

Joint Statement: Roadmap for Maintaining Essential Surgery during COVID-19 Pandemic

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American College of Surgeons
American Society of Anesthesiologists
Association of periOperative Registered Nurses
American Hospital Association

Introduction:

The recent resurgence of the COVID-19 virus across the United States has many states near or at bed and ICU capacity, and healthcare facilities are again struggling to meet the needs of patients presenting for essential surgery. Now in their ninth month of stretching to treat growing numbers of COVID-19 patients, health care organizations, physicians and nurses must be able to meet the escalating demands for patients hospitalized with COVID-19 and those in need of essential surgical services.

The need for centralized coordinated governmental action to deploy necessary supplies and alleviate the financial burden on physician practices, health care providers and facilities is critical so the health care community can continue to meet the increasing demands for care of COVID-19 patients both in the operating rooms and throughout the facility. Facility readiness to provide essential surgery will continue to vary by geographic location. The following is a list of principles and considerations to guide physicians, nurses and local facilities in their care in operating and procedure rooms during the ongoing pandemic.

1. Regional Cooperation Critical to Continuing to Provide Essential Surgery

Principle: Facilities should engage in regional cooperation to address capacity and new patient needs to ensure facilities have appropriate number of intensive care unit (ICU) and non-ICU beds, personal protective equipment (PPE), testing reagents and supplies, ventilators and trained staff to treat all non-elective patients without resorting to a crisis standard of care. Daily forecasting of COVID-19 demand on all resources shall be the base line for determining the ability to add non-COVID-19 cases.

Considerations: Facilities policies should account for the following:

- a. Local, state, and regional cooperation with public health authorities and state hospital associations for effective management of resources and optimal care for patients in the region.
- b. Any provision of essential surgery should be authorized by the appropriate municipal, county and state health authorities.
- c. Health care capacity should match community prevalence of disease.
- d. Facilities in the region/state should be able to safely treat all patients requiring hospitalization without resorting to crisis standards of care.
- e. Does the facility have the capability to flex up intensive care across all services, staffing, and specialties?
- f. Does the facility have appropriate number of ICU and non-ICU beds, PPE, testing reagents and supplies, ventilators, medications, anesthetics and all medical and surgical supplies?
- g. Does the facility have available numbers of trained and educated staff appropriate to the planned surgical procedures, patient population and facility resources? Given the known evidence supporting health care worker fatigue and the impact of stress, can the facilities perform planned procedures without compromising patient safety or staff safety and well-being?

2. Supply Chain

Principle: Federally organized pro-active deployment is needed to ensure facilities have adequate supplies of vital equipment and medications across disciplines.

Considerations: National collaboration to procure and distribute vital equipment and supplies should achieve the following:

- a. Collaboration with the FDA and other stakeholders to address drug shortages.
- b. Government support for low-margin essential medications.
- c. Build stockpiles of critical equipment, PPE and medications during times of low pandemic activity.
- d. Maintain distribution of appropriate PPE to health care providers for current clinical needs according to CDC recommendations and local needs for PPE conservation and re-sterilization.
- e. Maintain option for health care providers to obtain and wear their own facility-approved PPE should critical shortages develop.
- f. Facilities and state hospital associations should work together to ensure vital equipment and medicines are shared according to need.
- g. Use of mobile field hospitals for post-acute and non-COVID care that are appropriately staffed to unburden hospitals.
- h. Monitor potential drug shortages and ICU overloads as these stress surgical functions.

3. COVID-19 Testing within a Facility

Principle: Facilities should use available testing to protect staff and patient safety and should implement a policy addressing requirements and frequency for patient and staff testing in accordance with current CDC guidelines.

Considerations: Facility COVID-19 testing policies should account for:

- a. Availability, accuracy and current evidence regarding tests, including turnaround time for test results.
- b. Frequency and timing of patient testing (all/selective).
 - 1. Patient testing policy should include accuracy and timing considerations to provide useful preoperative information as to COVID-19 status of surgical patients, particularly in areas of residual community transmission.
 - 2. If such testing or timely test results are not available, reassess and implement evidence-based infection prevention techniques, access control, workflow and distancing processes to create a safe environment in which elective surgery can occur. If there is uncertainty about patients' COVID-19 status, PPE appropriate for the clinical tasks should be provided for the clinical and support team.
- c. Indications and availability for health care worker testing.
- d. How a facility will respond to COVID-19 positive worker, COVID-19 positive patient (identified preoperative, identified postoperative), "person under investigation" (PUI) worker, PUI patient. Develop patient protocols for the care of the COVID-19 positive patient requiring urgent or essential surgery.

4. Personal Protective Equipment

Principle: Facilities should not provide non-emergent essential surgical services unless they have adequate PPE and medical surgical supplies appropriate to the number and type of procedures to be performed.

Considerations: Facility policies for PPE should account for the following:

- a. Adequacy of available PPE, accounting for the ongoing N95 shortage.
- b. Staff training on and proper use of PPE according to non-crisis level evidence-based standards of care. Policies for the conservation of PPE should be developed (e.g., intubation teams) as well as policies for any extended use or reuse of PPE per CDC and FDA guidance.
- c. Protocols for any re-sterilization and decontamination procedures in accordance with CDC and FDA emergency use authorizations.

5. Case Prioritization and Scheduling

Principle: Facilities should establish a prioritization policy committee consisting of surgery, anesthesia and nursing leadership to develop a prioritization strategy appropriate to the immediate patient needs.

Considerations: Prioritization policy committee strategy decisions should address case scheduling and prioritization and should account for the following:

- a. List of previously cancelled and postponed cases.
- b. Objective priority scoring (e.g., MeNTS instrument).⁵
- c. Specialties' prioritization (cancer, organ transplants, cardiac, trauma).^{6,7}
- d. Strategy for allotting daytime "OR/procedural time" (e.g., block time, prioritization of case type [i.e., potential cancer, living related organ transplants, etc.]).
- e. Identification of essential health care professionals and medical device representatives per procedure.
- f. Strategy for phased opening of operating rooms.
 1. Identify capacity goal prior to resuming (e.g., 25% vs. 50%).
 2. Outpatient/ambulatory cases start surgery first followed by inpatient surgeries.
 3. All operating rooms simultaneously – will require more personnel and material.
- g. Strategy for increasing "OR/procedural time" availability (e.g., extended hours before weekends).
- h. Issues associated with increased OR/procedural volume.
- i. Potential for expanding procedural capacity by partnering with ASCs, including maintenance of waivers allowing ASCs increased average length of stay (ALOS):
 1. Ensure primary personnel availability commensurate with increased volume and hours (e.g., surgery, anesthesia, nursing, housekeeping, engineering, sterile processing, etc.).
 2. Ensure adjunct personnel availability (e.g., pathology, radiology, etc.).
 3. Ensure supply availability for planned procedures (e.g., anesthesia drugs, procedure-related medications, sutures, disposable and non-disposable surgical instruments).
 4. Ensure adequate availability of inpatient hospital beds and intensive care beds and ventilators for the expected postoperative care.
 5. New staff training.

6. COVID-19 Issues for the Five Phases of Surgical Care

Principle: Facilities should adopt policies addressing care issues specific to COVID-19 and the postponement of surgical scheduling.

Considerations:

Facility policies should consider the following when adopting policies specific to COVID-19 and the postponement of surgical scheduling:

a. Phase I: Preoperative

1. Guideline for preoperative assessment process.
 - Patient readiness for surgery can be coordinated by anesthesiology-led preoperative assessment services.
 - Continued investment in telemedicine.
2. Guideline for timing of re-assessing patient health status.
 - Given the multi-system and sometimes long-lasting ill effects after coronavirus infection, special attention and re-evaluation are needed if patient has had COVID-19 disease.
 - A recent history and physical examination within 30 days per Centers for Medicare and Medicaid Services (CMS) requirement is necessary for all patients. This will verify that there has been no significant interim change in patient's health status.
 - Consider use of telemedicine as well as nurse practitioners and physician assistants for components of the preoperative patient evaluation.
 - Some face-to-face components can be scheduled on day of procedure, particularly for healthier patients.
 - Surgery and anesthesia consents per facility policy and state requirements.
 - Laboratory testing and radiologic imaging procedures should be determined by patient indications and procedure needs. Testing and repeat testing without indication is discouraged.
 - Assess preoperative patient education classes vs. remote instructions
3. Advanced directive discussion with surgeon, especially patients who are older adults, frail or post-COVID-19.

4. Assess for need for post-acute care (PAC) facility stay and address before procedure (e.g., rehabilitation, skilled nursing facility).
- b. Phase II: Immediate Preoperative**
 1. Guideline for pre-procedure interval evaluation since COVID-19-related postponement.
 2. Assess need for revision of nursing, anesthesia, surgery checklists regarding COVID-19.
- c. Phase III: Intraoperative**
 1. Assess need for revision of pre-anesthetic and pre-surgical timeout components.
 2. Guideline for who is present during intubation and extubation (e.g., appropriate air turnover time).
 3. Guideline for PPE use.
 4. Guideline for continuing the education of all health care students as feasible.
 5. Guideline for presence of nonessential personnel.
- d. Phase IV: Postoperative**
 1. Adhere to standardized care protocols for reliability in light of potential different personnel. Standardized protocols optimize length of stay efficiency and decrease complications (e.g., ERAS).
 2. ICU capacity, including maintenance of waivers allowing expanded ICU capacity
- e. Phase V: Post Discharge Care Planning**
 1. PAC facility availability.
 2. PAC facility safety (COVID-19, non-COVID-19 issues).
 3. Home setting: Ideally patients should be discharged home and not to a nursing home as higher rates of COVID-19 may exist in these facilities.
 4. Expanded investment I use of telemedicine for post operative education and follow up care

7. Collection and Management of Data

Principle: Facilities should reevaluate and reassess policies and procedures frequently, based on COVID-19 related data, resources, testing and other clinical information.

Considerations: Facilities should collect and utilize relevant facility data, enhanced by data from local authorities and government agencies as available:

- a. COVID-19 numbers (testing, positives, availability of inpatient and ICU beds, intubated, OR/procedural cases, new cases, deaths, health care worker positives, location, tracking, isolation and quarantine policy).
- b. Facility bed, PPE, ICU, ventilator availability.
- c. Quality of care metrics (mortality, complications, readmission, errors, near misses, other – especially in context of increased volume).
- d. More research is needed regarding the long-term sequelae of the health of patients who have been infected with COVID-19.

8. COVID-related Safety and Risk Mitigation

Principle: Facilities should have and implement a face covering and social distancing policy for staff, patients, and patient visitors in non-restricted areas in the facility which meets current local and national recommendations for community isolation practices.

Considerations:

- a. Facility policy should require face coverings for all patients, staff, and visitors in all areas, including lounges, eating areas unless distanced, and outdoor grounds.
- b. Facilities should make hand sanitizer readily available to all patients, staff, and visitors.
- c. Facility policy should address whether temperature checks are required for patients, staff and visitors; optimal facility policies will require temperature checks.
- d. Each facility's social distancing policy should account for:
 1. Current local and national recommendations.
 2. The number of persons that can accompany the procedural patient to the facility.
 3. Whether visitors in preprocedural areas should be further restricted.

9. Additional COVID-19 Related Issues

- a. Healthcare worker well-being, including trainees and students if applicable: work hours, post-traumatic stress, burnout, suicide risk.
- b. Patient messaging and communication.
- c. Case scheduling process.
- d. Facility and OR/procedural safety for patients.
- e. Preoperative testing process.
 1. For COVID-19-positive patients.
 2. For non-COVID-19-positive patients.
 3. Environmental cleaning.
- f. Prior to implementing the start-up of any invasive procedure, all areas should be terminally cleaned according to evidence-based information.
- g. In all areas along five phases of care (e.g. clinic, preoperative and OR/procedural areas, workrooms, pathology-frozen, recovery room, patient areas, ICU, ventilators, scopes, sterile processing, etc.):
 1. Regulatory issues (The Joint Commission and other accrediting bodies, CMS, CDC).
 2. Operating/procedural rooms must meet engineering and Facility Guideline Institute standards for air exchanges.
 3. Re-engineering, testing, and cleaning as needed of anesthesia machines returned from COVID-19 and non-COVID ICU use.
- h. Increased patient and facility demand to focus on non-COVID issues such as the ongoing opioid epidemic, preventative care, and social determinants of health.

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