



AMERICAN COLLEGE OF SURGEONS

*Inspiring Quality:
Highest Standards, Better Outcomes*

Local Resumption of Elective Surgery Guidance

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Introduction

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In order to focus local resources on managing the new coronavirus (COVID-19) pandemic,

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“elective” surgery has been largely postponed and stopped. As the COVID-19 rates have already

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reached their peaks, or will do so over the next week or two (depending on location), the

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current focus for an increasing number of facilities is toward “ramping up” to prepare for

-

elective operations.

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The current document offers a set of principles and issues to help local facilities plan for

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resumption of elective surgical care.

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While the effect of the COVID-19 pandemic on local communities or facilities is a spectrum,

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we suggest facilities use this checklist as a guide to ensure issues have at least been

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considered. Understanding both the local facility capabilities (e.g., beds, testing, operating

•

rooms [ORs]) as well as potential constraints (e.g., workforce, supply chain), while keeping an

•

eye on potential subsequent waves of COVID-19 will continue to be important.

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Within the categories of I. COVID-19 Awareness, II. Preparedness, III. Patient Issues, and IV.

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Delivery of Safe High-Quality Care, there are 10 distinct issues to be addressed locally before

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elective surgery may be safely reinstated. Evaluating and addressing each of these 10 issues

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will help facilities to not only optimally provide safe and high-quality surgical patient care, but

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also to ensure that surgery resumes, and doesn't stop again.

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Document Sections

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I. COVID-19 AWARENESS

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1. Know your community's COVID-19 numbers, including prevalence, incidence, and

-

isolation mandates

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2. Know your COVID-19 diagnostic testing availability and policies for patients and

-

health care workers

-

II. PREPAREDNESS

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3. Promulgate personal protection equipment (PPE) policies for your health care

-

workers

-

4. Know your health care facility capacity (beds, intensive care units (ICUs),

-

ventilators), including expansion plans (e.g., weekends)

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5. Ensure OR supply chain/support areas

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6. Address workforce staffing issues

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7. Assign a governance committee

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III. PATIENT ISSUES

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8. Patient communication

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9. Prioritization protocol/plan

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IV. DELIVERY OF SAFE AND HIGH-QUALITY CARE

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10. Ensuring safe, high-quality, high-value care of the surgical patient across the Five

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Phases of Care continuum

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I. COVID-19 AWARENESS

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1. KNOW YOUR RATES: Knowing your community's COVID-19 numbers, including

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prevalence and incidence rates, as well as local isolation mandates, will help dictate

-

timing of ramp up.

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- **The 75th percentile of the incubation period prior to developing symptoms of**

-

COVID-19 is seven days, and the maximum estimated incubation period is

-

approximately 14 days. Thus, it has been recommended that a decrease in measures

-

of COVID-19 incidence for at least 14 days should be considered before

-

transitioning to provide surgical services for patients without immediately life- or

-

limb-threatening conditions. A Roadmap to Reopening [reference](#) is provided.

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- **Once the COVID-19 crisis has been mitigated locally, it is still vital to continually**

-

know the latest local COVID-19 rates (such as incidence rates of new cases, as well

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as hospitalizations), particularly as there is a threat of subsequent waves of COVID-

•

19 infection regardless of whether isolation/physical distancing mandates are

•

reversed.

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• Consider defining specific criteria and/or a threshold COVID-19 incidence rate for a

•

re-entering mitigation phase in the facility if COVID-19 rates locally resurge.

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• Ensure compliance with state or local community executive orders and regulations.

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2. DIAGNOSTIC TESTING: Know your COVID-19 diagnostic testing availability, and

•

develop operational testing policies for patients and health care workers.

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• Know, understand, and update your local COVID-19 diagnostic testing capabilities

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and turnaround times. The testing availability will likely change during the ramp-up

-

period. While it is to be hoped that availability is on the rise, some predict that

-

availability may actually decrease as the community testing demands increase.

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- Develop local diagnostic testing policies for patients. Rapid testing for COVID-19

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infection through real-time reverse transcription polymerase chain reaction (RT-PCR)

-

testing may be considered for all patients undergoing planned surgery, or for

-

selected patients after screening with or without mandatory preoperative

-

quarantine. The prevalence of asymptomatic/presymptomatic patients is unknown,

-

but likely varies according to the pretest probability, i.e., prevalence of disease in the

-

community. Surgeons should be involved in institutional policymaking since the risk

-

to the patient and the staff varies with the type of procedure, the patient's

-

condition, local circumstances, and over time. Some surgeon discretion is necessary

-

and should be permitted.

-

- **Develop diagnostic screening testing policies for health care workers. With near-**

-

future reversal of physical distancing, local incidence may increase, including among

-

health care workers. As ramp up proceeds, screening and testing policies and

-

planning for staff should be considered.

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- **Consider false negative test rates and need for retesting. False negatives have been**

-

reported as high as 30 percent. Guidelines for potential retesting in negative

-

patients might be considered. A particular challenge to health care worker safety is

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our current lack of understanding of duration for transmissibility of the virus in

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either asymptomatic COVID-19-positive patients or individuals who have recovered

•

from a COVID-19 illness. There is evidence that even after respiratory samples are

•

negative in patients who have recovered from a COVID-19 illness, viral RNA remains

•

in the stool for >30 days. The clinical significance of fecal RNA is not well

•

understood.

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• Consider guidelines for postoperative COVID-19 testing of symptomatic

•

patients/patients under investigation (PUI). Atelectasis, fevers, etc., are not

•

uncommon in the postoperative course. Establishing operational guidelines for

•

COVID-19 testing in these patients and concurrent testing results should be

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considered.

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- **There is not likely to be a highly sensitive and specific mass testing ability in the U.S.**
-
- **for at least several months. Therefore, reasonable alternative methods of**
-
- **determining risk versus benefit to the patient and public health in all facilities,**
-
- **inpatient and outpatient, will be required in the interim in order to continue the**
-
- **care of patients now waiting for surgeries previously delayed during the first phase**
-
- **of the pandemic. If optimal screening/testing is unavailable locally, implementation**
-
- **of such alternative screening methods is a local decision and should be done in**
-
- **conjunction with local public health officials.**

II. Preparedness

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- **3. PERSONAL PROTECTIVE EQUIPMENT: Know your local PPE availability and developing**
-
- **policies for your health care workers and procedures.**

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- Sustaining a productive workforce while ramping-up surgical cases requires
-
- adequate PPE availability and the continued adherence to protocols established to
-
- protect workers from virus exposure.
-
- PPE supplies: Stored inventory—or a reliable supply chain—of PPE for both
-
- airborne/aerosol and droplet/contact precautions optimally for at least 30 days of
-
- operations should exist in a hospital prior to relaxing restrictions on surgical activity.
-
- A Centers for Disease Control (CDC) PPE [calculator](#) is provided as an example for
-
- determining supply needs.
-
- PPE guidelines should include PPE recommendations for COVID-19+, PUI, and non-
-
- COVID-19 patients for all patient care, including high-risk procedures (e.g.,
-

intubation, chest tubes, tracheostomy).

•

• Consistent with CDC and Centers for Medicare & Medicaid (CMS) recommendations

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for PPEs outside the OR, facilities may consider having all health care workers and

•

staff wear appropriate-level PPE, while patients wear cloth masks during the ramp-

•

up period, and possibly beyond.

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4. LOCAL FACILITY CAPACITY: Know your health care facility capacity (e.g., beds, ICUs,

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ventilators), including capacity in expansion strategies (e.g., weekends).

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• The approach to restoring the elective surgery caseload depends greatly on the

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hospital's available resources, including OR capacity and alternative sites of care.

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Sufficient facility capacity for providing care to surgical patients must be present in

•

the system, including—in addition to ORs and peri-anesthesia units—critical care,

•

emergency, diagnostic imaging, and laboratory services.

•

• Consider potential sites for resuming elective surgery, including those facility areas

•

that were converted or closed during the surge, such as ORs, ambulatory surgery

•

centers, and hospital outpatient departments.

•

• Facility cleaning policies in context of COVID-19 should be considered. Cleaning—in

•

all areas—along the continuum of care should be addressed (e.g., clinic,

•

preoperative, ORs, workrooms, path-frozen, recovery room, wards, ICUs, ventilators,

•

scopes, etc.).

•

• Certain select procedures may be appropriate for the office setting as long as safety

•

concerns are identified and addressed.

•

• Collaboration and coordination of timing and site designation among clinically

•

integrated networks, Accountable Care Organizations, and other key partners may

•

accelerate the scaling of surgical activity.

•

• The OR schedules should change to accommodate the rapid influx of cases.

•

Modifications may include limiting block time assignments to increase open time

•

and extending hours of elective operations later into the evening and on the

•

weekends. Rooms may be outfitted with new equipment to expand the capacity for

•

specific procedures. Scheduling cases according to priority and grouping like cases

•

together may increase scheduling efficiency.

•

• Ensure that a post-corona elective surgery surge will not overwhelm the local facility

•

throughout preoperative, intraoperative, postoperative, and post-acute care phases.

•

• Other areas of the hospital that support perioperative services must be ready to

•

commence operations, including the clinical laboratory, diagnostic imaging, and

•

sterile processing. If these areas are not ready, it may be feasible to consider

•

engaging outside partners in providing temporary support, such as national

•

laboratory services.

•

• Facility capacity and expansion should include estimating the anticipated demand.

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• Need to consider numbers of canceled/postponed patients.

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• Need to consider facility capacity for usual levels of emergency care, trauma care,

•

and others.

•

- Engineering issues (e.g., reversing negative flow ORs for COVID-19 to positive flow

-

ORs for surgery).

-

5. RESOURCES AND SUPPLIES: Supply chain/support areas.

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- A resumption to normal levels of surgical supplies, implants, and equipment must be

-

in place prior to reactivating elective surgery and commensurate with anticipated

-

ramp-up procedures (e.g., anesthesia-sedation medications, minimally invasive

-

surgery trocar desufflation filters, PPEs, other).

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- Ensuring a supply of products is available from traditional or new vendors as well as

-

vendor support is necessary.

-

- ORs should take inventory of existing supplies for the particular service lines,

-

prioritized with a focus on those with expiration dates.

-

- Cleaning supplies for all areas where COVID-19 or PUI patient care was/is being

-

delivered.

-

6. HEALTH CARE WORKERS: Workforce staffing issues.

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- **Multidisciplinary staffing coverage for routine and “expanded” hours.**

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- **Ensure coordination among surgery, anesthesia, nursing, engineering, housekeeping,**

-

and others.

-

- **Consider creating and/or updating PPE policies to protect workers from a new**

-

infection.

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- **Contingency planning in potential situation of newly diagnosed health care workers.**

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- **Consider levels of stress and fatigue in otherwise healthy workers. Workers**

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returning to work following a COVID-19 infection may especially be at risk for

-

physical and emotional exhaustion.

-

- **Additional**

-

staff may need assistance with childcare, particularly with expanded

-

hours.

-

- **Institutions may consider mitigating workforce shortages through creative staffing,**

-
- e.g., retired surgeons may be available to work as first assistants. Hospitals may
-
- grant independent privileges to chief residents who have met graduation
-
- requirements. Hospitals should consider flexibility in other OR roles, and strategies
-
- to expedite the training of nurses and surgical technicians.
-
- Ensure adequate health care worker staffing to accommodate a COVID-19 surge if a
-
- second wave occurs.
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- 7. REVIEW-GOVERNANCE COMMITTEE: Assign a governance committee to clarify,**
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- interpret, and iterate policies, make real-time decisions, and initiate and communicate
-
- messaging.
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- **Function: Real-time governance, decision-making body**
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- **Members: Multidisciplinary (e.g., surgery, anesthesia, nursing, others)**
-
- **Frequency: At least daily huddles during ramp-up period and possibly beyond**
-
- **Data-driven, e.g., utilization, efficiency, COVID-19 awareness data, errors/near**
-
- misses, complications.

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- **Additional topics for consideration**
-
- **o Prioritization**
-
- **o PPE**
-
- **o Newly diagnosed patients/staff**
-
- **o Pandemic assessment**
-
- **o Patient backlog**
-
- **o Clinical priorities**
-
- **o Community backlog**
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- **o Patient access**
-
- **o Newly uninsured plan, low income plan**
-
- **o Safety/quality**
-
- **o Certification**

III. Patient Issues

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8. PATIENT COMMUNICATION: Surgery patients may have myriad questions and

-
- concerns regarding the ramp-up period. Clear messaging and communication will be
-
- paramount.
-
- Consider a multidisciplinary committee (e.g., may be review-governance committee,
-
- see above) to organize patient messaging and communication.
-
- Potential messaging-communication topics include:
-
- Procedure prioritization
-
- COVID-19 testing policies for patients
-
- COVID-19 counseling
-
- Safety for patients receiving care within the health care system—facilities,
-
- health care workers
-
- PPE use
-
- Patient family/visitor guidelines
-
- Postdischarge care/follow-up
-

Advance directives

•

All-payor class strategies:

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o Medicare/Medicaid

•

o Commercial insurers

•

o Newly uninsured coverage

•

o Uninsured

•

9. SURGERY PRIORITIZATION: Prioritization protocol/plan.

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• **As the ramp-up period is being planned, the prioritization of surgical procedures**

•

should follow a collaborative process to identify principles and a framework for

•

prioritization. Input should be considered from surgery, anesthesia, nursing, and

•

others.

•

• **A prioritization process should be created that adjusts to local, regional, and national**

•

epidemiological trends, changes in COVID-19 diagnostic and treatment strategies,

•

and is sensitive to the institution's resources, priorities, and patient needs. The

•

process should be optimally applicable both within and across surgical specialties,

-

disease processes, and practice environments.

-

- Transparency of the principles, framework, and prioritization process to hospitals,

-

surgeons, patients, and the public will provide assurance, consistency, and reliability,

-

as it will help to standardize the integration of decision-making factors not usually

-

considered in clinical judgment outside the pandemic/postpandemic setting. It also

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-

-

will help to reduce ethical dilemmas and potential for moral injury for surgeons,

-

anesthesiologists, nursing, surgical leadership, and others.

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- During development of the local prioritization process, the following may be

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considered:

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- o List of previously cancelled/postponed cases.

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- o Consider objective priority scoring (e.g., Medically Necessary Time-Sensitive

-

[MeNTS] Scoring [System](#) for prioritization).

- - o Defer to specialties' prioritization.
- - o OR availability and expansion. Strategy for allotting daytime "OR time"—
- - o block time, revised blocks, prioritization, other.
- - o Strategy for phased opening of ORs:
- - o All ORs
- - o 50 percent vs. 25 percent vs. outpatient/ambulatory first
- - o Consider local strategies for increasing "OR time" availability, e.g., weekends,
- - o extended hours (see following for issues related to OR expansion).
- - o Supply chain.
- - o PPE availability.
- - o Establish review-governance committee, see above, to review such issues as
- - o process of prioritization for ORs.
- - o The prioritization process and criteria may vary in real time according to
- - o institutional resources, capabilities, business priorities, and other issues.

-
- **Issues in question should be evaluated in concert with the governance**
-
- **committee.**
-
- **o Prioritization criteria will likely be modified as our knowledge of diagnosis**
-
- **and treatments of COVID-19 evolve, and as more COVID-19-related surgical**
-
- **outcome data become available.**
-
- **o Prioritize/integrate emergent/urgent operative cases (e.g., trauma,**
-
- **emergency general surgery).**
-
- **o Issues to consider associated with increased OR volume/OR expansion:**
-
- **Ensure primary personnel availability commensurate with increased**
-
- **OR volume/OR hours (e.g., surgeon, anesthesia, nursing,**
-
- **housekeeping, engineering, etc.)**
-
- **Ensure adjunct personnel availability (e.g., pathology, radiology,**
-
- **gastrointestinal, other)**
-
- **Ensure supply availability (e.g., medications, suture, minimally**

- **invasive surgery instruments, trocar desufflation filters, other—a**

- **more comprehensive list will be helpful)**

- **Ensure hospital bed/ICU/ventilator availability**

- **New staff training**

- **Other**

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-

IV. Delivery of Safe High-Quality Care

- **10. Ensuring safe, high-quality, high-value care of the surgical patient across the Five**

- **Phases of Care continuum.**

- **• Utilize quality improvement programs/care standards to help support achieving**

- **safe, high-quality, high-value patient care.**

- **• Use of risk-adjusted data to evaluate patient care and outcomes.**

- **• Ensure optimal patient care across Five Phases of Care:**

- **• Phase I: Preoperative Period**

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- o Consider guideline for repeating laboratory results, radiology, history and

-

- physical, re-consent vs. use of prior results.

-

- Consider use of telehealth.

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- o Consider guideline to (re)assess comorbidities especially if COVID-19/PUI

-

- or extended length of time of postponed operation.

-

- Consider use of telehealth.

-

- o The composite assessment, in conjunction with sound clinical judgment,

-

- provides the surgeon and other decision makers with the information

-

- needed to make decisions regarding clinical appropriateness as well as

-

- surgical prioritization.

-

- o Office, clinic, hospital public areas (e.g., waiting room) should continue to

-

- practice physical distancing (e.g., six-foot spacing of chairs)

-

- o Consider review of patient advance directive, especially older adults, frail,

-

- COVID-19+, other.

-

o Evaluate and discuss patient's potential need for post-acute care facility

•

(rehabilitation medicine, skilled nursing facility, other) before operation

•

(given known COVID-19 outbreaks in post-acute care-type facilities).

•

o Preoperative setting (e.g., clinic, office, or non-COVID-19 care (NCC)

•

areas) should consider screening all patients before the appointment for

•

symptoms of COVID-19 disease, including temperature checks, and

•

routinely screen all staff and others who would be working in the facility

•

(physicians, nurses, housekeeping, delivery, and others).

•

o As stated above in PPE section, aligning with CDC and CMS

•

recommendations, consider a policy for all health care providers and staff

•

to wear surgical face masks at all times. Procedures on the mucous

•

membranes, including the respiratory tract, that have a higher risk of

•

aerosol transmission should be done with great caution, and staff should

•

utilize appropriate respiratory protection such as N95 masks and face

•

shields.

-

- o Patients should wear a cloth face covering that can be bought or made at

-

- home.

-

- Phase II: Immediate Preoperative Period

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- o Review nursing, anesthesia, surgery checklists for potential need to be

-

- revised re: COVID-19+, other?

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-

- Phase III: Intraoperative Period

-

- o Review whether time-outs and briefings need revision with regard to

-

- COVID-19 risk, COVID-19 testing results, and ensure PPE use guidelines

-

- are being followed.

-

- o Consider guideline for personnel to be present during intubation, and

-

- consider including waiting time (e.g., with regard to air circulation cycling

-

- time) before beginning operation.

-

- o PPE use guideline (see above).

-

- o Review specimen pick-up protocol.

-

- Phase IV: Postoperative Period

-

- o Adhere to standardized care protocols as much as possible (e.g.,

-

- enhanced recovery protocols) for increased reliability in light of potential

-

- different personnel as standardized protocols optimize lengths of hospital

-

- stay and efficiency and are associated with decreased complication rates.

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- Phase V: Post Discharge Period

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- o Post-acute care facility availability.

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- o Post-acute care facility safety (COVID-19, non-COVID-19 issues).

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- o Home setting.

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