidelines in SARS-COV2 Negative Surgical Patients

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Introduction and Rationale

COVID-19 pandemic has changed how we practice medicine, let alone go about our daily lives. Given this is a new disease, literature is evolving rapidly. Patient, staff, and personnel safety is paramount, as well as providing high-quality healthcare.

Cessation and cancellation of elective adult surgical procedures worldwide due to the pandemic has been estimated to be over 28 million cases over the 12-weeks peak of COVID-19¹ and the best estimation of cancelled cases in the Gulf countries were over 262,000 and in Kuwait over 31,000 cases². This resulted in backlog of surgeries that may require up to 45 weeks or more to be cleared.

Moreover, elective surgery has been ceased since end of March 2020 in Kuwait until today and continuing to do so could place many patients at risk of disease progression or complications. The risk of contracting SARS-COV2 within 30 days perioperatively has been associated with high mortality and morbidity³, therefore, while the healthcare system recovers and adjusts to after the peak of COVID-19 new era, careful planning and assessment of local resources is imperative prior to the return of safe surgical practice of elective surgery. With that goal in mind, Kuwait Association of Surgeons, Women Surgeons Committee, and the American College of Surgeons Kuwait Chapter have issued this joint recommendations and statements to provide surgeons and healthcare providers practical tips and guidelines on transitioning back to surgery based on the most recent available scientific evidence .

The recommendations cover the following issues:

1. Preparedness and Work Organization
 - Healthcare Facilities to Resume Elective Surgery
 - Administration
 - Surgical, Anesthesia, and Ancillary Team(s) and Service(s)
 - Testing availability
 - PPE availability
2. Patient's Selection and Case Prioritization and Scheduling
3. Pre-Operative Evaluation and Planning
4. Timing to Resume Elective Surgery
 - Checklist for Resuming Elective Surgery Pre-Requisites
5. Phases of Return to Elective Surgery (Timeline Model)



6. Triage of Elective Surgical Procedures by Specialty (General Surgery, Surgical Oncology, Hepatobiliary, Bariatric and Metabolic Surgery, Otolaryngology, Orthopedics Neurosurgery, Urology and Plastic Surgery)
7. Post-Operative, Discharge and Follow Up Care
8. Data Collection and Management
9. Checklists for Patient's Eligibility for Re-scheduling for Elective Surgery

Preparedness and Work Organization

I. Healthcare Facilities to Resume Elective Surgery

Facilities

We suggest that the Ministry of Health allocates specific hospitals, or if not feasible, buildings or areas to ensure segregation of both proven and suspected COVID patients from elective surgical cases.

SARS-COV2 negative buildings, or areas should include out-patient clinics, operating suite(s) or room(s), radiology suite(s), elevator(s), designated service(s), intensive care unit(s) and medical and surgical team(s) dedicated for SARS-COV2 negative patients if feasible.

Resources

Health care facilities should have an adequate number of ICU beds, ventilators, medications, and the necessary medical and surgical supplies, and personal protective equipment (PPE) needed for the resumption of elective procedures.

Policies

We recommend that each hospital forms a committee or a team consisting of surgery, anesthesia and nursing leadership to oversee the initial transition period of resuming elective surgery, and to provide, when required insightful and timely decisions, to make the necessary adjustments during the initial phase.

Prevention and Infection Control

We recommend that preventative medicine and infection control protocols are set in place as per MOH guidelines in all SARS-COV2 negative health care facilities to promptly provide support and guidance for any rising situation in timely fashion.

The healthcare facility is advised to:

- Strictly adhere to the MOH infection control guidelines to maintain a safe environment for patients and staff.
- Implement universal precautions, patient isolation and physical distancing protocols.
- Provide appropriate training to the staff.
- Implement screening for COVID-19 appropriately.
- Establish separate care zones for COVID and non-COVID patients.
- Maintain utilization of PPE intra-operatively as per previous KAS, WSK and ACS Kuwait Chapter Joint Recommendations for Managing COVID-19 Surgical Patients and MOH guidelines.

II. Administration

We emphasize on the importance of setting explicit strategies and facilitation of logistics for re-scheduling patients for elective surgeries.



We recommend minimizing hospital visits and utilizing virtual care appropriately for rescheduling outpatient appointments, tracking laboratory and radiological investigation results, medication orders and renewals, admission, discharge and follow up bookings.

We encourage utilization of virtual care and telemedicine in pre-operative counseling, obtaining a history, assessing the need for repeated investigations as well as a pre-surgical SARS-COV2 screening and consent discussion.

Hospitals are encouraged to provide electronic and online relevant educational material for patients undergoing elective surgery.

Hospital administrators are encouraged to regularly collect and evaluate data of their institution's capacity and resources for elective surgery and to adjust plans accordingly.

III. Surgical, Anesthesia, and Ancillary Team(s) and Service(s)

We suggest that healthcare facilities dedicate specific number of surgical, anesthesia, nursing, and other ancillary staff for the care of SARS-COV2 negative patients.

We suggest that availability of the staff should meet the complexity of the procedure(s) appropriately to assure safely.

IV. Testing Availability

Institutions are encouraged to carefully assess current stocks of test kits of SARS-COV2 and to estimate test kits required for testing of elective surgery patients.

Healthcare facilities are expected to maintain adequate stock for patients testing.

• Testing Patients

We recommend

- Testing all patients using nasopharyngeal swabs molecular testing of SARS-COV2 prior to surgery.
- Negative PCR result 48-72 hours prior to surgery.

We suggest

- Two samples per patients 24-48 hours apart.
- Consider serologic testing in selective patients.
- Consider chest CT scans in selective patients.
- Considering weekly PCR testing for in-patients.

Symptomatic or patient's tested positive for COVID-19 should have their elective surgery postponed till asymptomatic and negative for SARS-COV2.

• Testing Healthcare Workers (HCW)

- We encourage routine testing of HCW at high risk for exposure to COVID-19 to protect patients and other staff members, as a recent study showed high mortality and morbidity in patients who were COVID-19 positive peri-operatively³.



- We suggest considering screening asymptomatic HCW for SARS-COV2 every 3-4 weeks.

V. PPE Availability

Institutions are expected to carefully assess current stocks of PPE and estimate needed PPE required for resuming elective surgery patients taking in consideration the following:

- Number of staff needing to use PPE
- Number of procedures requiring specific PPE (e.g.: contact vs air-born)
- Rate of consumption
- Back up planning for PPE shortage

Patient Selection and Case Prioritization and Scheduling

We recommend that patient selection for surgery should be a coordinated effort between surgical, anesthesia, nursing, and other relevant specialties.

Prioritization of patients should be multi-channeled and further characterized based on prior postponed cases during the COVID-19 pandemic, oncologic and emergent cases, and objective priority scoring⁴⁻⁶. Patients already on waiting lists should be re-triaged and given priority.

We recommend starting elective surgery on younger and healthier patients (below 60 years of age) and with An ASA I (normal healthy patient) or ASA II (patient with a mild systemic disease) in the initial phase of return to elective surgery. As both age and specific comorbidities (hypertension, cardiovascular disease, diabetes, lung disease, liver and kidney disease and BMI > 30 kg.m²) are now recognized to be negatively associated with outcomes of COVID-19.⁵

We recommend that hospitals should implement prioritization policy for elective surgery cases taking in consideration the following:

- Number of previously postponed/cancelled elective cases from February 2020 to date.
- Eligibility of rescheduling based on the strategy proposed in Phases of Return to Elective Surgery section and the triaging scheme in Elective Surgical Procedures by Specialty section
- Reschedule outpatient surgery cases first followed by inpatient surgeries.
- Specialties' prioritization (e.g.: obstructed cancer, cancer, cardiac, benign progressive, etc.)⁸⁻⁹. It is imperative that oncologic, cardiac, transplant, trauma, and life/limb- threatening conditions from the respected various surgical subspecialties take precedence over elective surgery^{5,6}.
- Strategy for allotting daytime "OR time" (e.g., block time for cancer cases, prioritization of case type.)¹¹.
- Current hospital readiness (refer to section Preparedness and Work Organization above).
- Set targeted accelerated discharge pathways based on the given case (e.g. total stay duration for lap cholecystectomy would be pre-defined at 2 days)⁸.



We emphasize that confirmed or suspected COVID-19 patients are omitted from elective surgery till they are asymptomatic for 10-14 days and test negative for SARS-COV2.

Pre-Operative Evaluation & Planning

We recommend that once patients have been selected to proceed with elective surgery, utilization of telemedicine and virtual care in pre-operative planning should be done within local and institutional regulations.

We advise to educate patients about the following:

- Self-isolate for 10-14 days prior and after the surgery
- Adherence to pre- and post-operative medical instructions
- Timeline of SARS-COV2 testing
- Relevant administrative new logistics (admission, discharge, follow up, locations of wards/clinic etc.)

We advise to consider telemedicine and virtual care in

- Re-scheduling
- Surgical procedures planning
- Obtaining medical history
- Assess need for repeated investigations
- Pre-surgical COVID-19 screening (Appendix#1)
- Obtaining informative consent for the planned procedure and the specific COVID-19 related consent.

We advise discussing COVID-19 related concerns in addition to the standard consent of the procedure intended as suggested below

Table1. Important COVID-19 related items to discuss in consent
1. Interpretation of a SARS-COV2 test (including a false negative result)
2. Risk of contracting SARS-COV2 infection while in hospital
3. Consequences of contracting COVID-19 infection perioperatively (higher morbidity, mortality, and risk of ICU admission)
4. Risk of increased hospital stay if COVID-19 infection contracted
5. Need for self-isolation after discharge for 14 days
6. Defining the expected post-operative stay and rationale

We encourage patients and their relatives to donate blood 3-4 weeks prior to the date of scheduled surgery, and we encourage hospitals to facilitate blood donation process on its premises.



Timing to Resume Elective Surgery

Returning to elective surgery should be timed properly within the pandemic. In Kuwait, private and government healthcare systems co-exist, each with its unique characteristics.

Elective surgeries should definitely be started after approval from the Ministry of Health when COVID-19 cases start to decline in the country for at least 14 consecutive days.

We suggest that institutions (private or governmental) keep proper statistics for the number of COVID-19 cases being admitted daily and consider restarting elective surgery when there is a steady decline of COVID-19 cases for at least 14 consecutive days in that institution.

Resumption of elective surgery for SARS-COV2 negative patients, should proceed with caution with a decline in number of cases and after fulfilment of pre-requisites in these guidelines.

For institutions that do not provide care for COVID-19 patients, resumption of elective surgery should be considered as soon as the MOH approves the start of surgery and after fulfilment of the pre-requisites and considerations in these guidelines.

We recommend assessing these factors prior to safe resumption of elective surgery:

- Sustained decline of COVID-19 positive cases in the institution for at least 14 days.
- Healthcare facility has met the points discussed in preparedness and work organization section.
 - Healthcare Facilities to Resume Elective Surgery
 - Administration
 - Surgical, Anesthesia, and Ancillary Team(s) and Service(s)
 - Testing availability
 - PPE availability
- Protocols for patient selection and case prioritization and scheduling in place.
- Protocols for pre-operative care is in place.
- Protocols for postoperative, discharge and follow up care.
- Protocols for disposition and management of patients who become COVID-19 positive while in hospital.
- Data collection system in place.
- Detailed plan and strategy for gradually escalating operating room capacity.
- Backup plan in case manpower shortage due to COVID-19 second wave.
- Regular evaluation of the healthcare facility situation, resources, and outcomes to implement changes accordingly.

We suggest utilizing the following checklist for healthcare facilities to assess readiness to resume elective surgeries

Checklist A. Resuming Elective Surgery Pre-Requisites	
<input type="checkbox"/>	Sustained decline of COVID-19 positive cases in the institution for 14 days
Healthcare Facilities preparedness and work organization met requirement for	
<input type="checkbox"/>	Facilities
<input type="checkbox"/>	Resources
<input type="checkbox"/>	Policies
<input type="checkbox"/>	Prevention and Infection Control
Administration met requirement	
<input type="checkbox"/>	Strategies and logistics for re-scheduling
<input type="checkbox"/>	Patient access
Teams and Services	
<input type="checkbox"/>	Surgical
<input type="checkbox"/>	Anesthesia
<input type="checkbox"/>	Ancillary Teams
<input type="checkbox"/>	Adjunct Services
Testing Availability	
<input type="checkbox"/>	Patients
<input type="checkbox"/>	Healthcare Workers
PPE Availability	
<input type="checkbox"/>	Number of staff needing to use PPE
<input type="checkbox"/>	Number of procedures requiring specific PPE (e.g.: contact vs air-born)
<input type="checkbox"/>	Rate of consumption
<input type="checkbox"/>	Back up planning for PPE shortage
<input type="checkbox"/>	Protocols for selection, case prioritization and scheduling in place
<input type="checkbox"/>	Protocols for pre-operative care is in place
<input type="checkbox"/>	Protocols for postoperative, discharge and follow up care available
<input type="checkbox"/>	Disposition Protocols for patients who become COVID-19 positive while in hospital in place
<input type="checkbox"/>	Data collection system in place
<input type="checkbox"/>	Plan in place for increasing OR capacity
<input type="checkbox"/>	Backup plan in case of manpower shortage due to COVID-19 second wave
<input type="checkbox"/>	Regular evaluation for resources, and outcomes

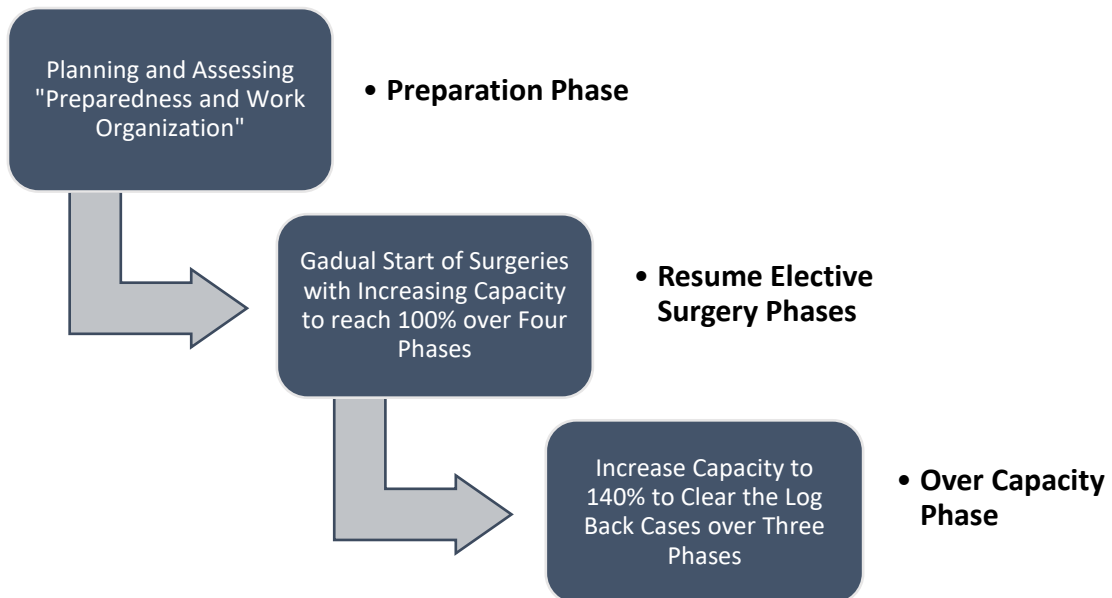
Phases of Return to Elective Surgery

Overview

We emphasize that assessing the capacity of a healthcare institution is a dynamic process. Starting surgical capacity should be at a capacity goal less than pre-COVID-19 rates and best started at 20% with slow upward increments.

We suggest that healthcare facilities plan the return to Elective Surgery Phases as follows

- Preparation phase as institutions plan and assess readiness to resume surgeries.
- Resume “Elective Surgery” phases with gradual start of surgeries and increasing capacity to reach 100% [Phase 1 (20%), 2 (30%), 3 (50%), 4 (100%).]
- Beginning of “Over Capacity phase” where increase capacity to 140% to clear the backlog of cases over three phases [Phase 5 (120%), 6 (130%), 7 (140%)].



1. Out-Patient Procedures and Surgeries Phase

We recommend starting with healthy and very low risk patients, ASA I, Age 18-50, no comorbidities and BMI \leq 35, LOS <12 hours, under local or regional anesthesia, estimated time for procedure should be less than 60 minutes with minimal estimated blood loss of less than 50 ml. The surgical team consists of 1 surgeon only, risk of intubation and ICU admission is very unlikely.

Out-Patient Phase 1 Procedures					
Patients factors		Procedure factors		Institution factors	
Age	18- 50	Surgery time	< 60 minutes	Intubation risk	<0.5%
ASA Score	I	Blood loss	<50 ml	LOS	\leq 12h
Comorbidity	0	No. surgical team	1	ICU risk	<0.5%
BMI	\leq 35				

Out-Patients Elective General Surgery Procedures			
Phase 1	Phase 2	Phase 3	Phase 4
OR 20% Capacity	OR 30% Capacity	OR 50% Capacity	OR 100% Capacity
Out-Patients Benign skin minor-OT and office-based procedures such as sebaceous cyst, in-grow nail, biopsy, small lipomas etc.	Phase 1 cases and Benign anorectal office-based procedures Hernia and lipoma under regional	Phase 1 + 2 cases and Circumcision Pediatrics and Adolescence minor out-patient cases	Phase 1 + 2 + 3 cases

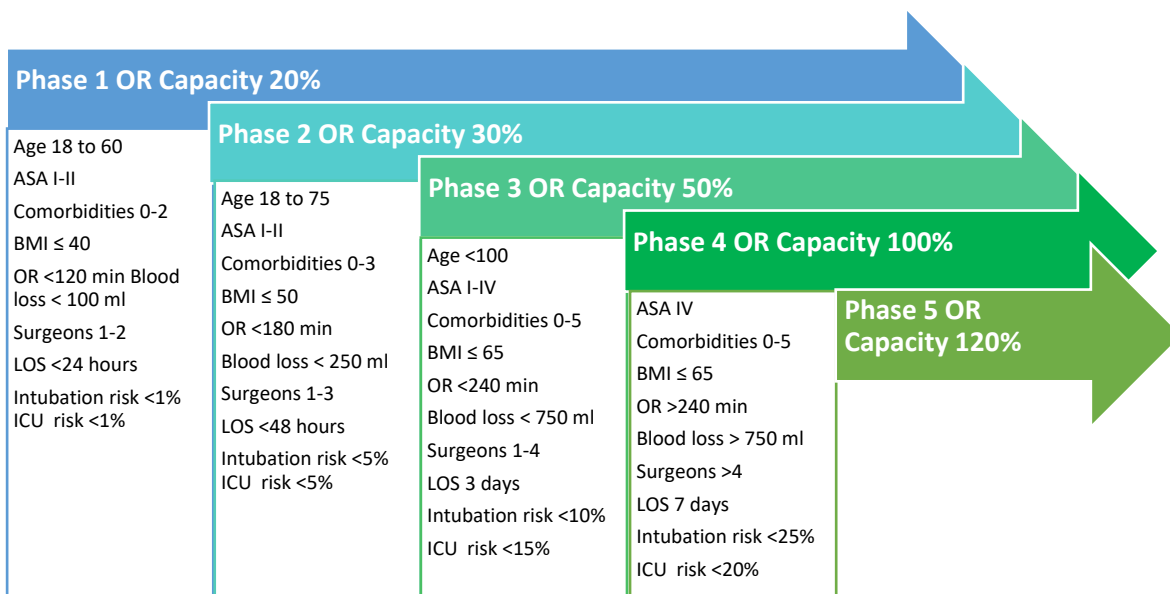
2. In-Patient Procedures and Surgeries Phase

We propose the following timeline as a model to resume elective surgery with the notion that each institution will weigh the previously discussed considerations and pre-requisites and exercise the best clinical judgement into the application of this suggested timeline to its facility's capacity and resources and then with slow upward increments.

The model estimates the time projected to start and reach 100% capacity for elective surgery over four phases, and then the fifth phase indicates readiness to begin "Over Capacity phase" by increasing the capacity to 140% eventually to clear the backlog of cases from the peak of the COVID9 pandemic as illustrated below.

The model incorporates patients, procedures, institutional factors and resources as well as the presumption that the COVID19 pandemic is in the decline over the next few months which would liberate more resources that can be utilized to support more complex patients who may need more healthcare support. Phase one highlights the beginning of the timeline and phase one marks the start of increase capacity to clear the log back of cases.

We suggest that surgeons exercise their best clinical judgment to fit their patients into this phase appropriately. List of surgical procedures are discussed under the procedure section.



Phase 1

In this phase, the OR capacity starts at 20%. Patients should be 18 to 60 years of age, with ASA score if I-II, with 0-2 controlled comorbidities and BMI ≤ 40. The estimated time for surgery should be less than 120 minutes with minimal estimated blood loss of less than 100 ml. The surgical team consists of 1-2 surgeons maximum due allow for the gradual manpower redistribution and reduce the risk of infection in cases the exposure to false negative patients. The length of stay should be less than 24 hours and the risk of intubation and ICU admission is very unlikely.

In-Patient Procedures and Surgeries Phase 1

Estimated OR Capacity 20%

Patients factors		Procedure factors		Institution factors	
Age	18- 60	Surgery time	< 120 minutes	Intubation risk	<1%
ASA Score	I-II	Blood loss	<100 ml	LOS	≤24h
Comorbidity	0-2	No. surgical team	1-2	ICU risk	<1%
BMI	≤ 40				

Phase 2

The estimated OR capacity of 30% in this phase. Patients should be 18 to 75 years of age, with ASA score if I-II, with 0-3 controlled comorbidities and BMI ≤ 50. The estimated time for surgery should be less than 180 minutes with minimal estimated blood loss of less than 250 ml. The surgical team consists of 1-3 surgeons maximum to reduce the risk of infection in cases the exposure to false negative patients. The length of stay should not exceed than 48 hours, the risk of intubation and ICU admission is below 5%.

In-Patient Procedures and Surgeries Phase 2

Estimated OR Capacity 30%

Patients factors		Procedure factors		Institution factors	
Age	≤ 75	Surgery time	120-180 minutes	Intubation risk	1-5%
ASA Score	I-II	Blood loss	100-250	LOS	>24-48 hour
Comorbid	0-3	No. surgical team	1-3	ICU risk	< 5%
BMI	≤50				

Phase 3

Estimated OR capacity is 50%. The patients should be younger than 100 years of age. ASA score I-IV, with 0-5 controlled comorbidities and BMI ≤ 65. The estimated time for surgery should be less than 240 minutes with minimal estimated blood loss of less than 750 ml. The surgical team consists of 1-4 surgeons maximum. The length of stay can be up to 3 days and the risk of intubation up to 10% and ICU admission between 5-15%.

In-Patient Procedures and Surgeries Phase 3

Estimated OR Capacity 50%

Patients factors		Procedure factors		Institution factors	
Age	<100	Surgery time	>180-240 minutes	Intubation risk	6-10%
ASA Score	I-IV	Blood loss	250-750 ml	LOS	3 days
Comorbid	0-5	No. surgical team	1-4	ICU risk	5-15%
BMI	≤65				



Phase 4

In this phase, the OR is expected to return to 100% and therefore, more complex patients and surgical cases is expected to be manageable as more resources are expected to be available.

Less limitation to patient's factors and surgical procedures, however, considerations to intensive care unit resources should be monitored and spared, as second wave of COVID19 may occur. Patients should be 18 to 60 years of age, with ASA score if I-II, with 0-2 controlled comorbidities and BMI ≤ 40. The estimated time for surgery should be less than 120 minutes with minimal estimated blood loss of less than 100 ml. The surgical team consists of 1-2 surgeons maximum due allow for the gradual manpower redistribution and reduce the risk of infection in cases the exposure to false negative patients. Length of hospital stay can be up to 7 days and the risk of intubation <25% and ICU admission should not exceed 20%.

In-Patient Procedures and Surgeries Phase 4					
Estimated OR Capacity 100%					
Patients factors		Procedure factors		Institution factors	
Age	No limit	Surgery time	>240 minutes	Intubation risk	>11-25%
ASA Score	I-V	Blood loss	>750 ml	LOS	3-7 days
Comorbid	No limit	No. surgical team		ICU risk	15-20%
BMI	No limit				

Triage of Elective Surgical Procedures by Specialty (General Surgery, Surgical Oncology, Hepatobiliary, Bariatric and Metabolic Surgery, Otolaryngology, Orthopedics Neurosurgery, Urology and Plastic Surgery)

Hospitals and surgical departments are encouraged to collaborate to accurately assess their local manpower and resource and calculate the number of surgical and procedural cases that was canceled over the period of February 2020 to date to properly estimate and plan re-scheduling of these cases.

Once the numbers are accounted for, prioritization of re-scheduling cases should be based on the as mentioned in sections above.

The following triaging scheme takes in account time-sensitive surgical procedures measured to patient's general condition, local available resources and expected outcome and integrates it into the timeline model to start the return to elective surgery in multiple surgical specialties such as General Surgery, Surgical Oncology, Hepatobiliary, Bariatric and Metabolic Surgery, Otolaryngology, Orthopedics Neurosurgery, Urology and Plastic Surgery.



General Surgery, Surgical Oncology and Hepatobiliary

Emergency and urgent surgeries that are expected to be done within 24-72 hours are **excluded** from the following triaging list.

We suggest the following **list for triaging Elective General Surgery**:

Inpatient Elective General Surgery Procedures			
Phase 1	Phase 2	Phase 3	Phase 4
OR 20% Capacity	OR 30% Capacity	OR 50% Capacity	OR 100% Capacity
Oncological diseases causing obstruction: <ul style="list-style-type: none"> - Hepatobiliary - Pancreatic - Esophagogastric - MDT directed Colon/rectal cancer resection - MDT directed Adrenal cancer surgery - MDT directed breast cancer resection - MDT directed Thyroid/Parathyroid cancer surgery Oncological diseases not causing obstruction: <ul style="list-style-type: none"> - Hepatobiliary - Pancreatic - Esophagogastric Cholecystectomy for biliary colic	Phase 1 cases and Hernia presenting with risks of complications Goiter with mild/moderate strider	Phase 1 + 2 cases and Cholecystectomy- post acute pancreatitis Hartmann's reversal and closure of stomas Benign thyroid and parathyroid conditions Benign breast surgery	Phase 1 + 2 + 3 cases and Abdominal wall reconstruction Benign Hepatobiliary with reconstruction (Choledochal cyst Biliary) Achalasia Heller's myotomy Gastroesophageal reflux surgeries

Bariatric and Metabolic Surgery

We suggest the following list for triaging Elective Bariatric and Metabolic Surgery cases:

Inpatient Elective Bariatric and Metabolic Surgery Procedures			
Phase 1	Phase 2	Phase 3	Phase 4
OR 20% Capacity	OR 30% Capacity	OR 50% Capacity	OR 100% Capacity
BMI ≤45 Age 18-50 years ASA I & II Surgery time ≤ 120 mins LOS 24 hours Need of post-op ICU <2% Anticipated blood loss < 100ml Number of surgical team 1-2 Intubation possibility <1%	BMI ≤50 Age 18-55 years ASA I & II Surgery time ≤180 mins LOS <48 hour Need of post-op ICU < 5% Anticipated Blood loss 100-250 Number of surgical team 1-3 Intubation possibility 1-5%	BMI ≤65 Age 18-65 ASA I-III Surgery time 180-240 mins LOS up to 3 day Need of ICU post op 5-15% Anticipated Blood loss 250-500 ml Number of surgical team 1-4 Intubation possibility 6-10%	BMI ≤ 80 Age 18-65 ASA I-IV Surgery time ≥240 mins or LOS up 3-7 days Need of ICU post op <20% Anticipated Blood loss >750 Number of surgical team 1- >4 Intubation possibility <25%
Primary gastric band Primary sleeve	Phase 1 cases and Primary gastric bypass Primary one anastomosis gastric bypass	Phase 1 + 2 cases and Primary duodenal switch	Phase 1 + 2 + 3 cases and Revisions for weight gain

Otolaryngology Surgery

Emergency and urgent surgeries that are expected to be done within 24-72 hours are **excluded** from the following triaging list. We suggest the following **list for triaging Elective Otolaryngology Surgery** cases:

In-Patient Elective Otolaryngology Surgery Procedures			
Phase 1	Phase 2	Phase 3	Phase 4
OR 20% Capacity	OR 30% Capacity	OR 50% Capacity	OR 100% Capacity
Excisional LN biopsy (for suspected lymphoma) Panendoscopy, micolaryngoscopy + biopsy for suspected malignancy of the upper aerodigestive tract Thyroid/Parathyroid cancer High grade salivary cancers Oropharyngeal/Nasopharyngeal cancer surgery Sinus cancers	Phase 1 cases and Thyroid enlargement-with mild to moderate airway compromise Tonsils/Adenoids (mild to moderate airway compromise) Thyrotoxicosis not responding to medical management Pediatric micro laryngoscopy for progressive airway conditions (RRP, Subglottic stenosis) Sinus surgery – complete nasal obstruction associated with severe sleep disordered breathing	Phase 1 + 2 cases and Cochlear implantation post-meningitis Barotrauma perilymph fistula Diagnostic thyroid lobectomy CSF fistula repair Symptomatic mucocele Cochlear implant in preverbal profound HL where delay may impact long term outcome	Phase 1 + 2 + 3 cases and ALL other rhinology cases CSOM surgery Ossicular chain implants/middle ear surgery Tympanoplasty Tonsils/Adenoids/Grommet tube Uncomplicated nasal bone fracture Procedures for Benign laryngeal pathology Rhinoplasty Benign salivary gland surgery

Orthopedics Surgery

Emergency and urgent surgeries that are expected to be done within 24-72 hours, discussed in the previous guidelines, **are excluded** from the following triaging list.

We suggest the following **list for triaging Elective Orthopedics Surgery** cases:

In-Patient Elective Orthopedics Surgery Procedures			
Phase 1	Phase 2	Phase 3	Phase 4
OR 20% Capacity	OR 30% Capacity	OR 50% Capacity	OR 100% Capacity
Simple nerve decompression (carpal tunnel, ulnar nerve) Trigger finger release Hallux valgus correction knee arthroscopy (meniscal pathology) Simple shoulder arthroscopy (AC decompression, simple cuff repair) Simple lumbar microdiscectomy Stem cell injection, PRP injection procedures	Phase 1 cases and Single level lumbar spine surgery Primary ACL reconstruction Foot corrective osteotomies	Phase 1 + 2 cases and Primary total knee arthroplasty Primary total hip arthroplasty Primary total shoulder arthroplasty	Phase 1 + 2 + 3 cases and Revision total knee arthroplasty Revision total hip arthroplasty Revision shoulder arthroplasty Multiple level lumbar spine surgery Cervical spine surgery Revision ACL reconstruction Complex shoulder arthroscopy Complex Foot correction

Neurosurgery

Emergency and urgent surgeries that are expected to be done within 24-72 hours, discussed in the previous guidelines, **are excluded** from the following triaging list.

We suggest the following **list for triaging Elective Neurosurgery cases**:

In-Patient Elective Neurosurgery Surgery Procedures			
Phase 1	Phase 2	Phase 3	Phase 4
OR 20% Capacity	OR 30% Capacity	OR 50% Capacity	OR 100% Capacity
<p>Oncology: with potential to progress (e.g. symptomatic meningioma, low grade glioma with little or no mass effect) 🩸 ⌚</p> <p>Spinal: Progressive myelopathy in patients with a risk of falling, Severe radiculopathy causing severe pain. This pain is requiring extensive opioid use</p> <p>Epilepsy: VNS battery revision</p>	<p>Phase 1 cases and Trauma: e.g. cranioplasty 🩸</p>	<p>Phase 1 + 2 cases and Pediatric: Laser ablation procedures</p> <p>Spinal: Nerve root schwannoma, herniated disc with controlled radiating pain 🩸 ⌚</p>	<p>Phase 1 + 2 + 3 cases and Pediatric: Craniosynostosis 🩸 ⌚, Asymptomatic Occult spina bifida ⌚</p> <p>Epilepsy: 🩸 ⌚</p> <p>Oncology: e.g. incidental meningioma 🩸 ⌚</p> <p>Vascular: Unruptured intracranial aneurysm or AVM 🩸 ⌚</p> <p>Epilepsy: Unoperated epilepsy foci, VNS insertion</p> <p>Functional: non-operated cases ⌚</p>
<p>🩸 : Expected large blood loss (>50% of circulating blood volume in 30 minutes, +/- blood loss exceeding >150cc/min or blood loss necessitating plasma or platelet transfusion). ⌚ Surgery expected to last more than 2 hours on average.</p>			

Urology Surgery

Emergency and urgent surgeries that are expected to be done within 24-72 hours are **excluded** from the following triaging list.

We suggest the following **list for triaging Elective Urology Surgery** cases:

Inpatient Elective Urology Surgery Procedures			
Phase 1	Phase 2	Phase 3	Phase 4
OR 20% Capacity	OR 30% Capacity	OR 50% Capacity	OR 100% Capacity
MTD Testicular cancer surgery (non- metastatic) MTD Bladder cancer surgery MTD Renal cancer surgery (non-bleeding) MTD Upper tract transitional cell cancer surgery Acute Urinary Retention	Phase 1 cases and Stent removal/ exchange Hematuria - investigation for non-visible	Phase 1 + 2 cases and Prostate cancer surgery Fistula surgery Female urology for benign conditions (e.g. incontinence/ prolapse/Sacral Nerve Stimulator/ fistula/urethral diverticulum) Andrology/GU Surgery (male fertility surgery) Endourology- uncomplicated stones/ percutaneous nephrolithotomy/ pelviureteric obstruction	Phase 1 + 2 + 3 cases and Urethral stricture Gender reassignment Andrology/GU Surgery (surgery for erectile dysfunction/ urethral stricture/ Bladder outflow surgery)

Plastic Surgery

Emergency and urgent surgeries that are expected to be done within 24-72, are excluded from the following triaging list. We suggest the following **list for triaging Elective Plastic Surgery** cases:

In-Patient Elective Plastic Surgery Procedures			
Phase 1	Phase 2	Phase 3	Phase 4
OR 20% Capacity	OR 30% Capacity	OR 50% Capacity	OR 100% Capacity
<p>Excision and coverage for burns (skin grafts with or without dermal substitutes)</p> <p>Complex infantile hemangiomas with significant ulcerations, bleeding or causing significant impediments such as vision obstruction, that are not responsive to medical therapy</p>	<p>Simple limb trauma reconstruction, unsuitable for conservative treatment:</p> <ul style="list-style-type: none"> - Skin graft - Dermal substitutes - Local flaps 	<p>Diabetic foot reconstruction (by skin grafts, dermal substitute, and local flaps)</p> <p>Bedsore reconstruction, unsuitable for conservative treatment, e.g.:</p> <ul style="list-style-type: none"> - Rotation flap - Gluteus maximus myocutaneous flap - Tensor fascia lata flap - V-Y gluteus maximus flap - Propeller/perforator flaps <p>Some oncologic and trauma-related reconstructive procedures, especially for head and neck or perineal malignancies (e.g. TRAM flap, LD flap, Pectoralis major muscle flap, supraclavicular flap, gracilis flap, internal pudendal artery flap)</p>	<p>Major limb trauma reconstruction (by free flaps e.g.: latissimus dorsi free flap, ALT free flap, SCIP free flap, free fibula flap, radial forearm free flap)</p> <p>All aesthetic surgeries, e.g.:</p> <ul style="list-style-type: none"> - Abdominoplasty - Brachioplasty - Belt lipectomy - Thigh lift - Reduction mammoplasty - Mastopexy - Breast augmentation <p>Most other craniofacial and reconstructive plastic surgery procedures (e.g. cleft lip & palate surgeries, orthofacial surgery, tissue expanders and scar revisions)</p>



Postoperative, Discharge and Follow Up Care

Immediate Post-Op Care

We advise healthcare service and surgeons to provide the optimal care for patients by strict adherence to standardized care and protocols for elective surgery and accelerated discharge pathways.

We encourage minimizing risk of infection and exposure to nosocomial infections by

- Reduce the length of stay in the hospital.
- Consider same day discharge for non-complicated cases.
- Minimize in-person contact (restrict visitors, update family via phone, social distancing).
- Adherence to local infection control policies.

We recommend in the case of a patient becomes symptomatic for COVID-19 postoperatively, clear instructions for testing and patient isolation while awaiting test results should be in place. Once test results are positive, arrangements should be clear on disposition of the patient (COVID-19 hospital vs COVID-19 wards in the same institution).

Discharge and Follow Up

We advise that patients are instructed to

- Self-quarantine postoperatively for a maximum of 10-14 days.
- Contact control, social distancing, and frequent hand washing is advised.

We recommend implementing out-patient care protocols that ensure adequate post-operative follow-up with unimpeded access to the healthcare service in the event of possible adverse outcome or complication (provide early post-op virtual or phone call, online support or hospital contact for discharged patients).

We encourage surgeons and the healthcare provider to utilize telehealth when possible for the postoperative follow-ups unless face to face consultation is required or further investigations or treatment is needed (e.g. chemotherapy treatment).

Data Collection and Management

We advise Health Care facilities to gather relevant data (electronic or on paper) and set key performance indicators at the institution and departmental level

We encourage hospitals to analyze and review this data regularly to improve current practice, policies and outcome.

We encourage institutions to share with local authorities and MOH and consider forming a national registry to assess and improve outcome.

Data collection is suggested to be in the following areas:

- COVID-19 related data: testing of patients and health care professionals' results, availability of inpatient and ICU beds, ventilators, mortality etc.).
- Quality of care: number of admissions, procedures/operations, complications, mortality.
- Facility: number of beds in surgical wards and in ICU and PPE availability.

Sample 1. Checklist for Patient's Eligibility for Re-scheduling for Elective Surgery Phase 1 (Non-Bariatric Surgery)



Checklist for Elective Surgery During Phase 1

Patient information

Name	Hospital
Civil ID	MRN
DOB	Date

1. Is your patient older than 60 years?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Is your patient BMI >40?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Is your patient have more than 2 comorbidities?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Is your patient ASA > II?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Will the surgery last longer than 120 minutes?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Will the estimated blood loss be more than 100 mls?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Does the procedure need more than 2 surgeons?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8. Is the risk of ICU admission post operatively more than 1%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9. Is the risk of post-operative intubation more than 1%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
10. Is the expected Length of stay longer than 24 hours?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
11. Is your patient's COVID-19 NP Swab positive or equivocal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
12. Is your patient's CT scan-chest suggestive of SARS-Cov-2?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If you have answered YES to any of the questions above, then you should not proceed with this elective surgery at this phase.

Sample 2. Checklist for Patient's Eligibility for Re-scheduling for Elective Surgery Phase 2 (Non-Bariatric Surgery)



Checklist for Elective Surgery During Phase 2

Patient information

Name	Hospital
Civil ID	MRN
DOB	Date

1. Is your patient older than 75 years?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Is your patient BMI >50?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Is your patient have more than 3 comorbidities?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Is your patient ASA > II?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Will the surgery last longer than 180 minutes?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Will the estimated blood loss be more than 250 mls?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Does the procedure need more than 3 surgeons?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8. Is the risk of ICU admission post operatively more than 5%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9. Is the risk of post-operative intubation more than 5%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
10. Is the expected Length of stay longer than 48 hours?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
11. Is your patient's COVID-19 NP Swab positive or equivocal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
12. Is your patient's CT scan-chest suggestive of SARS-Cov-2?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If you have answered YES to any of the questions above, then you should not proceed with this elective surgery at this phase.

Sample 3. Checklist for Patient's Eligibility for Re-scheduling for Elective Surgery Phase 3 (Non-Bariatric Surgery)



Checklist for Elective Surgery During Phase 3

Patient information

Name	Hospital
Civil ID	MRN
DOB	Date

1. Is your patient older than 100 years?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Is your patient BMI >65?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Is your patient have more than 5 comorbidities?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Is your patient ASA > IV?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Will the surgery last longer than 240 minutes?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Will the estimated blood loss be more than 750 mls?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Does the procedure need more than 4 surgeons?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8. Is the risk of ICU admission post operatively more than 15%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9. Is the risk of post-operative intubation more than 10%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
10. Is the expected Length of stay longer than 3 days?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
11. Is your patient's COVID-19 NP Swab positive or equivocal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
12. Is your patient's CT scan-chest suggestive of SARS-Cov-2?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If you have answered YES to any of the questions above, then you should not proceed with this elective surgery at this phase.

Sample 4. Checklist for Patient's Eligibility for Re-scheduling for Elective Surgery Phase 4 (Non-Bariatric Surgery)



Checklist for Elective Surgery During Phase 4

Patient information

Name	Hospital
Civil ID	MRN
DOB	Date

1. Is your patient BMI >65?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Is the risk of ICU admission post operatively more than 20%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Is the risk of post-operative intubation more than 25%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Is the expected length of stay longer than 7 days?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Is your patient's COVID-19 NP Swab positive or equivocal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Is your patient's CT scan-chest suggestive of SARS-Cov-2?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If you have answered YES to any of the questions above, then you should not proceed with this elective surgery at this phase.

Sample 5. Checklist for Patient's Eligibility for Re-scheduling for Bariatric and Metabolic Surgery Phase 1



Checklist for Bariatric and Metabolic Surgery During Phase 1

Name	Hospital
Civil ID	MRN
DOB	Date

1. Is your patient older than 50 years?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Is your patient BMI >45?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Is your patient ASA > II?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Will the surgery last longer than 120 minutes?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Will the estimated blood loss be more than 100 mls?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Does the procedure need more than 2 surgeons?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Is the risk of ICU admission post operatively more than 2%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8. Is the risk of post-operative intubation more than 1%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9. Is the expected length of stay longer than 24 hours?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
10. Is your patient's COVID-19 NP Swab positive or equivocal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
11. Is your patient's CT scan-chest suggestive of SARS-Cov-2?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If you have answered YES to any of the questions above, then you should not proceed with this elective surgery at this phase.

Sample 6. Checklists for Patient's Eligibility for Re-scheduling for Bariatric and Metabolic Surgery Phase 2



Checklist for Bariatric and Metabolic Surgery During Phase 2

Name	Hospital
Civil ID	MRN
DOB	Date

1. Is your patient older than 55 years?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Is your patient BMI >50?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Is your patient ASA > II?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Will the surgery last longer than 180 minutes?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Will the estimated blood loss be more than 250 mls?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Does the procedure need more than 3 surgeons?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Is the risk of ICU admission post operatively more than 5%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8. Is the risk of post-operative intubation more than 5%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9. Is the expected length of stay longer than 48 hours?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
10. Is your patient's COVID-19 NP Swab positive or equivocal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
11. Is your patient's CT scan-chest suggestive of SARS-Cov-2?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If you have answered YES to any of the questions above, then you should not proceed with this elective surgery at this phase.

Sample 7. Checklists for Patient's Eligibility for Re-scheduling for Bariatric and Metabolic Surgery Phase 3



Checklist for Bariatric and Metabolic Surgery During Phase 3

Name	Hospital
Civil ID	MRN
DOB	Date

1. Is your patient older than 65 years?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Is your patient BMI >65?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Is your patient ASA > III?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Will the surgery last longer than 240 minutes?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Will the estimated blood loss be more than 500 mls?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Does the procedure need more than 4 surgeons?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Is the risk of ICU admission post operatively more than 15%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8. Is the risk of post-operative intubation more than 10%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9. Is the expected length of stay longer than 3 days?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
10. Is your patient's COVID-19 NP Swab positive or equivocal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
11. Is your patient's CT scan-chest suggestive of SARS-Cov-2?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If you have answered YES to any of the questions above, then you should not proceed with this elective surgery at this phase.



Appendix 1. Pre-Visit COVID-19 Screening Questionnaire

Question		
1. Are you coming from a. home b. hospital c. long term care		
2. Have you had any of the following symptoms BEGIN in the last 14 days?	YES	NO
Fever		
Chills		
Cough		
Shortness of breath or breathing difficulties		
Runny nose or nasal congestion		
Joint or muscle pain		
New headache		
Recent onset of loss of smell or taste		
Weakness, exhaustion		
New onset diarrhea, nausea, vomiting		
Pink eye		
Any other symptoms or illness		
3. Have you been in contact with, or close to anyone who has the coronavirus in the last 14 days?		
4. Have you been in contact with, or close to someone who has been sick in the last 14 days (such as a cold, pneumonia, etc.), in absence of negative COVID-19 test.		
5. Have you travelled in the last 2 weeks? If so, where?		
6. Do you work in a high-risk facility and have you been tested positive for COVID-19? If so, when?		

***Adopted from the CSOHNS**



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Kuwait Association of Surgeons



WOMEN SURGEONS
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KUWAIT CHAPTER

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