

EVIDENCE SEARCH REPORT

RESEARCH QUESTION:	What is the best evidence to guide the sequence or priority of re-opening each type of healthcare service and how have the closures impacted patients?	UNIQUE IDENTIFIER:	EOC042202-02 ESR
RESOURCES USED:			
<ol style="list-style-type: none"> 1. CDC website & database 2. Centre for Evidence-Based Medicine 3. CINAHL 4. Embase 5. European Centre for Disease Prevention and Control 6. Google 7. Google Scholar 8. Health Canada 		<ol style="list-style-type: none"> 9. medRxiv 10. LitCovid 11. MEDLINE 12. Public Health England 13. Public Health Ontario 14. PubMed 15. WHO website & database 16. Reference/Citation Lists 	
LIMITS/EXCLUSIONS/INCLUSIONS: English		REFERENCE INTERVIEW COMPLETED:	
DATE: May 6, 2020			
LIBRARIAN: Lukas Miller, Catherine Young		REQUESTOR: Brent Kitchen	
TEAM: EOC			
SEARCH ALERTS CREATED: Yes (Embase, MEDLINE, Google)			
CITE AS: Miller, L; Young, C. What is the best evidence to guide the sequence or priority of re-opening each type of healthcare service and how have the closures impacted patients? 2020 May 6; Document no.: EOC042202-02 ESR. In: COVID-19 Rapid Evidence Reviews [Internet]. SK: SK COVID Evidence Support Team, c2020. 31 p. (CEST evidence search report)			

LIBRARIAN NOTES/COMMENTS

This is an update to a prior (interim) report.

Catherine Young completed an extensive search of research publications, which are included below. Results from these searches will be delivered on a regular (weekly) basis (to Andreea). I will continue to track grey literature going forward.

We are still gathering unpublished and grey literature and will forward anything noteworthy as it arrives. . I have included findings so far but work is ongoing. For some idea of the volume of information, see the results of this Google search I constructed to find PDFs posted online in the last few weeks.

Regards,

DISCLAIMER

This information is provided as a service by the Saskatchewan Health Authority and University of Saskatchewan Libraries. Professional librarians conduct searches of the literature. Results are subject to the limitations of the databases and the specificity, broadness and appropriateness of the search parameters presented by the requester. The Libraries do not represent in any matter that retrieved citations are complete, accurate or otherwise to be relied upon. The search results are only valid as of the date and time at which the search is conducted. The Libraries do not accept responsibility for any loss or damage arising from the use of, or reliance on, search results.

SEARCH RESULTS

To obtain full-text articles email library@saskhealthauthority.ca.

SUMMARIES, GUIDELINES & OTHER RESOURCES

National Health Service (UK)

- Second phase of NHS response to COVID-19: Letter from Sir Simon Stevens and Amanda Pritchard. 29 April 2020.
<https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/second-phase-of-nhs-response-to-covid-19-letter-to-chief-execs-29-april-2020.pdf>
- Clinical guide to surgical prioritisation during the coronavirus pandemic. 11 April 2020.
<https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/C0221-specialty-guide-surgical-prioritisation-v1.pdf>

College of Physicians & Surgeons of Alberta.

- (May 5) Advice to Profession on Reopening Practice
<https://mailchi.mp/cpsa/cpsa-advice-to-the-profession-covid-19-reopening-practice>
So far this is the only college that has released something.

Canadian Dental Hygienists Association (CDHA)

- (May 1) Update for CDHA members
https://files.cdha.ca/newsEvents/SafetyAlerts/1_May_2020_update_to_members_covid.pdf
See last paragraph of first page – we will monitor for their upcoming release.

American Medical Association (AMA)

- COVID-19: A physician practice guide to reopening
<https://www.ama-assn.org/delivering-care/public-health/covid-19-physician-practice-guide-reopening>
- AMA launches physician guide for reopening medical practices [press release]
<https://www.ama-assn.org/press-center/press-releases/ama-launches-physician-guide-reopening-medical-practices>
- (April 16) AMA urges states to use science, data as they reopen economy [statement]
<https://www.ama-assn.org/press-center/ama-statements/ama-urges-states-use-science-data-they-reopen-economy>
Advising scientific and evidence-based methods to minimize risk.

USA (Federal) – CDC / FDA / Whitehouse

- <https://www.whitehouse.gov/openingamerica/>
- <https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>
(PDF) https://www.cdc.gov/coronavirus/2019-ncov/community/pdf/Reopening_America_Guidance.pdf

- See the table at the end of this document for a selection of CDC policies and recommendations!
- <https://www.cdc.gov/coronavirus/2019-ncov/downloads/fs-reopening-america-workers-at-risk.pdf>

Other – Still being gathered

Knox County Tennessee Health Department: A Community Strategy for Phased Reopening

<http://media.graytvinc.com/documents/COVID-Reopen-Plan.pdf>

Lots of emerging evidence coming out of Europe, the UK and other countries as well. A future report will contain additional info.

ARTICLES FROM LIBRARY DATABASES

Note: References are sorted by year (newest to oldest)

1. **Amato A, Rondonotti E, Radaelli F. Lay-off of Endoscopy services for the COVID-19 pandemic: how can we resume the practice of routine cases? Gastroenterology. 2020. DOI: <https://doi.org/10.1053/j.gastro.2020.04.049>**
 ABSTRACT: Multiple questions have been raised regarding the gastrointestinal and liver manifestations of COVID-19 infection, and implications of SARS-CoV-2 infection on gastrointestinal endoscopy. A joint society statement of the American Gastroenterological Association (AGA), the American Association for the Study of Liver Diseases (AASLD), the American College of Gastroenterology (ACG), and the American Society for Gastrointestinal Endoscopy (ASGE) on March 15, 2020 highlighted the potential for SARS-CoV-2 transmission through droplets, an established mode of transmission, and possibly fecal shedding, and the associated risk for transmission to endoscopy personnel during gastrointestinal endoscopy procedures.¹⁶ In this document, we seek to summarize the data and provide evidence-based recommendation and clinical guidance. This rapid recommendation document was commissioned and approved by the AGA Institute Clinical Guidelines Committee (CGC), AGA Institute Clinical Practice Updates Committee (CPUC), and the AGA Governing Board to provide timely, methodologically rigorous guidance on a topic of high clinical importance to the AGA membership and the public.
 URL: <http://www.sciencedirect.com/science/article/pii/S0016508520305680>
 DOI: <https://doi.org/10.1053/j.gastro.2020.04.049>
2. **Bannow T. AHA, ACS and others release guidelines for resuming elective surgeries. Modern Healthcare. 2020;50(16):8-.**
 ABSTRACT: The article mentions the release of guidelines from the American Hospital Association, American College of Surgeons and other groups for providers' resumption of elective surgical procedures as the coronavirus 2019 (COVID-19) cases begin to decline in some regions as of April 20, 2020.
3. **Basman C, Kliger CA, Pirelli L, et al. Management of elective aortic valve replacement over the long term in the era of COVID-19. European Journal of Cardio-Thoracic Surgery. 2020. DOI: 10.1093/ejcts/ezaa152**

ABSTRACT: As numerous patients await elective aortic valve intervention for aortic stenosis (AS) during this unprecedented outbreak of severe acute respiratory syndrome coronavirus 2 in 2019 (COVID-19), there is serious concern for the possibility of morbidity and mortality during prolonged wait-times. During this time period, the American College of Surgeons and Center for Disease Control released their recommendation to reschedule elective surgeries and to shift elective inpatient diagnostic and surgical procedures to the outpatient setting [1]. Accordingly, the Centers for Medicare & Medicaid Services provided a framework to further group elective surgeries into levels of urgency [2]. A tiered framework ensures that we are providing surgical services and procedures to those patients in whom the risk of delaying a procedure may lead to significant morbidity or mortality. As cardiovascular healthcare providers caring for patients with AS, we must now differentiate cases at a higher tier of urgency from the rest.

URL: <https://academic.oup.com/ejcts/advance-article/doi/10.1093/ejcts/ezaa152/5821310>

DOI: 10.1093/ejcts/ezaa152

4. Bhangu A, Lawani I, Ng-Kamstra JS, et al. Global guidance for surgical care during the COVID-19 pandemic. *British Journal of Surgery*. 2020. DOI: 10.1002/bjs.11646

ABSTRACT: Background: Surgeons urgently need guidance on how to deliver surgical services safely and effectively during the COVID-19 pandemic. The aim was to identify the key domains that should be considered when developing pandemic preparedness plans for surgical services. Methods: A scoping search was conducted to identify published articles relating to management of surgical patients during pandemics. Key informant interviews were conducted with surgeons and anaesthetists with direct experience of working during infectious disease outbreaks, in order to identify key challenges and solutions to delivering effective surgical services during the COVID-19 pandemic. Results: Thirteen articles were identified from the scoping search, and surgeons and anaesthetists representing 11 territories were interviewed. To mount an effective response to COVID-19, a pandemic response plan for surgical services should be developed in advance. Key domains that should be included are: provision of staff training (such as patient transfers, donning and doffing personal protection equipment, recognizing and managing COVID-19 infection); support for the overall hospital response to COVID-19 (reduction in non-urgent activities such as clinics, endoscopy, non-urgent elective surgery); establishment of a team-based approach for running emergency services; and recognition and management of COVID-19 infection in patients treated as an emergency and those who have had surgery. A backlog of procedures after the end of the COVID-19 pandemic is inevitable, and hospitals should plan how to address this effectively to ensure that patients having elective treatment have the best possible outcomes. Conclusion: Hospitals should prepare detailed context-specific pandemic preparedness plans addressing the identified domains. Specific guidance should be updated continuously to reflect emerging evidence during the COVID-19 pandemic.

URL: <https://bjssjournals.onlinelibrary.wiley.com/doi/full/10.1002/bjs.11646>

DOI: <http://dx.doi.org/10.1002/bjs.11646>

5. Bhatla N, Singhal S. The COVID-19 Pandemic and Implications for Gynaecologic Cancer Care. *Indian Journal of Gynecologic Oncology*. 2020;18(2). DOI: 10.1007/s40944-020-00395-7

ABSTRACT: Purpose: The impact of the COVID-19 pandemic on world healthcare system and economy is unprecedented. Currently routine surgical procedures are at a halt globally, but whether one can delay cancer procedures remains an ethical issue, and still there is no clarity on how women with gynaecological cancers should be managed in these critical times. Methods: Currently available literature on impact of COVID-19 on cancer was reviewed with special reference to its applicability to the Indian context. Results: Cancer cases are more susceptible for COVID-19 infection and rapid deterioration if they get infected. A tumour board should plan their management with a “do no harm” approach as the guiding principle. Teleconsultation may be used to advise patients for therapy and

symptom control measures, as well as to advise new patients regarding diagnostic tests. Surgical decision making may be stratified into three categories: patients with low (not life threatening) or intermediate (potential for future morbidity or mortality) acuity may be delayed; those with high acuity may be taken up for planned therapy after explaining the risks. Assessment of the severity of disease, comorbid conditions, and logistic challenges, along with COVID census in their area are important variables for informed and individualized decision making. Safety of healthcare personnel needs to be ensured at the same time. Conclusion: Currently available evidence is limited by small sample size, and full impact of this pandemic on cancer is yet to be seen. However, cancer care needs to be individualized taking all variables into consideration.

URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7180676/>

DOI: <http://dx.doi.org/10.1007/s40944-020-00395-7>

6. Brody RM, Albergotti WG, Shimunov D, et al. Changes in Head and Neck Oncologic Practice During the COVID-19 Pandemic. *Head Neck*. 2020;2020/05/02. DOI: 10.1002/hed.26233

ABSTRACT: INTRODUCTION: The COVID-19 pandemic has raised controversies regarding safe and effective care of head and neck cancer patients. It is unknown how much the pandemic has changed surgeon practice. METHODS: A questionnaire was distributed to head and neck surgeons assessing opinions related to treatment and concerns for the safety of patients, self, family, and staff. RESULTS: A total of 67 head and neck surgeons responded during the study period. Surgeons continued to recommend primary surgical treatment for oral cavity cancers. Respondents were more likely to consider non-surgical therapy for patients with early glottic cancers and HPV-mediated oropharynx cancer. Surgeons were least likely to be concerned for their own health and safety and had the greatest concern for their resident trainees. CONCLUSIONS: This study highlights differences in the willingness of head and neck surgeons to delay surgery or alter plans during times when hospital resources are scarce and risk is high.

URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/hed.26233>

DOI: <http://doi.org/10.1002/hed.26233>

7. Chiu PWY, Ng SC, Inoue H, et al. Practice of endoscopy during COVID-19 pandemic: position statements of the Asian Pacific Society for Digestive Endoscopy (APSDE-COVID statements). *Gut*. 2020. DOI: 10.1136/gutjnl-2020-321185

ABSTRACT: Coronavirus-19 (COVID-19) caused by SARS-CoV-2 has become a global pandemic. Risk of transmission may occur during endoscopy and the goal is to prevent infection among healthcare professionals while providing essential services to patients. Asia was the first continent to have a COVID-19 outbreak, and this position statement of the Asian Pacific Society for Digestive Endoscopy shares our successful experience in maintaining safe and high-quality endoscopy practice at a time when resources are limited. Sixteen experts from key societies of digestive endoscopy in Asia were invited to develop position statements, including patient triage and risk assessment before endoscopy, resource prioritisation and allocation, regular monitoring of personal protective equipment, infection control measures, protective device training and implementation of a strategy for stepwise resumption of endoscopy services after control of the COVID-19 outbreak.

URL: <https://gut.bmj.com/content/early/2020/04/02/gutjnl-2020-321185>

DOI: <http://doi.org/10.1136/gutjnl-2020-321185>

8. Civantos FJ, Leibowitz JM, Arnold DJ, et al. Ethical Surgical Triage of Head and Neck Cancer Patients during the COVID-19 Pandemic. *Head Neck*. 2020;2020/05/02. DOI: 10.1002/hed.26229

ABSTRACT: BACKGROUND: Coronavirus has serially overtaken our metropolitan hospitals. At peak, patients with acute respiratory distress syndrome may outnumber mechanical ventilators. In our Miami hospital system COVID-19 cases have multiplied for 4 weeks and elective surgery has been suspended.

METHODS: An otolaryngologic triage committee was created to appropriately allocate resources to patients. Hospital ethicists provided support. Our tumor conference screened patients for non-surgical options. Patients were tested twice for Sars-CoV-2 before performing urgent contaminated operations. N95 masks and protective equipment were conserved when possible. Patients with low-grade cancers were advised to delay surgery, and other difficult decisions were made. **RESULTS:** Hundreds of surgeries were cancelled. Sixty-five cases supervised over three weeks are tabulated. Physicians and patients expressed discomfort regarding perceived deviations from standards, but risk of Covid-19 exposure tempered these discussions. **CONCLUSIONS:** We describe the use of actively managed surgical triage to fairly balance our patient's health with public health concerns.

URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/hed.26229>

DOI: <http://doi.org/10.1002/hed.26229>

9. Corral JE, Hoogenboom SA, Kröner PT, et al. COVID-19 polymerase chain reaction testing before endoscopy: an economic analysis. *Gastrointestinal Endoscopy*. 2020. DOI: <https://doi.org/10.1016/j.gie.2020.04.049>

ABSTRACT: Background and Aims The COVID-19 pandemic has limited endoscopy utilization, causing significant health and economic losses. We aim to model the impact of PCR testing into resuming endoscopy practice. Methods We performed a retrospective review of endoscopy utilization during the COVID-19 pandemic for a baseline reference. A computer model compared 3 approaches—Strategy 1: endoscopy for urgent indications only; Strategy 2: testing for semi-urgent indications; and Strategy 3: testing all patients. Analysis was made under current COVID-19 prevalence, and projected prevalence of 5% and 10%. Primary outcomes were number of procedures performed/cancelled. Secondary outcomes were direct costs, reimbursement, personal protective equipment used and personnel infected. Disease prevalence, testing accuracy, and costs were obtained from literature. Results During the COVID-19 pandemic, endoscopy volume was 12.7% of expected. Strategy 2 and 3 were safe and effective interventions to resume endoscopy in semi-urgent and elective cases. Investing 22USD and 105USD in testing per patient allowed completing 19.4% and 95.3% of baseline endoscopies respectively. False negative results were seen after testing 4,700 patients (or 3 months applying Strategy 2 in our practice). Implementing PCR testing over 1 week in United States would require 13 and 64 million USD, with a return of 165 and 767 million USD to providers, leaving 65 and 325 health care workers infected. Conclusion PCR testing is an effective strategy to restart endoscopic practice in United States. PCR screening should be implemented during the second phase of the pandemic, once the healthcare system is able to test and isolate all suspected COVID-19 cases.

URL: <http://www.sciencedirect.com/science/article/pii/S0016510720342486>

DOI: <https://doi.org/10.1016/j.gie.2020.04.049>

10. Crespo Garcia J, Alberca de Las Parras F, Balaguer F, et al. Resumption of activity in gastroenterology departments. Recommendations by SEPD, AEEH, GETECCU and AEG. *Rev Esp Enferm Dig*. 2020;22:22. DOI: <https://dx.doi.org/10.17235/reed.2020.7141/2020>

ABSTRACT: The set of measures proposed by SEPD, AEEH, GETECCU and AEG are aimed to help departments in their resumption of usual activity. We have prepared a number of practical recommendations regarding patient management and the stepwise resumption of healthcare activity. These recommendations are based on the sparse, changing evidence available, and will be updated in the future according to daily needs and the availability of expendable materials to suit them; in each department they will be implemented depending upon the cumulative incidence of SARS-CoV-2 infection in each region, and the burden the pandemic has represented for each hospital. The general objectives of these recommendations include: * To protect our patients against the risks of infection with SARS-CoV-2 and to provide them with high-quality care. * To protect all healthcare professionals

against the risks of infection with SARS-CoV-2. * To resume normal functioning of our departments in a setting of ongoing risk for infection with SARS-CoV-2.

URL: https://online.reed.es/DOI/PDF/ArticuloDOI_7141.pdf

DOI: <https://dx.doi.org/10.17235/reed.2020.7141/2020>

- 11. Day AT, Sher DJ, Lee RC, et al. Head and neck oncology during the COVID-19 pandemic: Reconsidering traditional treatment paradigms in light of new surgical and other multilevel risks. Oral Oncology. 2020:104684-. DOI: <https://doi.org/10.1016/j.oraloncology.2020.104684>**

ABSTRACT: The COVID-19 pandemic demands reassessment of head and neck oncology treatment paradigms. Head and neck cancer (HNC) patients are generally at high-risk for COVID-19 infection and severe adverse outcomes. Further, there are new, multilevel COVID-19-specific risks to patients, surgeons, health care workers (HCWs), institutions and society. Urgent guidance in the delivery of safe, quality head and neck oncologic care is needed. Novel barriers to safe HNC surgery include: 1) imperfect presurgical screening for COVID-19; 2) prolonged SARS-CoV-2 aerosolization; 3) occurrence of multiple, potentially lengthy, aerosol generating procedures (AGPs) within a single surgery; 4) potential incompatibility of enhanced personal protective equipment (PPE) with routine operative equipment; 5) existential or anticipated PPE shortages. Additionally, novel, COVID-19-specific multilevel risks to HNC patients, HCWs and institutions, and society include: use of immunosuppressive therapy, nosocomial COVID-19 transmission, institutional COVID-19 outbreaks, and, at some locations, societal resource deficiencies requiring health care rationing. Traditional head and neck oncology doctrines require reassessment given the extraordinary COVID-19-specific risks of surgery. Emergent, comprehensive management of these novel, multilevel surgical risks are needed. Until these risks are managed, we temporarily favor nonsurgical therapy over surgery for most mucosal squamous cell carcinomas, wherein surgery and nonsurgical therapy are both first-line options. Where surgery is traditionally preferred, we recommend multidisciplinary evaluation of multilevel surgical-risks, discussion of possible alternative nonsurgical therapies and shared-decision-making with the patient. Where surgery remains indicated, we recommend judicious preoperative planning and development of COVID-19-specific perioperative protocols to maximize the safety and quality of surgical and oncologic care.

URL: <http://www.sciencedirect.com/science/article/pii/S1368837520301202>

DOI: <https://doi.org/10.1016/j.oraloncology.2020.104684>

- 12. Di Saverio S, Khan M, Pata F, et al. Laparoscopy at all costs? Not now during COVID-19 and not for acute care surgery and emergency colorectal surgery: a practical algorithm from a Hub Tertiary teaching hospital in Northern Lombardy, Italy. Journal of trauma and acute care surgery. 2020. DOI: [10.1097/ta.0000000000002727](https://doi.org/10.1097/ta.0000000000002727)**

ABSTRACT: As General Surgeons also managing the Acute Care and Trauma Surgery service, we have been following with great interest the most recent experiences and practical advice on whether the use of laparoscopy should be continued or not during these difficult times; with the fear and potential risks of virus spread being higher with laparoscopy or with open surgery. Initial documents seemed to conditionally advise against use of laparoscopy, not only because of pneumoperitoneum, but also for the use of electrical and/or ultrasonic devices during Minimally Invasive Surgery (MIS) rather than with open surgery.

URL:

https://journals.lww.com/jtrauma/Citation/9000/Laparoscopy_at_all_costs_Not_now_during_COVID_19.97941.aspx

DOI: <http://doi.org/10.1097/ta.0000000000002727>

- 13. Diaz A, Sarac BA, Schoenbrunner AR, et al. Elective surgery in the time of COVID-19. Am J Surg. 2020. DOI: [10.1016/j.amjsurg.2020.04.014](https://doi.org/10.1016/j.amjsurg.2020.04.014)**

ABSTRACT: The COVID-19 pandemic has placed a significant strain on the United States health care system, and frontline healthcare workers are rapidly altering their professional responsibilities to help meet hospital needs. In an effort to decrease disease transmission and conserve personal protective equipment (PPE), surgeons have witnessed one of the most dramatic changes in their practices with rapidly decreasing numbers of elective surgeries.

URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7161516/>

DOI: <http://doi.org/10.1016/j.amisurg.2020.04.014>

14. Dover JS, Moran ML, Figueroa JF, et al. A PATH TO RESUME AESTHETIC CARE; EXECUTIVE SUMMARY OF; PROJECT AesCert™ GUIDANCE SUPPLEMENT; PRACTICAL CONSIDERATIONS FOR; AESTHETIC MEDICINE PROFESSIONALS; SUPPORTING CLINIC PREPAREDNESS; IN RESPONSE TO THE SARS-CoV-2 OUTBREAK. *Facial Plastic Surgery & Aesthetic Medicine*. 2020:abc.2020.0239-abc.2020.0239. DOI: 10.1089/abc.2020.0239

ABSTRACT: This Project AesCert™ Guidance Supplement (“Guidance Supplement”) was developed in partnership with a multi-disciplinary panel of board-certified physician and doctoral experts in the fields of Infectious Disease, Immunology, Public Health Policy, Dermatology, Facial Plastic Surgery and Plastic Surgery. The Guidance Supplement is intended to provide aesthetic medicine physicians and their staffs with a practical guide to safety considerations to support clinic preparedness for patients seeking non-surgical aesthetic treatments and procedures following the return-to-work phase of the COVID-19 pandemic, once such activity is permitted by applicable law. Many federal, state and local governmental authorities, public health agencies and professional medical societies have promulgated COVID-19 orders and advisories applicable to health care practitioners. The Guidance Supplement is intended to provide aesthetic physicians and their staffs with an additional set of practical considerations for delivering aesthetic care safely and generally conducting business responsibly in the new world of COVID-19. Aesthetic providers will face new and unique challenges as government stay-at-home orders and related commercial limitations are eased, and the U.S. economy reopens and healthcare systems transition from providing only urgent and other essential treatment to resuming routine care and elective procedures and services. The medical aesthetic specialties will therefore wish to resume practice in order to ensure high quality, expert care is available, and importantly to help promote patients’ positive self-image and sense of well-being following a lengthy and stressful period of quarantine. In a number of areas, this Guidance Supplement exceeds traditional aesthetic office safety precautions, recognizing reduced tolerance in an elective treatment environment for any risk associated with COVID-19’s highly variable presentation and unpredictable course. The disease has placed a disturbing number of young, otherwise healthy patients in extremis with severe respiratory and renal failure, stroke, pericarditis, neurologic deficits and other suddenly life-threatening complications, in addition to its pernicious effects on those with pre-existing morbidities and advanced age. Accordingly, the Guidance Supplement seeks to establish an elevated safety profile for providing patient care while reducing, to the greatest extent reasonably possible, the risk of infectious processes to both patients and providers. While the Guidance Supplement cannot foreclose the risk of infection, nor serve to establish or modify any standards of care, it does offer actionable risk-mitigation considerations for general office comportment and for certain non-surgical procedures typically performed in aesthetic medical settings. It is axiomatic that all such considerations are necessarily subject to the ultimate judgment of each individual healthcare professional based on patient situation, procedure details, office environment, staffing constraints, equipment and testing availability, and local legal status and public health conditions.

URL: <https://www.liebertpub.com/doi/10.1089/abc.2020.0239>

DOI: <http://doi.org/10.1089/abc.2020.0239>

- 15. Finley C, Prashad A, Camuso N, et al. Guidance for management of cancer surgery during the COVID-19 pandemic. Canadian journal of surgery Journal canadien de chirurgie. 2020;63(22):S2-S4. DOI: 10.1503/cjs.005620**
ABSTRACT: During the coronavirus disease 2019 (COVID-19) pandemic, delaying lifesaving cancer surgeries must be done with extreme caution and thoughtfulness. Modelling indicates that delays in high-risk cancer surgeries beyond 6 weeks could affect long-term outcomes for thousands of Canadians. Consequently, it is possible that postponing cancer surgery without consideration of its implications could cost more lives than can be saved by diverting all surgical resources to COVID-19. This article provides general guidance on supporting curative surgical treatment where appropriate and with available resources.
URL: <http://canjsurg.ca/63-2-s2/>
DOI: <http://doi.org/10.1503/cjs.005620>
- 16. Finley C, Prashad A, Camuso N, et al. Lifesaving cancer surgeries need to be managed appropriately during the COVID-19 pandemic. Canadian journal of surgery Journal. 2020;63(2):S1-S. DOI: 10.1503/cjs.005520**
ABSTRACT: During the coronavirus disease 2019 (COVID-19) pandemic, the number of cases and deaths have been overwhelming. Health care leadership and practitioners are increasingly faced with ethical and practical challenges. Even as we all face the threat of this pandemic, an estimated 225 800 Canadians will be diagnosed with cancer in 2020, and cancer is responsible for 30% of all deaths across the country. Modelling indicates that as many as 13 000 people could be affected by a delay in access to cancer surgery over the first 3 months of the pandemic, and delays in cancer surgeries beyond 6 weeks can affect long-term outcomes for these patients. For others, a delay beyond 14 days may tip the scale. Thus, extreme caution is required in delaying lifesaving cancer surgeries. Postponed cancer surgery can also lead to conditions, such as bowel obstruction or spinal cord impingement, requiring emergent surgeries that otherwise could have been elective, often having a major impact on survival in these patients.
URL: <http://canjsurg.ca/63-2-s1/>
DOI: <http://doi.org/10.1503/cjs.005520>
- 17. Fontanella MM, Saraceno G, Lei T, et al. Neurosurgical activity during COVID-19 pandemic: an expert opinion from China, South Korea, Italy, United States of America, Colombia and United Kingdom. Journal of neurosurgical sciences. 2020. DOI: 10.23736/s0390-5616.20.04994-2**
ABSTRACT: BACKGROUND: More than a million and a half people are infected worldwide with more than 90,000 casualties. The ongoing COVID-19 pandemic is radically altering both socio-economic and health care scenarios. METHODS: On April 4, 2020, at 13.30 CET, a webinar was broadcasted, organized by Global Neuro and supported by WFNS. Expert neurosurgeons from 6 different countries (China, Italy, South Korea, USA, Colombia and United Kingdom) reported on the impact of the COVID-19 pandemic on their health care systems and neurosurgical activity. RESULTS: The first part focused on the epidemiology until that date. The USA were the most affected State with 450,000 cases, followed by Italy (140,000 cases and 19,000 casualties), China (83,305 cases and 3,345 had died), South Korea (10,156 cases with 177 casualties), the UK (38,168 cases and 3,605 deaths) and Colombia (1,267 cases and 25 deaths). The second part concerned Institution and staff reorganization. In every country all surgical plans have been modified. In Wuhan the staff was enrolled in COVID-units. In New York, the Mount Sinai Health System was in lockdown mode. In South Korea, sterilizing chambers have been placed. In Italy some Departments were reorganized in a Hub and Spoke fashion. In the Latin American region, they adopted special measures for every case. In the UK a conference center has been used to accommodate intensive care unit (ICU) beds. The third part was about neurosurgical practice during the COVID-19 pandemic. In Wuhan the main hospital was used for urgent non-COVID patients. In New York

the neurosurgeon staff work in ICU as advanced practitioner (APP). In South Korea every patient is screened. In Italy the on-duty Hub neurosurgeons have been doubled. In the Latin American region recommendations have been developed by some neurosurgical societies. In the UK local non-specialists and traumatologists neurosurgical experts are collaborating in terms of best practice. The final part touched upon how to perform safe surgery and re-start after the pandemic. In China elective surgical procedures are performed very carefully. In New York, surgery planning will be based on patient's viral load. In South Korea and in Italy disinfection plans and negative-pressure O.R. were created. In the Latin American region, the aim is to have a rapid testing system. In the UK they have developed flowcharts to guide trauma patient management. CONCLUSIONS: In general, the pandemic scenario was presented as a thought-provoking challenge in all countries which requires tireless efforts for both maintaining emergency and elective neurosurgical procedures.

URL: <https://www.minervamedica.it/en/journals/neurosurgical-sciences/article.php?cod=R38Y9999N00A20042912>

DOI: <http://doi.org/10.23736/s0390-5616.20.04994-2>

18. Francesco C, Pettke A, Michele B, et al. Managing COVID-19 in the oncology clinic and avoiding the distraction effect. *Annals of oncology* . 2020. DOI: 10.1016/j.annonc.2020.03.286.

ABSTRACT: The safety and management of cancer patients in the current severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) outbreak is urgent and most cancer clinics need to establish a contingency plan. It is well established that cancer patients are more susceptible to infections because of the immunosuppressive state caused by both anticancer treatments and surgery.^{1e3} A recent study from Prof He and colleagues shows that the risk of developing severe events in coronavirus disease 2019 (COVID-19) is statistically significant higher in patients with cancer, with a hazard ratio of 3.56.4 A caution in interpreting the data is that the patient numbers are of course small but the results are not unexpected. The authors suggest that postponing adjuvant chemotherapy or elective surgery for less aggressive cancers should be considered and that the increased risk for personal protection provisions should be emphasized for patients with cancer or cancer survivors. Furthermore, more intensive surveillance or treatment should be considered for those patients with cancer who are infected with SARS-CoV-2.

URL: [https://www.annalsofncology.org/article/S0923-7534\(20\)36373-0/pdf](https://www.annalsofncology.org/article/S0923-7534(20)36373-0/pdf)

DOI: <http://doi.org/10.1016/j.annonc.2020.03.286>

19. Gilat R, Haunschild ED, Tauro T, et al. Recommendation to Optimize Safety of Elective Surgical Care While Limiting the Spread of COVID-19: Primum Non Nocere. *Arthrosc Sports Med Rehabil*. 2020. DOI: 10.1016/j.asmr.2020.04.008

ABSTRACT: COVID-19 has drastically altered our lives in an unprecedented manner, shuttering industries, and leaving most of the country in isolation as we adapt to the evolving crisis. Orthopedic surgery has not been spared from these effects, with the postponement of elective procedures in an attempt to mitigate disease transmission and preserve hospital resources as the pandemic continues to expand. During these turbulent times, it is crucial to understand that while patient and care-providers safety is paramount, canceling or postponing essential surgical care is not without consequences, and may be irreversibly detrimental to a patient's health and quality of life in some cases. The optimal solution of how to effectively balance the resumption of standard surgical care while doing everything possible to limit the spread of COVID-19 is undetermined, and could include strategies such as social distancing, screening forms and tests including temperature screening, segregation of inpatient and outpatient teams, proper use of protective gear, and the use of ambulatory surgery centers (ASCs) to provide elective, yet ultimately essential, surgical care while conserving resources and protecting the health of patients and health-care providers. Of importance, these recommendations do not and should

not supersede evolving United States Centers for Disease Control and Prevention (CDC), and relevant federal, state and local public health guidelines. Level of Evidence: Level V.

URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7183963/>

DOI: <http://doi.org/10.1016/j.asmr.2020.04.008>

- 20. Ginsburg KB, Curtis GL, Timar RE, et al. Delayed Radical Prostatectomy is Not Associated with Adverse Oncological Outcomes: Implications for Men Experiencing Surgical Delay Due to the COVID-19 Pandemic. J Urol. 2020;2020/05/02:101097JU0000000000001089. DOI: 10.1097/JU.0000000000001089**

ABSTRACT: PURPOSE: The 2019 Novel Coronavirus (COVID-19) pandemic has forced many healthcare organizations to divert efforts and resources to emergent patient care, delaying many elective oncological surgeries. We investigated an association between delay in radical prostatectomy (RP) and oncological outcome. MATERIALS AND METHODS: This is a retrospective review of men with intermediate and high-risk prostate cancer (PC) in the National Cancer Database (NCDB) underdoing radical prostatectomy from 2010-2016. Immediate RP was defined as RP within 3-months of diagnosis, while delayed RP was analyzed in 3-month intervals up to 12-months. Multivariable logistic regression models were fit to test for associations between levels of delayed RP and outcomes of interest (adverse pathology, upgrading on RP, node positive disease, and post-RP secondary treatments) compared with men undergoing immediate RP. RESULTS: We identified 128,062 men with intermediate- and high-risk PC treated with RP. After adjustment, we did not appreciate a significant difference in odds of adverse pathology, upgrading, node positive disease, or post-RP secondary treatments between men treated with immediate RP and any level of delay up to 12 months. Subgroup analysis of men with Grade group 4 and 5 PC did not demonstrate an association between delayed RP and worse oncological outcomes. CONCLUSIONS: In the NCDB, delayed RP was not associated with early adverse oncological outcomes at RP. These results may provide reassurance to patients and urologists balancing care in the current pandemic.

URL: <https://www.auajournals.org/doi/10.1097/JU.0000000000001089>

DOI: <http://doi.org/10.1097/JU.0000000000001089>

- 21. Gornet J-M, Linh Tran Minh M, Leleu F, et al. What do surgeons need to know about the digestive disorders and paraclinical abnormalities induced by COVID-19? Journal of Visceral Surgery. 2020. DOI: <https://doi.org/10.1016/j.jvisc Surg.2020.04.017>**

ABSTRACT: The symptoms associated with COVID-19 are mainly characterized by a triad composed of fever, dry cough and dyspnea. However, digestive symptoms have also been reported; at first considered as infrequent, they in fact seem to affect (to some extent) more than half of patients. The symptoms are mainly manifested by anorexia, diarrhea, nausea and/or vomiting and abdominal pain. Even though prognosis is associated with lung injury, digestive symptoms seem significantly more frequent in patients presenting with severe COVID-19 infection. Digestive forms, which may be isolated or which can precede pulmonary symptoms, have indeed been reported, with diarrhea as a leading clinical sign. The main biological abnormalities that can suggest COVID-19 infection at an early stage are lymphopenia, elevated CRP and heightened ASAT transaminases. Thoraco-abdominal scan seems useful as a means of on the one hand ruling out digestive pathology not connected with coronavirus and on the other hand searching for pulmonary images compatible with COVID-19 infection. No data exist on the interest of digestive endoscopy in cases of persistent digestive symptoms. Moreover, the endoscopic surgeons may themselves be at significant risk of contamination. Fecal-oral transmission of the infection is possible, especially insofar as viral shedding in stools seems frequent and of longer duration than at the ENT level, including in patients with negative throat swab and without digestive symptoms. In some doubtful cases, virologic assessment of stool samples can yield definitive diagnosis. In the event of prolonged viral shedding in stools, a patient's persistent contagiousness is conceivable but not

conclusively established. Upcoming serology should enable identification of the patients having been infected by the COVID-19 epidemic, particularly among previously undetected pauci-symptomatic members of a health care staff. Resumption of medico-surgical activity should be the object of a dedicated strategy preceding deconfinement.

URL: <http://www.sciencedirect.com/science/article/pii/S1878788620301235>

DOI: <https://doi.org/10.1016/j.jviscsurg.2020.04.017>

22. Gralnek IM, Hassan C, Beilenhoff U, et al. ESGE and ESGENA Position Statement on gastrointestinal endoscopy and the COVID-19 pandemic. Endoscopy. 2020. DOI: 10.1055/a-1155-6229

ABSTRACT: We are currently living in the throes of the COVID-19 pandemic that imposes a significant stress on health care providers and facilities. Europe is severely affected with an exponential increase in incident infections and deaths. The clinical manifestations of COVID-19 can be subtle, encompassing a broad spectrum from asymptomatic mild disease to severe respiratory illness. Health care professionals in endoscopy units are at increased risk of infection from COVID-19. Infection prevention and control has been shown to be dramatically effective in assuring the safety of both health care professionals and patients. The European Society of Gastrointestinal Endoscopy (www.esge.com) and the European Society of Gastroenterology and Endoscopy Nurses and Associates (www.esgena.org) are joining forces to provide guidance during this pandemic to help assure the highest level of endoscopy care and protection against COVID-19 for both patients and endoscopy unit personnel. This guidance is based upon the best available evidence regarding assessment of risk during the current status of the pandemic and a consensus on which procedures to perform and the priorities on resumption. We appreciate the gaps in knowledge and evidence, especially on the proper strategy(ies) for the resumption of normal endoscopy practice during the upcoming phases and end of the pandemic and therefore a list of potential research questions is presented. New evidence may result in an updated statement.

URL: <https://www.thieme-connect.de/products/ejournals/abstract/10.1055/a-1155-6229>

DOI: <http://doi.org/10.1055/a-1155-6229>

23. Gupta A, Arora V, Nair D, et al. Status and strategies for the management of head and neck cancer during COVID-19 pandemic: Indian Scenario. Head Neck. 2020;2020/05/02. DOI: 10.1002/hed.26227

ABSTRACT: In India, oral cancer is the most common head and neck cancer (HNC) in men in India, mainly due to the consumption of smoked and smokeless tobacco. During the current pandemic, delaying surgery for even 1-2 months may lead to more extensive surgery or inoperability, when only supportive care can be provided. Being semi-emergent in nature, treatment for these patients is currently on hold or delayed in most centres across the country. This study was conducted to assess the impact of COVID-19 pandemic and inability of the health system to treat HNC in a timely fashion and how surgeons are coping to this emergent situation. This article highlights the situation in Indian, a country burdened with one of the highest incidence of HNC.

URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/hed.26227>

DOI: <http://doi.org/10.1002/hed.26227>

24. Han J, Wang Y, Zhu L, et al. Preventing the spread of COVID-19 in digestive endoscopy during the resuming period: meticulous execution of screening procedures. Gastrointestinal Endoscopy. 2020. DOI: https://doi.org/10.1016/j.gie.2020.03.3855

ABSTRACT: To the Editor:

The experience in management of the endoscopy unit during the COVID-19 pandemic shared by Thompson et al, Repici et al, and Soetikno et al³ deserves recognition. Identifying the risk of fecal–oral transmission⁴ and subsequently preventing potential nosocomial infections caused by digestive endoscopy are urgent issues.

URL: <http://www.sciencedirect.com/science/article/pii/S001651072034133X>

DOI: <https://doi.org/10.1016/j.gie.2020.03.3855>

25. Hassan A, Arora RC, Lothar SA, et al. Ramping Up the Delivery of Cardiac Surgery During the COVID-19 Pandemic: A Guidance Statement from the Canadian Society of Cardiac Surgeons. Canadian Journal of Cardiology. 2020. DOI: 10.1016/j.cjca.2020.04.030

ABSTRACT: The coronavirus disease 2019 (COVID-19) has had a profound global impact. Its rapid transmissibility has forced whole countries to adopt strict measures to contain its spread. As part of necessary pandemic planning, the majority of Canadian cardiac surgical programs have prioritized and delayed elective procedures in an effort to reduce the burden on the health care system and to mobilize resources in the event of a pandemic surge. While the number of COVID-19 cases continue to increase worldwide, new cases have begun to decline in many jurisdictions. This “flattening of the curve” has inevitably prompted discussions around re-opening of the economy, relaxing some public health restrictions and resuming non-urgent health care delivery.

URL: [https://www.onlinecjc.ca/article/S0828-282X\(20\)30415-3/pdf](https://www.onlinecjc.ca/article/S0828-282X(20)30415-3/pdf)

DOI: <https://doi.org/10.1016/j.cjca.2020.04.030>

26. Huddleston JI, Iorio R, Bosco JA, et al. American Association of Hip and Knee Surgeons Advocacy Efforts in Response to the SARS-CoV-2 Pandemic. The Journal of Arthroplasty. 2020. DOI: <https://doi.org/10.1016/j.arth.2020.04.050>

ABSTRACT: Abstract: As soon as it became clear that our economy was going to be paralyzed by the SARS-CoV-2 pandemic, AAHKS leadership acted swiftly to ensure that our members were going to be eligible for the anticipated federal economic stimulus. The cessation of elective surgery, enacted in mid-March and necessary to stop the spread of the SARS-CoV-2 virus, would surely challenge the solvency of many of our members’ practices. While our advocacy efforts discussed below have helped, clearly more relief is needed. Fortunately, our mitigation efforts have led to a “flattening of the curve” and discussions have begun on when, where, and how to safely start elective surgery again.

URL: <http://www.sciencedirect.com/science/article/pii/S088354032030437X>

DOI: <https://doi.org/10.1016/j.arth.2020.04.050>

27. Iacobucci G. Covid-19: all non-urgent elective surgery is suspended for at least three months in England. BMJ (Clinical research ed). 2020;368:m1106. DOI: 10.1136/bmj.m1106

ABSTRACT: NHS hospitals in England have been told to suspend all non-urgent elective surgery for at least three months from 15 April to help the service deal with the covid-19 pandemic.

Trusts are also advised to urgently discharge inpatients who are medically fit to leave. In addition, the NHS will block-buy capacity in independent hospitals within the next fortnight to “expand critical care capacity to the maximum,” NHS bosses have said.

In a letter to NHS staff on 17 March, 1 NHS England’s chief executive, Simon Stevens, and its chief operating officer, Amanda Pritchard, said that these measures aimed to free up 30 000 or more of the English NHS’s 100 000 general and acute beds, supplementing them with “all available” additional capacity.

URL: <https://www.bmj.com/content/368/bmj.m1106>

DOI: <http://doi.org/10.1136/bmj.m1106>

28. Iacobucci G. Covid-19: NHS outlines services to be prioritised to restart in next six weeks. BMJ. 2020;369:m1793. DOI: 10.1136/bmj.m1793

ABSTRACT: NHS England has set out details of which regular services should be prioritised for resumption over the next six weeks as part of the second phase of the health service’s response to the covid-19 pandemic.

On 17 March NHS hospitals in England were asked to suspend all non-urgent elective surgery to help free up general and acute care capacity in the wake of the pandemic. But on Monday 27 April the health and social care secretary, Matt Hancock, said that some services would resume this week as hospital admissions for covid-19 began to fall in most parts of the country.

URL: <https://www.bmj.com/content/369/bmj.m1793>

DOI: <http://doi.org/10.1136/bmj.m1793>

29. Iacobucci G. Covid-19: NHS will restart some paused services this week. *BMJ*. 2020;369:m1709-m. DOI: 10.1136/bmj.m1709

ABSTRACT: Some NHS services that were temporarily stopped to release capacity for dealing with the covid-19 pandemic will restart from today, the health secretary has announced. Matt Hancock said that the “restoration” of other NHS services would initially focus on the most urgent services, such as for cancer and mental health. He said that the recommencement was possible because the number of hospital ...

URL: <http://www.bmj.com/lookup/doi/10.1136/bmj.m1709>

DOI: <http://doi.org/10.1136/bmj.m1709>

30. Lambertini M, Toss A, Passaro A, et al. Cancer care during the spread of coronavirus disease 2019 (COVID-19) in Italy: young oncologists' perspective. *ESMO Open*. 2020. DOI: 10.1136/esmoopen-2020-000759

ABSTRACT: At the end of 2019, a novel severe acute respiratory syndrome (SARS) coronavirus (CoV), named SARS-CoV-2 or 2019-nCoV, has been identified as the microbial agent causing viral pneumonia in several patients epidemiologically linked to a seafood market in Wuhan (Hubei province, China). Since then, the spread of coronavirus disease 2019 (COVID-19) has progressively involved countries outside China leading the World Health Organization (WHO) to make the assessment that COVID-19 can be characterised as a pandemic.

URL: <https://esmoopen.bmj.com/content/5/2/e000759>

DOI: <http://doi.org/10.1136/esmoopen-2020-000759>

31. Lazzarini M, Barbi E, Apicella A, et al. Delayed access or provision of care in Italy resulting from fear of COVID-19. *Lancet Child Adolesc Health*. 2020;09:09. DOI: [https://dx.doi.org/10.1016/S2352-4642\(20\)30108-5](https://dx.doi.org/10.1016/S2352-4642(20)30108-5)

ABSTRACT: During Italy's national lockdown for coronavirus disease 2019 (COVID-19), official hospital statistics in the period March 1–27, 2020, show substantial decreases—ranging from 73% to 88%—in paediatric emergency department visits compared with the same time period in 2019 and 2018 (figure). Similarly, family paediatricians widely report a considerable reduction in clinic visits, although this is difficult to measure precisely.

URL: [https://www.thelancet.com/pdfs/journals/lanchi/PIIS2352-4642\(20\)30108-5.pdf](https://www.thelancet.com/pdfs/journals/lanchi/PIIS2352-4642(20)30108-5.pdf)

DOI: [https://dx.doi.org/10.1016/S2352-4642\(20\)30108-5](https://dx.doi.org/10.1016/S2352-4642(20)30108-5)

32. Liu Z, Zhang Y, Wang X, et al. Recommendations for Surgery During the Novel Coronavirus (COVID-19) Epidemic. *Indian J Surg*. 2020:1-5. DOI: 10.1007/s12262-020-02173-3

ABSTRACT: The whole world is going through an unprecedented period during the pandemic of COVID-19. This pandemic has affected all aspects of daily life with far-reaching implications, especially in most aspects of healthcare. Practice of surgery across the globe is in a standstill as of now. When we restart surgical practices across world, we have to bring new protocols and practices in place to combat the transmission. This article discusses the major changes in surgical practice, which need to be brought in. This article is based on scientific information about transmission of virus and experiences of some of the authors from China, a country which successfully dealt with and contained the virus outbreak.

URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7150607/>

DOI: <http://doi.org/10.1007/s12262-020-02173-3>

- 33. Lopez Cano M, Saludes Serra J, Rossello-Jimenez D, et al. Abdominal Wall Surgery After SARS-CoV-2: Time to Reestablish Postponed Non-essential Procedures? Cir Esp. 2020. DOI: 10.1016/j.ciresp.2020.04.011**

ABSTRACT: Pandemic by the COVID-19 has found us unprotected to provide an adequate and rapid sanitary response. The hospital network of our public health system has provided most of the resources for the treatment of patients affected by the infection. Non-essential (non-priority) surgeries have been postponed. The optimal and proportionate reestablishment of these non-priority surgeries can be a problem. This article offers a technical and non-technical view of reestablishment non-priority surgeries from the perspective of abdominal wall surgery.

URL: <https://www.sciencedirect.com/science/article/pii/S0009739X20301342>

DOI: <http://doi.org/10.1016/j.ciresp.2020.04.011>

- 34. Martin G, Clarke J, Markar S, et al. How should hospitals manage the backlog of patients awaiting surgery following the COVID-19 pandemic? A demand modelling simulation case study for carotid endarterectomy. medRxiv. 2020:2020.04.29.20085183. DOI: 10.1101/2020.04.29.20085183**

ABSTRACT: Background The COVID-19 pandemic presents unparalleled challenges for the delivery of safe and effective care. In response, many health systems have chosen to restrict access to surgery and reallocate resources; the impact on the provision of surgical services has been profound, with huge numbers of patient now awaiting surgery at the risk of avoidable harm. The challenge now is how do hospitals transition from the current pandemic mode of operation back to business as usual, and ensure that all patients receive equitable, timely and high-quality surgical care during all phases of the public health crisis. Aims and Methods This case study takes carotid endarterectomy as a time-sensitive surgical procedure and simulates 400 compartmental demand modelling scenarios for managing surgical capacity in the UK for two years following the pandemic. Results A total of 7,69 patients will require carotid endarterectomy. In the worst-case scenario, if no additional capacity is provided on resumption of normal service, the waiting list may never be cleared, and no patient will receive surgery within the 2-week target; potentially leading to >1000 avoidable strokes. If surgical capacity is doubled after 1-month of resuming normal service, it will still take more than 6-months to clear the backlog, and 30.8% of patients will not undergo surgery within 2-weeks, with an average wait of 20.3 days for the proceeding 2 years. Conclusions This case study for carotid endarterectomy has shown that every healthcare system is going to have to make difficult decisions for balancing human and capital resources against the needs of patients. It has demonstrated that the timing and size of this effort will critically influence the ability of these systems to return to their baseline and continue to provide the highest quality care for all. The failure to sustainably increase surgical capacity early in the post-COVID-19 period will have significant long-term negative impacts on patients and is likely to result in avoidable harm.

URL: <http://medrxiv.org/content/early/2020/05/02/2020.04.29.20085183.abstract>

DOI: <http://doi.org/10.1101/2020.04.29.20085183>

- 35. Massey PA, McClary K, Zhang AS, et al. Orthopaedic Surgical Selection and Inpatient Paradigms During the Coronavirus COVID-19 Pandemic. JAAOS - Journal of the American Academy of Orthopaedic Surgeons. 2020;Publish Ahead of Print. DOI: 10.5435/jaaos-d-20-00360**

ABSTRACT: The Novel Coronavirus (COVID-19) pandemic, also known as SARS-CoV-2, has placed an immense strain on health care systems across the entire world. Consequently, multiple federal and state governments have placed restrictions on hospitals such as limiting “elective surgery” and recommending social or physical distancing. We review the literature on several areas that have been affected including surgical selection, inpatient care, and physician well-being. These areas affecting inpatient paradigms

include surgical priority, physical or social distancing, file sharing for online clinical communications, and physician wellness. During this crisis, it is important that orthopaedic departments place an emphasis on personnel safety and slowing the spread of the virus, so that the department can still maintain vital functions. Physical Distancing and emerging technologies such as inpatient telemedicine and online file sharing applications can enable orthopaedic programs to still function, while attempting to protect medical staff and patients from COVID-19 spread. This literature review sought to provide evidence-based guidance to orthopaedic departments during an unprecedented time. Orthopaedic surgeons should follow the Centers for Disease Control and Prevention (CDC) guidelines, wear PPE when appropriate, have teams created utilizing physical distancing, understand the department's policy on elective surgery, and engage in routines which enhance physician wellness. Address correspondence and requests for reprints to: Patrick A. Massey, MD, Department of Orthopaedic Surgery, Louisiana State University Health, 1501 Kings Highway, Shreveport, LA 71103 USA, (Ph) 410-419-1748; (Fax) 318-675-6186; E-mail: pmasse@lsuhsc.edu. IRB: This is a standard review not requiring any IRB approval Support: No external funding was used for this study. Conflict of Interest Statement: The authors have no competing interests.

URL:

https://journals.lww.com/jaaos/Fulltext/9000/Orthopaedic_Surgical_Selection_and_Inpatient.99126.aspx

DOI: <http://doi.org/10.5435/jaaos-d-20-00360>

36. Miani A, Burgio E, Piscitelli P, et al. The Italian war-like measures to fight coronavirus spreading: Re-open closed hospitals now. *EClinicalMedicine*. 2020. DOI: 10.1016/j.eclinm.2020.100320

ABSTRACT: As recently highlighted by The Lancet, the Covid-19 outbreak started in Northern Italy has shocked Europe, while it has been questioned if China benefits from an authoritarian advantage in disease response [1,2]. In Italy, after the shutdown of the educational system (schools and Universities will remain closed at least for one month) and the collapse of the touristic sector (90% of travels and reservations cancelled), the Government officially locked down residents of all the region of Milan (Lombardia) and other 11 provinces. To avoid the imprisonment, hundreds thousand people left those areas with any possible mean in the night of March 7th, just before the law was signed by the prime Minister Giuseppe Conte, thus turning his purpose of slowing down the epidemics exactly into the opposite. The Governors of Southern regions adopted limitations for this huge mass of potentially infected incoming people, with the risk of disseminating suspicion in the population ("hunting the greaser"). Violence exploded in several prisons, due to the cancellation of all the family visits and fear of the virus. Just 48 hours later, the Italian Government has extended these exceptional war-like measures to the entire nation: nobody is allowed to exit from home other than for compelling job or health reasons; museums, cinemas, theatres, sport facilities, and even churches have been closed; restaurants and bars must stop at 6 PM their activity. Further restrictions are probably going to be considered in next days. The Italian prime minister was clear in his video-message of March 5th: the emergency does not come from the lethality of the virus, but from the impossibility of the Italian healthcare system to cope with the impact of a rapid epidemic spreading of the Covid-19.

URL: [https://www.thelancet.com/pdfs/journals/eclinm/PIIS2589-5370\(20\)30064-X.pdf](https://www.thelancet.com/pdfs/journals/eclinm/PIIS2589-5370(20)30064-X.pdf)

DOI: <http://doi.org/10.1016/j.eclinm.2020.100320>

37. Nair AG, Gandhi RA, Natarajan S. Effect of COVID-19 related lockdown on ophthalmic practice and patient care in India: Results of a survey. *Indian Journal of Ophthalmology*. 2020;68(5):725-30. DOI: https://dx.doi.org/10.4103/ijo.IJO_797_20

ABSTRACT: Purpose: In early 2020, the World Health Organization declared the outbreak of the disease COVID-19, caused by a new variant of coronavirus 2019-nCoV as a global pandemic. The government of India ordered a nationwide lockdown for 21 days, limiting movement of people as a preventive

measure. This survey was designed and conducted during the lockdown period to assess its effect on ophthalmic practice and patient care in India. Methods: An online survey was sent across to practicing Indian ophthalmologists across through various social media platforms. All valid responses were tabulated and analyzed. Results: A total of 1260 ophthalmologists responded to the survey. Most of the respondents (775/1260; 61.5%) were in private practice and 14.8% (187/1260) were affiliated to ophthalmic institutes. At the time of taking the survey, 72.5% of the respondents (913/1260) were not seeing any patients due to the lockdown. Of those who were still examining patients, 82.9% (287/347) were only seeing emergency cases, based on their own clinical judgement. The proportion of ophthalmologists in ophthalmic institutes, government and municipal hospitals (126/253;49.8%) who were still seeing patients was significantly higher (P 0.0001) than those in private practice (174/775;22.4%). Apart from emergencies such as trauma, retinal detachment, and endophthalmitis (81.8%), other surgeries that were still being performed included intravitreal injections (9.1%) and cataract surgeries (5.9%). Approximately, 77.5% (976/1260) of the respondents had begun telephonic/e-mail/video consultations or consultations over social media applications since the lockdown began. In addition, 59.1% (745/1260) felt that ophthalmologists were potentially at a higher risk of contracting COVID-19 compared to other specialties while examining patients. When asked about the resumption of practice upon easing off of the restrictions, 57.8% (728/1260) of the respondents said they were unsure of when to resume elective surgeries; furthermore, 62.8% (791/1260) were unsure about the preferred screening strategy or precautionary approach prior to resuming surgeries and were awaiting guidelines. Conclusion: Our survey shows that majority of ophthalmologists in India were not seeing patients during the COVID-19 lockdown, with near-total cessation of elective surgeries. Emergency services were still being attended to by 27.5% of ophthalmologists who responded. A large proportions of ophthalmologists had switched over to telephonic advice or other forms of telemedicine to assist patients. Most of the responding ophthalmologists were unclear about when and how to resume surgeries upon easing off of the COVID-19 related restrictions. Regulatory bodies should take note of this and issue appropriate guidelines regarding the same.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32317434>

DOI: https://dx.doi.org/10.4103/ijo.IJO_797_20

38. Nelson R. Disruptions in cancer care in the era of COVID-19. Chest Physician. 2020;15(4):17-.

URL: <https://www.medscape.com/viewarticle/927215>

39. O'Connor CM, Anoushiravani AA, DiCaprio MR, et al. Economic Recovery After the COVID-19 Pandemic: Resuming Elective Orthopedic Surgery and Total Joint Arthroplasty. Journal of Arthroplasty. 2020. DOI: 10.1016/j.arth.2020.04.038

ABSTRACT: Background: The economic effects of the COVID-19 crisis are not like anything the U.S. health care system has ever experienced. Methods: As we begin to emerge from the peak of the COVID-19 pandemic, we need to plan the sustainable resumption of elective procedures. We must first ensure the safety of our patients and surgical staff. It must be a priority to monitor the availability of supplies for the continued care of patients suffering from COVID-19. As we resume elective orthopedic surgery and total joint arthroplasty, we must begin to reduce expenses by renegotiating vendor contracts, use ambulatory surgery centers and hospital outpatient departments in a safe and effective manner, adhere to strict evidence-based and COVID-19-adjusted practices, and incorporate telemedicine and other technology platforms when feasible for health care systems and orthopedic groups to survive economically. Results: The return to normalcy will be slow and may be different than what we are accustomed to, but we must work together to plan a transition to a more sustainable health care reality which accommodates a COVID-19 world. Conclusion: Our goal should be using these lessons to achieve a healthy and successful 2021 fiscal year.

URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7166028/>

DOI: <http://dx.doi.org/10.1016/j.arth.2020.04.038>

40. Patel RJ, Kejner A, McMullen C. Early Institutional Head and Neck Oncologic and Microvascular Surgery Practice Patterns Across the United States During the SARS-CoV-2 (COVID19) Pandemic. Head Neck. 2020. DOI: 10.1002/hed.26189

ABSTRACT: BACKGROUND: The SARS-CoV-2 (COVID-19) pandemic has caused rapid changes in head and neck cancer (HNC) care. "Real-time" methods to monitor practice patterns can optimize provider safety and patient care. METHODS: Head and neck surgeons from 14 institutions in the United States regularly contributed their practice patterns to a shared spreadsheet. Data from March 27th, 2020 to April fifth, 2020 was analyzed. RESULTS: All institutions had significantly restricted HNC clinic evaluations. 2 institutions stopped free flap surgery with the remaining scheduling surgery by committee review. Factors contributing to reduced clinical volume included lack of personal protective equipment (PPE) (35%) and lack of rapid COVID-19 testing (86%). CONCLUSIONS: The COVID-19 pandemic has caused a reduction in HNC care. Rapid COVID-19 testing and correlation with infectious potential remain paramount to resuming the care of head and neck cancer patients. Cloud-based platforms to share practice patterns will be essential as the pandemic evolves.

URL: <https://onlinelibrary.wiley.com/doi/full/10.1002/hed.26189>

DOI: <http://doi.org/10.1002/hed.26189>

41. Pelt CE, Campbell KL, Gililand JM, et al. The Rapid Response to the COVID-19 Pandemic by the Arthroplasty Divisions at Two Academic Referral Centers. The Journal of Arthroplasty. 2020. DOI: https://doi.org/10.1016/j.arth.2020.04.030

ABSTRACT: The COVID-19 pandemic has created widespread changes across all of healthcare. The impacts on the delivery of orthopaedic services has been challenged as a result. In order to ensure and provide for adequate health care resources in terms of hospital capacity, personnel and personal protective equipment (PPE), service lines such as adult reconstruction and lower limb arthroplasty have stopped or substantially limited elective surgeries and have been forced to re-engineer care processes for a high-volume of patients. Herein, we summarize the similar approaches by two arthroplasty divisions in high volume academic referral centers in 1) the cessation of elective surgeries, 2) workforce restructuring, 3) phased delivery of outpatient and inpatient care, and 4) educational restructuring.

URL: <http://www.sciencedirect.com/science/article/pii/S0883540320303843>

DOI: <https://doi.org/10.1016/j.arth.2020.04.030>

42. Quaedackers JSLT, Stein R, Bhatt N, et al. Clinical and surgical consequences of the COVID-19 pandemic for patients with pediatric urological problems: Statement of the EAU guidelines panel for paediatric urology, March 30 2020. Journal of Pediatric Urology. 2020. DOI: https://doi.org/10.1016/j.jpuro.2020.04.007

ABSTRACT: Summary The COVID-19-pandemic forces hospitals to reorganize into a dual patient flow system. Healthcare professionals are forced to make decisions in patient prioritization throughout specialties. Most pediatric urology pathologies do not require immediate or urgent care, however, delay may compromise future renal function or fertility. Contact with patients and parents, either physical in safe conditions or by (video)telephone must continue. The Paediatric-Urology-Guidelines-panel of the EAU proposes recommendations on prioritization of care. Pediatric-Urology program directors must ensure education, safety and attention for mental health of staff. Upon resumption of care, adequate prioritization must ensure minimal impact on outcome.

URL: <http://www.sciencedirect.com/science/article/pii/S1477513120301054>

DOI: <https://doi.org/10.1016/j.jpuro.2020.04.007>

- 43. Rodriguez-Wallberg KA, Wikander I. A global recommendation for restrictive provision of fertility treatments during the COVID-19 pandemic. Acta Obstetrica et Gynecologica Scandinavica. 2020;08:08. DOI: <https://dx.doi.org/10.1111/aogs.13851>**

ABSTRACT: Probably no country in the world is free from the novel corona virus disease (COVID-19) and the current global pandemic declared by WHO on 11 March 2020 is spreading at an accelerating rate. The disease is particularly deadly in vulnerable populations and the whole world is preparing to contain the outbreak and manage infection. Infection rates and deaths among healthcare professionals in particular are alarming.

On 17 March, the American Society of Reproductive Medicine (ASRM) provided early key recommendations, updated and affirmed on 30 March, including suspending initiation of new treatment cycles aimed at achieving pregnancy.¹ The group also recommended canceling planned embryo transfers, suspending elective surgeries, non-urgent diagnostic procedures and minimizing in-person interaction by increasing telemedicine contact. Only patients undergoing emergency procedures, such as those for fertility preservation, and patients already undergoing cycle stimulation should complete their treatments, but they should be advised to cryopreserve their embryos and not receive a fresh embryo transfer. On 19 March, the European Society of Human Reproduction and Embryology (ESHRE) recommended a precautionary approach and advised all infertility patients considering or planning treatment to avoid becoming pregnant at this time, albeit with no strong evidence of negative effects of COVID-19 on pregnancy, especially at the early stages. They further suggested consideration of deferred pregnancy with oocyte or embryo cryopreservation.

URL: <https://obgyn.onlinelibrary.wiley.com/doi/full/10.1111/aogs.13851>

DOI: <https://dx.doi.org/10.1111/aogs.13851>

- 44. Shah PB, Welt FGP, Mahmud E, et al. Triage Considerations for Patients Referred for Structural Heart Disease Intervention During the Coronavirus Disease 2019 (COVID-19) Pandemic: An ACC /SCAI Consensus Statement. Catheter Cardiovasc Interv. 2020;2020/04/07. DOI: 10.1002/ccd.28910**

ABSTRACT: The COVID-19 pandemic has strained health care resources around the world causing many institutions to curtail or stop elective procedures. This has resulted in the inability to care for patients with valvular and structural heart disease (SHD) in a timely fashion potentially placing these patients at increased risk for adverse cardiovascular complications including congestive heart failure and death. The effective triage of these patients has become challenging in the current environment as clinicians have had to weigh the risk of bringing susceptible patients into the hospital environment during the COVID-19 pandemic versus the risk of delaying a needed procedure. In this document, we suggest guidelines as to how to triage patients in need of SHD interventions and provide a framework of how to decide when it may be appropriate to proceed with intervention despite the ongoing pandemic. In particular, we address the triage of patients in need of trans-catheter aortic valve replacement and percutaneous mitral valve repair. We also address procedural issues and considerations for the function of structural heart disease teams during the COVID-19 pandemic. This article is protected by copyright. All rights reserved.

URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/ccd.28910>

DOI: <http://doi.org/10.1002/ccd.28910>

- 45. Silver JK. Prehabilitation May Help Mitigate an Increase in COVID-19 Peri-Pandemic Surgical Morbidity and Mortality. American journal of physical medicine & rehabilitation. 2020. DOI: 10.1097/phm.0000000000001452**

ABSTRACT: As physicians specializing in rehabilitation medicine consider sequelae from the novel coronavirus pandemic that began in 2019, one issue that should be top of mind is the physiologic effect that large scale social distancing had on the health of patients in general, but more specifically on pre-operative patients who had their surgeries delayed or will have newly scheduled procedures during the peri-pandemic period. Predictably, as the virus becomes less prevalent, there will be a tremendous

motivation to move forward with scheduling operations from both patient care and institutional perspectives. However, one can anticipate a pandemic-related increase in surgical morbidity and mortality above pre-pandemic levels, particularly in older or medically frail patients even if they did not have COVID-19. Therefore, now is the time to consider wider adoption of prehabilitation for patients awaiting surgery-physical and psychological assessments that establish a baseline functional level, identify impairments, and provide interventions that promote physical and psychological health to reduce the incidence and/or severity of future impairments.

URL:

https://journals.lww.com/ajpmr/Abstract/9000/Prehabilitation_May_Help_Mitigate_an_Increase_in.98010.aspx

DOI: <http://doi.org/10.1097/phm.0000000000001452>

46. Sockalingam S, Leung SE, Cassin SE. The Impact of COVID-19 on Bariatric Surgery: Re-Defining Psychosocial Care. Obesity. 2020;n/a(n/a). DOI: 10.1002/oby.22836

ABSTRACT: Abstract The global outbreak of novel coronavirus disease (COVID-19) has had a tremendous psychological impact on individuals around the world. Individuals with obesity are susceptible to distress and psychological sequelae secondary to this pandemic, which can have detrimental effects on obesity management. In particular, individuals undergoing bariatric surgery could experience increased emotional distress resulting in increased eating psychopathology, mental health exacerbation and difficulties with self-management. Addressing these challenges requires novel approaches to re-defining psychosocial care before and after bariatric surgery. Emerging evidence suggests the remote delivery of care using virtual care models, including mobile and online modalities, could extend the reach of psychosocial services to individuals after bariatric surgery and mitigate weight regain or impairment in quality of life. Due to this pandemic, the rapid integration of virtual psychosocial care in bariatric surgery programs to address patients' needs will create new opportunities for clinical and implementation science research.

URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/oby.22836>

DOI: <http://doi.org/10.1002/oby.22836>

47. Sørreide K, Hallet J, Matthews JB, et al. Immediate and long-term impact of the COVID-19 pandemic on delivery of surgical services. The British journal of surgery. 2020. DOI: 10.1002/bjs.11670

ABSTRACT: BACKGROUND: The ongoing pandemic is having a collateral health effect on delivery of surgical care to millions of patients. Very little is known about pandemic management and effects on other services, including delivery of surgery. METHODS: This was a scoping review of all available literature pertaining to COVID-19 and surgery, using electronic databases, society websites, webinars and preprint repositories. RESULTS: Several perioperative guidelines have been issued within a short time. Many suggestions are contradictory and based on anecdotal data at best. As regions with the highest volume of operations per capita are being hit, an unprecedented number of operations are being cancelled or deferred. No major stakeholder seems to have considered how a pandemic deprives patients with a surgical condition of resources, with patients disproportionately affected owing to the nature of treatment (use of anaesthesia, operating rooms, protective equipment, physical invasion and need for perioperative care). No recommendations exist regarding how to reopen surgical delivery. The postpandemic evaluation and future planning should involve surgical services as an essential part to maintain appropriate surgical care for the population during an outbreak. Surgical delivery, owing to its cross-cutting nature and synergistic effects on health systems at large, needs to be built into the WHO agenda for national health planning. CONCLUSION: Patients are being deprived of surgical access, with uncertain loss of function and risk of adverse prognosis as a collateral effect of the pandemic. Surgical services need a contingency plan for maintaining surgical care in an ongoing or postpandemic phase.

URL: <https://bjssjournals.onlinelibrary.wiley.com/doi/full/10.1002/bjs.11670>

48. Stahel PF. How to risk-stratify elective surgery during the COVID-19 pandemic? Patient Safety in Surgery. 2020;14(1):8-. DOI: 10.1186/s13037-020-00235-9

ABSTRACT: On March 11, 2020, the World Health Organization (WHO) declared the novel coronavirus disease 2019 (COVID-19) a global pandemic, which classifies the outbreak as an international emergency [1]. At the time of drafting this editorial, COVID-19 has swept through more than 115 countries and infected over 200,000 people around the globe [2,3,4]. More than 7000 individuals have died during the early phase of the pandemic, implying a high estimated case-fatality rate of 3.5% [2,3,4]. The rapidly spreading outbreak imposes an unprecedented burden on the effectiveness and sustainability of our healthcare system. Acute challenges include the exponential increase in emergency department (ED) visits and inpatient admission volumes, in conjunction with the impending risk of health care workforce shortage due to viral exposure, respiratory illness, and logistical issues due to the widespread closure of school systems [5]. Subsequent to the WHO declaration, the United States Surgeon General proclaimed a formal advisory to cancel elective surgeries at hospitals due to the concern that elective procedures may contribute to the spreading of the coronavirus within facilities and use up medical resources needed to manage a potential surge of coronavirus cases [6]. The announcement escalated to a nationwide debate regarding the safety and feasibility of continuing to perform elective surgical procedures during the COVID-19 pandemic [7, 8]. Many health care professionals erroneously interpreted the Surgeon General's recommendation as a "blanket directive" to cancel all elective procedures in the Country [9]. This notion was vehemently challenged in an open letter to the Surgeon General on behalf of United States hospitals [10]. The letter outlined a significant concern that the recommendation could be "interpreted as recommending that hospitals immediately stop performing elective surgeries without clear agreement on how we classify various levels of necessary care "[10]. Notably, the Surgeon General's recommendation was based on a preceding statement by the American College of Surgeons (ACS) with a call to prioritize appropriate resource allocation during the coronavirus pandemic as it relates to elective invasive procedures.

URL: <https://pssjournal.biomedcentral.com/articles/10.1186/s13037-020-00235-9>

DOI: <http://doi.org/10.1186/s13037-020-00235-9>

49. Stensland KD, Morgan TM, Moinzadeh A, et al. Considerations in the Triage of Urologic Surgeries During the COVID-19 Pandemic. European Urology. 2020;09:09. DOI: <https://dx.doi.org/10.1016/j.eururo.2020.03.027>

ABSTRACT: We present a suggested list of urologic surgeries that should be prioritized if COVID-19 surges warrant cancellation of elective surgeries to free up health care resources. The recommendations should be tailored to locally available resources and situations and can be used as a framework for other specialties.

URL: [https://www.europeanurology.com/article/S0302-2838\(20\)30202-5/pdf](https://www.europeanurology.com/article/S0302-2838(20)30202-5/pdf)

DOI: <https://dx.doi.org/10.1016/j.eururo.2020.03.027>

50. Sud A, Jones ME, Broggio J, et al. Collateral damage: the impact on cancer outcomes of the COVID-19 pandemic. medRxiv. 2020:2020.04.21.20073833. DOI: 10.1101/2020.04.21.20073833

ABSTRACT: Background: Cancer diagnostics and surgery have been disrupted by the response of healthcare services to the COVID-19 pandemic. Progression of cancers during delay will impact on patient long-term survival. Methods: We generated per-day hazard ratios of cancer progression from observational studies and applied these to age-specific, stage-specific cancer survival for England 2013-2017. We modelled per-patient delay of three months and six months and periods of disruption of one year and two years. Using healthcare resource costing, we contextualise attributable lives saved and life years gained from cancer surgery to equivalent volumes of COVID-19 hospitalisations. Findings: Per year,

94,912 resections for major cancers result in 80,406 long-term survivors and 1,717,051 life years gained. Per-patient delay of six months would cause attributable death of 10,555 of these individuals with loss of 205,024 life years. For cancer surgery, average life years gained (LYGs) per patient are 18.1 under standard conditions and 15.9 with a delay of six months (a loss of 2.3 LYG per patient). Taking into account units of healthcare resource (HCRU), surgery results on average per patient in 2.25 resource-adjusted life years gained (RALYGs) under standard conditions and 1.98 RALYGs following delay of six months. For 94,912 hospital COVID-19 admissions, there are 474,505 LYGs requiring of 1,097,937 HCRUs. Hospitalisation of community-acquired COVID-19 patients yields on average per patient 5.0 LYG and 0.43 RALYGs. Interpretation: Delay of six months in surgery for incident cancers would mitigate 43% of life years gained by hospitalisation of an equivalent volume of admissions for community acquired COVID-19. This rises to 62% when considering resource-adjusted life-years gained. To avoid a downstream public health crisis of avoidable cancer deaths, cancer diagnostic and surgical pathways must be maintained at normal throughput, with rapid attention to any backlog already accrued. Funding: Breast Cancer Now, Cancer Research UK, Bobby Moore Fund for Cancer Research, National Institute for Health Research (NIHR).

URL: <http://medrxiv.org/content/early/2020/04/29/2020.04.21.20073833.abstract>

DOI: <http://doi.org/10.1101/2020.04.21.20073833>

- 51. Tam CF, Cheung KS, Lam S, et al. Impact of Coronavirus Disease 2019 (COVID-19) Outbreak on ST-Segment-Elevation Myocardial Infarction Care in Hong Kong, China. *Circulation Cardiovascular quality and outcomes*. 2020;CIRCOUTCOMES120006631. DOI: 10.1161/CIRCOUTCOMES.120.006631**
ABSTRACT: Acute ST-segment–elevation myocardial infarction (STEMI) is a disease of high mortality and morbidity, and primary percutaneous coronary intervention (PPCI) is the typical recommended therapy.^{1,2} Systems of care have been established to expedite PPCI workflow to minimize ischemic time from symptom onset to definitive treatment in the catheterization laboratory. Little is known about the impact of public health emergencies like a community outbreak of infectious disease on STEMI systems of care. Since December 2019, the emergence of Coronavirus disease 2019 (COVID-19) in Wuhan, China, has evolved into a regional epidemic, including in Hong Kong, a city in Southern China. We describe the impact of the COVID-19 outbreak on STEMI care in Hong Kong through a handful of recent cases of patients with STEMI who underwent PPCI at a single center.
URL: <https://www.ahajournals.org/doi/10.1161/CIRCOUTCOMES.120.006631>
DOI: <http://doi.org/10.1161/CIRCOUTCOMES.120.006631>
- 52. Tang D, Tou J, Wang J, et al. Prevention and control strategies for emergency, limited-term, and elective operations in pediatric surgery during the epidemic period of COVID-19. *World Journal of Pediatric Surgery*. 2020;3(1). DOI: 10.1136/wjps-2020-000122**
ABSTRACT: The outbreak of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has spread to more than 100 countries. Children appeared to be susceptible to SARS-CoV-2 infection. Preventing and controlling the epidemic while ensuring orderly flows of pediatric surgery clinical work has proven to be a big challenge for both patients and clinicians during the epidemic. Based on the transmission characteristics of SARS-CoV-2 and the requirements for prevention and control of COVID-19, the authors proposed some concrete measures and practical strategies of managing emergency, limited-term, and elective pediatric surgeries during the epidemic period.
URL: <https://wjps.bmj.com/content/3/1/e000122>
DOI: <http://doi.org/10.1136/wjps-2020-000122>
- 53. Tapper EB, Asrani SK. COVID-19 pandemic will have a long-lasting impact on the quality of cirrhosis care. *J Hepatol*. 2020. DOI: <https://doi.org/10.1016/j.jhep.2020.04.005>**

ABSTRACT: Summary The coronavirus disease 2019 (COVID-19) pandemic has shattered the meticulously developed processes by which we delivered quality care for patients with cirrhosis. Care has been transformed by the crisis, but enduring lessons have been learned. In this article, we review how COVID-19 will impact cirrhosis care. We describe how this impact unfolds over 3 waves; i) an intense period with prioritized high-acuity care with delayed elective procedures and routine care during physical distancing, ii) a challenging 'return to normal' following the end of physical distancing, with increased emergent decompensations, morbidity, and systems of care overwhelmed by the backlog of deferred care, and iii) a protracted period of suboptimal outcomes characterized by missed diagnoses, progressive disease and loss to follow-up. We outline the concrete steps required to preserve the quality of care provided to patients with cirrhosis. This includes an intensification of the preventative care provided to patients with compensated cirrhosis, proactive chronic disease management, robust telehealth programs, and a reorganization of care delivery to provide a full service of care with flexible clinical staffing. Managing the pandemic of a serious chronic disease in the midst of a global infectious pandemic is challenging. It is incumbent upon the entire healthcare establishment to be strong enough to weather the storm. Change is needed.

URL: <http://www.sciencedirect.com/science/article/pii/S0168827820302178>

DOI: <https://doi.org/10.1016/j.jhep.2020.04.005>

- 54. Thaler M, Khosravi I, Hirschmann MT, et al. Disruption of joint arthroplasty services in Europe during the COVID-19 pandemic: an online survey within the European Hip Society (EHS) and the European Knee Associates (EKA). Knee Surgery, Sports Traumatology, Arthroscopy. 2020:1-8. DOI: 10.1007/s00167-020-06033-1**

ABSTRACT: The aim of the present study was to evaluate the impact of the coronavirus (COVID-19) pandemic on joint arthroplasty service in Europe by conducting an online survey of arthroplasty surgeons. The survey was conducted in the European Hip Society (EHS) and the European Knee Associates (EKA). The survey consisted of 20 questions (single, multiple choice, ranked). Four topics were addressed: (1) origin and surgical experience of the participant (four questions); (2) potential disruption of arthroplasty surgeries (12 questions); (3) influence of the COVID-19 pandemic on the particular arthroplasty surgeon (four questions); (4) a matrix provided 14 different arthroplasty surgeries and the participant was asked to state whether dedicated surgery was stopped, delayed or cancelled. Two-hundred and seventy-two surgeons (217 EHS, 55 EKA) from 40 different countries participated. Of the respondents, 25.7% stated that all surgeries were cancelled in their departments, while 68.4% responded that elective inpatient procedures were no longer being performed. With regard to the specific surgical procedures, nearly all primary TJA were cancelled (92.6%) as well as aseptic revisions (94.7%). In most hospitals, periprosthetic fractures (87.2%), hip arthroplasty for femoral neck fractures and septic revisions for acute infections (75.8%) were still being performed. During the current 2020 COVID-19 pandemic, we are experiencing a near-total shutdown of TJA. A massive cutback was observed for primary TJA and revision TJA, even in massively failed TJA with collapse, dislocation, component failure or imminent dislocation. Only life-threatening pathologies like periprosthetic fractures and acute septic TJA are currently undergoing surgical treatment. V.

URL: <http://link.springer.com/10.1007/s00167-020-06033-1>

DOI: <http://doi.org/10.1007/s00167-020-06033-1>

- 55. Topf MC, Shenson JA, Holsinger FC, et al. A Framework for Prioritizing Head and Neck Surgery during the COVID-19 Pandemic. Head Neck. 2020. DOI: 10.1002/hed.26184**

ABSTRACT: The COVID-19 pandemic has placed an extraordinary demand on the United States healthcare system. Many institutions have cancelled elective and non-urgent procedures to conserve resources and limit exposure. While operational definitions of elective and urgent categories exist, there is a degree of surgeon judgment in designation. In the present commentary, we provide a framework for

prioritizing head and neck surgery during the pandemic. Unique considerations for the head and neck patient are examined including risk to the oncology patient, outcomes following delay in head and neck cancer therapy, and risk of transmission during otolaryngologic surgery. Our case prioritization criteria consist of four categories: urgent - proceed with surgery, less urgent - consider postpone 30 days, less urgent - consider postpone 30-90 days, and case-by-case basis. Finally, we discuss our preoperative clinical pathway for transmission mitigation including defining low-risk and high-risk surgery for transmission and role of preoperative COVID-19 testing. This article is protected by copyright. All rights reserved.

URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/hed.26184>

DOI: <http://doi.org/10.1002/hed.26184>

56. Tuech JJ, Gangloff A, Di Fiore F, et al. Strategy for the practice of digestive and oncological surgery during the Covid-19 epidemic. J Visc Surg. 2020. DOI: 10.1016/j.jviscsurg.2020.03.008

ABSTRACT: The Covid-19 pandemic is changing the organization of healthcare and has a direct impact on digestive surgery. Healthcare priorities and circuits are being modified. Emergency surgery is still a priority. Functional surgery is to be deferred. Laparoscopic surgery must follow strict rules so as not to expose healthcare professionals (HCPs) to added risk. The question looms large in cancer surgery-go ahead or defer? There is probably an added risk due to the pandemic that must be balanced against the risk incurred by deferring surgery. For each type of cancer-colon, pancreas, oesogastric, hepatocellular carcinoma-morbidity and mortality rates are stated and compared with the oncological risk incurred by deferring surgery and/or the tumour doubling time. Strategies can be proposed based on this comparison. For colonic cancers T1-2, N0, it is advisable to defer surgery. For advanced colonic lesions, it seems judicious to undertake neoadjuvant chemotherapy and then wait. For rectal cancers T3-4 and/or N+, chemoradiotherapy is indicated, short radiotherapy must be discussed (followed by a waiting period) to reduce time of exposure in the hospital and to prevent infections. Most complex surgery with high morbidity and mortality-oesogastric, hepatic or pancreatic-is most often best deferred.

URL: <https://www.sciencedirect.com/science/article/pii/S1878788620300709>

DOI: <http://doi.org/10.1016/j.jviscsurg.2020.03.008>

57. Tzeng C-WD, Tran Cao HS, Roland CL, et al. Surgical decision-making and prioritization for cancer patients at the onset of the COVID-19 pandemic: A multidisciplinary approach. Surgical Oncology. 2020. DOI: https://doi.org/10.1016/j.suronc.2020.04.029

ABSTRACT: In the midst of the coronavirus disease 2019 (COVID-19) pandemic, governmental agencies, state medical boards, and healthcare organizations have called for restricting “elective” operations to mitigate the risk of transmission of the virus amongst patients and healthcare providers and to preserve essential resources for potential regional surges of COVID patients. While the fear of delaying surgical care for many of our patients is deeply challenging for us as cancer care providers, we must balance our personal commitment to providing timely and appropriate oncologic care to our cancer patients with our societal responsibility to protect our patients (including those on whom we are operating), co-workers, trainees, families, and community, from undue risks of contracting and propagating COVID-19. Herein, we present guidelines for surgical decision-making and case prioritization developed among all adult disease specialties in the MD Anderson Cancer Center Departments of Surgical Oncology and Breast Surgical Oncology in Houston, Texas.

URL: <http://www.sciencedirect.com/science/article/pii/S0960740420303005>

DOI: <https://doi.org/10.1016/j.suronc.2020.04.029>

58. Vaccaro AR, Getz CL, Cohen BE, et al. Practice Management During the COVID-19 Pandemic. J Am Acad Orthop Surg. 2020. DOI: 10.5435/jaaos-d-20-00379

ABSTRACT: On March 14, 2020 the Surgeon General of the United States urged a widespread cessation of all elective surgery across the country. The suddenness of this mandate and the concomitant spread of the COVID-19 virus left many hospital systems, orthopaedic practices, and patients with significant anxiety and confusion as to the near, intermediate, and long-term future of our healthcare system. As with most businesses in the United States during this time, many orthopaedic practices have been emotionally and fiscally devastated as a result of this crisis. Furthermore, this pandemic is occurring at a time where small and mid-sized orthopaedic groups are already struggling to cover practice overhead and to maintain autonomy from larger health systems. It is anticipated that many groups will experience financial demise leading to substantial global consolidation. As the authors represent some of the larger musculoskeletal multispecialty groups in the country, we are uniquely positioned to provide a framework with recommendations to best weather the ensuing months. We believe these recommendations will allow providers and their staff to return to an infrastructure that can adjust immediately to the pent-up healthcare demand that may occur following the COVID-19 pandemic. In this editorial, we address practice finances, staffing, telehealth, operational plans following the crisis and ethical considerations.

URL:

https://journals.lww.com/jaaos/Abstract/9000/Practice_Management_During_the_COVID_19_Pandemic.99131.aspx

DOI: <http://doi.org/10.5435/jaaos-d-20-00379>

- 59. Werner MT, Carey RM, Albergotti WG, et al. Impact of the COVID-19 Pandemic on the Management of Head and Neck Malignancies. Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery. 2020;194599820921413-. DOI: 10.1177/0194599820921413**

ABSTRACT: The impact of the coronavirus disease 2019 (COVID-19) pandemic on the management of head and neck cancer must be addressed. Immediate measures to reduce transmission rates and protect patients and providers take priority and necessitate some delays in care, particularly for patients with mild symptoms or less aggressive cancers. However, strict guidelines have yet to be developed, and many unintentional delays in care are to be expected based on the magnitude of the looming public health crisis. The medical complexity of head and neck cancer management may lead to prolonged delays that worsen treatment outcomes. Therefore, those caring for patients with head and neck cancer must take action to reduce these negative impacts as the country rallies to overcome the challenges posed by this pandemic.

URL: <https://journals.sagepub.com/doi/10.1177/0194599820921413>

DOI: <http://doi.org/10.1177/0194599820921413>

- 60. Whelan J. Considerations for closing then re-opening endoscope, processing operations. Healthcare Purchasing News. 2020;44(5):40-1.**

ABSTRACT: The article discusses the processes that healthcare facilities and ambulatory surgery centers (ASC) should consider for closing then re-opening endoscopy and sterile processing operations amidst the coronavirus disease 2019 (COVID-19) pandemic. Topics covered include the need to have a complete risk assessment and implementation plan, and the importance of having appropriate storage for endoscopes and other equipment and accessories to avoid biofilm formation.

URL: <https://www.hpnonline.com/sterile-processing/article/21133958/considerations-for-closing-then-reopening-endoscope-processing-operations>

- 61. Williams VM, Kahn JM, Harkenrider MM, et al. COVID-19 impact on timing of brachytherapy treatment and strategies for risk mitigation. Brachytherapy. 2020. DOI: 10.1016/j.brachy.2020.04.005**

ABSTRACT: PurposeThe purpose of this study was to highlight the importance of timely brachytherapy treatment for patients with gynecologic, breast, and prostate malignancies, and provide a framework for brachytherapy clinical practice and management in response to the COVID-19 pandemic.

URL: [https://www.brachyjournal.com/article/S1538-4721\(20\)30079-9/pdf](https://www.brachyjournal.com/article/S1538-4721(20)30079-9/pdf)

DOI: <https://doi.org/10.1016/j.brachy.2020.04.005>

62. Wood RM, McWilliams CJ, Thomas MJ, et al. COVID-19 scenario modelling for the mitigation of capacity-dependent deaths in intensive care: computer simulation study. medRxiv. 2020:2020.04.02.20050898. DOI: 10.1101/2020.04.02.20050898

ABSTRACT: Background Managing healthcare demand and capacity is especially difficult in the context of the COVID-19 pandemic, where limited intensive care resources can be overwhelmed by a large number of cases requiring admission in a short space of time. If patients are unable to access this specialist resource, then death is a likely outcome. The aim of this study is to estimate the extent to which such capacity-dependent deaths can be mitigated through demand-side initiatives involving non-pharmaceutical interventions and supply-side measures to increase surge capacity or reduce length of stay. Methods A stochastic discrete event simulation model is developed to represent the key dynamics of the intensive care admissions process for COVID-19 patients. Model inputs are aligned to levers available to planners with key outputs including duration of time at maximum capacity (to inform workforce requirements), peak daily deaths (for mortuary planning), and total deaths (as an ultimate marker of intervention efficacy). The model - freely available - is applied to the COVID-19 response at a large hospital in England for which the effect of a number of possible interventions are simulated. Results Capacity-dependent deaths are closely associated with both the nature and effectiveness of non-pharmaceutical interventions and availability of intensive care beds. For the hospital considered, results suggest that capacity-dependent deaths can be reduced five-fold through a combination of isolation policies, a doubling of bed capacity, and 25% reduced length of stay. Conclusions Without treatment or vaccination there is little that can be done to reduce deaths occurring when patients have otherwise been treated in the most appropriate hospital setting. Healthcare planners should therefore focus on minimising the capacity-dependent deaths that are within their influence.

URL: <http://medrxiv.org/content/early/2020/04/06/2020.04.02.20050898.abstract>

DOI: <http://doi.org/10.1101/2020.04.02.20050898>

63. Woodson E, Sydlowski S. CI Surgery Cancellations due to COVID-19. Hearing Journal. 2020;73(4):38,9-9. DOI: 10.1097/01.HJ.0000661624.87101.5a

ABSTRACT: The impact of the COVID-19 pandemic continues to accelerate across the globe. As stories develop on overwhelmed hospital systems and increasing death rates, the United States has sought preemptive measures to lessen the impact of the pandemic on health care infrastructure. Supported by the American College of Surgeons, U.S. Surgeon General Jerome M. Adams, MD, MPH, has indicated that “now's maybe not the best time to have that elective procedure done, because it uses up personal protective equipment (PPE), it potentially brings in coronavirus cases into the hospital, and it taxes health care workers.”¹ At the time of this writing, several states have gone so far as to issue bans on elective procedures indefinitely. Furthermore, many medical centers have closed to all but essential outpatient visits. National professional associations, including the American Academy of Audiology² and American Academy of Otolaryngology—Head and Neck Surgery, have endorsed positions encouraging providers to “limit providing patient care activities to those individuals with time-sensitive, urgent, and emergent medical conditions.”³ For audiologists and otolaryngologists, cochlear implant (CI) surgery is a key procedure impacted by the pandemic. The decision to postpone this life-changing procedure can be difficult to accept, but it is essential to do so during this global crisis.

URL:

https://journals.lww.com/thehearingjournal/FullText/2020/04000/CI_Surgery_Cancellations_due_to_COVID_19.14.aspx

DOI: <http://doi.org/10.1097/01.HJ.0000661624.87101.5a>

64. Zarrintan S. Surgical operations during the COVID-19 outbreak: should elective surgeries be suspended? Int J Surg. 2020. DOI: 10.1016/j.ijssu.2020.04.005

The current outbreak of coronavirus disease (COVID-19) which causes severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) continues to spread since the end of 2019 from China. After the index case, increasing number of cases are being reported in many countries across the world [1,2]. The mortality rate of SARS-CoV-2 was 3.6% [3.5–3.7] in China and is 1.5% [1.2–1.7] in outside of China [3]. Safety of health workers and patients who are admitted to hospitals and health centers are of potential concern during SARS-CoV-2 outbreak [4]. The decision whether to suspend elective surgical operations during the current epidemic is a challenging topic in many centers.

URL: <https://www.sciencedirect.com/science/article/pii/S1743919120302922>

DOI: <http://doi.org/10.1016/j.ijssu.2020.04.005>

Articles from previous search:

17. Guest JL, Del Rio C, Sanchez T. The 3 Steps Needed to End the COVID-19 Pandemic: Bold Public Health Leadership, Rapid Innovations, and Courageous Political Will. JMIR Public Health Surveill. 2020;2020/04/03. DOI: 10.2196/19043.; ID: 8419 10.2196/19043

ABSTRACT: The world is experiencing the expansive spread of the virus SARS-CoV-2 in a global pandemic that is placing strains on healthcare, economic and social systems. Commitment to implementing proven public health strategies will require bold public health leadership and courageous acts by politicians. Developing new innovative communication, mitigation and healthcare approaches, particularly in the era of social media is also clearly warranted. We believe that the best public health evidence must inform activities in three priority areas to stop this pandemic: 1) coordinated and consistent stay-at-home orders across multiple jurisdictions, including potential nation-wide mandates; 2) rapid scale-up of SARS-CoV-2 testing; and 3) improving healthcare capacity to respond. The editorial outlines those areas, the rationale behind them, and the call for innovation and the engagement of bold public health leadership to empower courageous political action to reduce the number of people who will die during this pandemic.

DOI: <https://dx.doi.org/10.2196/19043>

18. Scarabel F, Pellis L, Bragazzi NL, et al. Canada Needs to Rapidly Escalate Public Health Interventions for Its COVID-19 Mitigation Strategies. SSRN- Lancet prepublication. 2020.

ABSTRACT: Background. After the declaration of COVID-19 pandemic on March 11th 2020, local transmission chains starting in different countries including Canada are forcing governments to take decisions on public health interventions to mitigate the spread of the epidemic. Methods. We conduct data-driven and model-free estimations for the growth rates of the COVID-19 epidemics in Italy and Canada, by fitting an exponential curve to the daily reported cases. We use these estimates to predict epidemic trends in Canada under different scenarios of public health interventions. Results. In Italy, the initial growth rate (0.22) has reduced to 0.1 two weeks after the lockdown of the country on March 8th 2020. This corresponds to a reduction of the doubling time from about 3.15 to almost 7 days. In comparison, the growth rate in Canada has increased from 0.13 between March 1st and 13th, to 0.25 between March 13th to 22nd. This current growth rate corresponds to a doubling time of 2.7 days, and

therefore, unless further public health interventions are escalated in Canada, we project 15,000 cases by March 31st. However, the case number can be reduced to 4,000 if escalated public health interventions can be implemented instantly to reduce the growth rate to 0.1, the same level achieved in Italy. Interpretation. Intervention measures implemented so far in different countries worldwide have been effective in reducing the growth rate and increasing the doubling time, but their effects come with a substantial delay as long as 2 weeks. Prompt and farsighted interventions are critical to counteract the very rapid initial growth of the COVID-19 epidemic in Canada. Mitigation plans must take into account the delayed effect of interventions by up to 2-weeks and the short doubling time of 3-4 days. Keywords: COVID-19; pandemics; growth rate; public health; intervention measures; Italy; Canada URL: (March 23, 2020). Available at SSRN: <https://ssrn.com/abstract=3559929>

- 19. Tang B, Wang X, Li Q, et al. Estimation of the Transmission Risk of the 2019-nCoV and Its Implication for Public Health Interventions. Journal of clinical medicine. 2020;9(2):E462. DOI: 10.3390/jcm9020462**
 ABSTRACT: Since the emergence of the first cases in Wuhan, China, the novel coronavirus (2019-nCoV) infection has been quickly spreading out to other provinces and neighboring countries. Estimation of the basic reproduction number by means of mathematical modeling can be helpful for determining the potential and severity of an outbreak and providing critical information for identifying the type of disease interventions and intensity. A deterministic compartmental model was devised based on the clinical progression of the disease, epidemiological status of the individuals, and intervention measures. The estimations based on likelihood and model analysis show that the control reproduction number may be as high as 6.47 (95% CI 5.71-7.23). Sensitivity analyses show that interventions, such as intensive contact tracing followed by quarantine and isolation, can effectively reduce the control reproduction number and transmission risk, with the effect of travel restriction adopted by Wuhan on 2019-nCoV infection in Beijing being almost equivalent to increasing quarantine by a 100 thousand baseline value. It is essential to assess how the expensive, resource-intensive measures implemented by the Chinese authorities can contribute to the prevention and control of the 2019-nCoV infection, and how long they should be maintained. Under the most restrictive measures, the outbreak is expected to peak within two weeks (since 23 January 2020) with a significant low peak value. With travel restriction (no imported exposed individuals to Beijing), the number of infected individuals in seven days will decrease by 91.14% in Beijing, compared with the scenario of no travel restriction.
 URL: <https://www.ncbi.nlm.nih.gov/pubmed/32046137>
 DOI: 10.3390/jcm9020462

SEARCH STRATEGIES

CINAHL

Date Run: May 5, 202 11:55

S15	S10 AND S14	15
S14	S11 OR S12 OR S13	27,364
S13	(MH "Surgery, Elective+") OR (MH "Diagnosis, Delayed") OR (MH "Treatment Delay")	14,807
S12	TI (delay* N3 (access or care or service* or surg* or procedure*)) OR AB (delay* N3 (access or care or service* or surg* or procedure*))	6,198
S11	TI (re-open or re-opening or reopen or reopening or resume or resuming or resumption or re-start or re-starting or restart or restarting) OR AB (re-open or re-opening or reopen or reopening or resume or resuming or resumption or re-start or re-starting or restart or restarting)	7,179
S10	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 Limiters - Published Date: 20191201-20201231; English Language	2,159
S9	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8	14,067

S8	TX ("severe acute respiratory syndrome*")	3,639
S7	TX ((outbreak* or wildlife* or pandemic* or epidemic*) N1 (Wuhan* or Hubei or China* or Chinese* or Huanan*))	668
S6	TX (("seafood market*" or "food market*" or pneumonia*) N10 (Wuhan* or Hubei* or China* or Chinese* or Huanan*))	444
S5	TX (respiratory* N2 (symptom* or disease* or illness* or condition*) N10 (Wuhan* or Hubei* or China* or Chinese* or Huanan*))	1,242
S4	TX ("2019-nCoV" or 2019nCoV or nCoV2019 or "nCoV-2019" or "COVID-19" or COVID19 or "CORVID-19" or CORVID19 or "WN-CoV" or WNCov or "HCoV-19" or HCoV19 or "2019 novel*" or Ncov or "n-cov" or "SARS-CoV-2" or "SARSCoV-2" or "SARSCoV2" or "SARS-CoV2" or SARSCov19 or "SARS-Cov19" or "SARSCov-19" or "SARS-Cov-19" or Ncover or Ncorona* or Ncorono* or NcovWuhan* or NcovHubei* or NcovChina* or NcovChinese* or SARS2 or "SARS-2" or SARSCoronavirus2 or "SARS-coronavirus-2" or "SARSCoronavirus 2" or "SARS coronavirus2" or SARSCoronavirus2 or "SARS-coronavirus-2" or "SARSCoronavirus 2" or "SARS coronavirus2")	1,821
S3	TX (coronavirus* or coronovirus* or coronavirinae* or CoV or HCoV*)	8,090
S2	TX ((corona* or corono*) N1 (virus* or viral* or virinae*))	246
S1	(MH "Coronavirus Infections+") OR (MH "Coronavirus+") OR (MH "COVID-19")	4,375

Embase <1974 to 2020 May 04>

Date Run: May 5, 2020 12:35

- 1 exp Coronavirinae/ or exp Coronavirus infection/ (21601)
- 2 (coronavirus disease 2019 or severe acute respiratory syndrome coronavirus 2).sh,dj. (1797)
- 3 ((corona* or corono*) adj1 (virus* or viral* or virinae*)).ti,ab,kw. (698)
- 4 (coronavirus* or coronovirus* or coronavirinae* or CoV).ti,ab,kw. (18551)
- 5 ("2019-nCoV" or 2019nCoV or nCoV2019 or "nCoV-2019" or "COVID-19" or COVID19 or "CORVID-19" or CORVID19 or "WN-CoV" or WNCov or "HCoV-19" or HCoV19 or "2019 novel*" or Ncov or "n-cov" or "SARS-CoV-2" or "SARSCoV-2" or "SARSCoV2" or "SARS-CoV2" or SARSCov19 or "SARS-Cov19" or "SARSCov-19" or "SARS-Cov-19" or Ncover or Ncorona* or Ncorono* or NcovWuhan* or NcovHubei* or NcovChina* or NcovChinese* or SARS2 or "SARS-2" or SARSCoronavirus2 or "SARS-coronavirus-2" or "SARSCoronavirus 2" or "SARS coronavirus2" or SARSCoronavirus2 or "SARS-coronavirus-2" or "SARSCoronavirus 2" or "SARS coronavirus2").ti,ab,kw. (6769)
- 6 (respiratory* adj2 (symptom* or disease* or illness* or condition*) adj10 (Wuhan* or Hubei* or China* or Chinese* or Huanan*)).ti,ab,kw. (540)
- 7 (("seafood market*" or "food market*" or pneumonia*) adj10 (Wuhan* or Hubei* or China* or Chinese* or Huanan*)).ti,ab,kw. (1308)
- 8 ((outbreak* or wildlife* or pandemic* or epidemic*) adj1 (Wuhan* or Hubei* or China* or Chinese* or Huanan*)).ti,ab,kw. (98)
- 9 "severe acute respiratory syndrome*".ti,ab,kw. (5792)
- 10 or/1-9 (33592)
- 11 10 and 20191201:20201231.(dc). (8353)
- 12 limit 11 to english language (7890)
- 13 (re-open or re-opening or reopen or reopening or resume or resuming or resumption or re-start or re-starting or restart or restarting).ti,ab. (32800)
- 14 (delay* adj3 (access or care or service* or surg* or procedure*)).ti,ab. (20333)
- 15 elective surgery/ or delayed diagnosis/ or therapy delay/ (58246)
- 16 13 or 14 or 15 (109141)
- 17 12 and 16 (68)

Ovid MEDLINE(R) ALL <1946 to May 04, 2020>

Date Run: May 5, 2020 12:30

- 1 exp coronavirus/ or exp Coronavirus Infections/ (16749)
- 2 ((corona* or corono*) adj1 (virus* or viral* or virinae*)).ti,ab,kw,kf. (918)
- 3 (coronavirus* or coronavirus* or coronavirinae* or CoV).ti,ab,kw,kf. (17993)
- 4 ("2019-nCoV" or 2019nCoV or nCoV2019 or "nCoV-2019" or "COVID-19" or COVID19 or "CORVID-19" or CORVID19 or "WN-CoV" or WNCov or "HCoV-19" or HCoV19 or "2019 novel*" or Ncov or "n-cov" or "SARS-CoV-2" or "SARSCoV-2" or "SARSCoV2" or "SARS-CoV2" or SARSCov19 or "SARS-Cov19" or "SARSCov-19" or "SARS-Cov-19" or Ncovor or Ncorona* or Ncorono* or NcovWuhan* or NcovHubei* or NcovChina* or NcovChinese* or SARS2 or "SARS-2" or SARScoronavirus2 or "SARS-coronavirus-2" or "SARScoronavirus 2" or "SARS coronavirus2" or SARScoronavirus2 or "SARS-coronavirus-2" or "SARScoronavirus 2" or "SARS coronavirus2").ti,ab,kw,kf. (9515)
- 5 (respiratory* adj2 (symptom* or disease* or illness* or condition*) adj10 (Wuhan* or Hubei* or China* or Chinese* or Huanan*)).ti,ab,kw,kf. (445)
- 6 (("seafood market*" or "food market*" or pneumonia*) adj10 (Wuhan* or Hubei* or China* or Chinese* or Huanan*)).ti,ab,kw,kf. (1204)
- 7 ((outbreak* or wildlife* or pandemic* or epidemic*) adj1 (Wuhan* or Hubei* or China* or Chinese* or Huanan*)).ti,ab,kw. (228)
- 8 "severe acute respiratory syndrome*".ti,ab,kw,kf. (5721)
- 9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 (31738)
- 10 9 and 20191201:20201231.(dt). (10970)
- 11 limit 10 to english language (10328)
- 12 (re-open or re-opening or reopen or reopening or resume or resuming or resumption or re-start or re-starting or restart or restarting).ti,ab. (24547)
- 13 (delay* adj3 (access or care or service* or surg* or procedure*)).ti,ab. (13976)
- 14 Elective Surgical Procedures/ or Delayed Diagnosis/ or Time-to-Treatment/ (25720)
- 15 12 or 13 or 14 (63276)
- 16 11 and 15 (63)

PubMed

Date Run: May 5, 2020 12:15

- #13 (#6 AND #10) Filters: Publication date from 2019/12/01 to 2020/12/31; English 42
- #12 (#6 AND #10) Filters: Publication date from 2019/12/01 to 2020/12/31 49
- #11 (#6 AND #10) 87
- #10 (#7 OR #8 OR #9) 49876
- #9 (Elective Surgical Procedures[Mesh] OR Delayed Diagnosis[Mesh] OR "Time-to-Treatment"[Mesh]) 25731
- #8 (delay*[Title/Abstract] AND (access[Title/Abstract] OR care[Title/Abstract] OR service*[Title/Abstract] OR surg*[Title/Abstract] OR procedure*[Title/Abstract])) 2
- #7 (re-open[Title/Abstract] OR re-opening[Title/Abstract] OR reopen[Title/Abstract] OR reopening[Title/Abstract] OR resume[Title/Abstract] OR resuming[Title/Abstract] OR resumption[Title/Abstract] OR re-start[Title/Abstract] OR re-starting[Title/Abstract] OR restart[Title/Abstract] OR restarting[Title/Abstract]) 24214
- #6 (#1 OR #2 OR #3 OR #4 OR #5) 44089
- #5 severe acute respiratory syndrome*[Text Word] 8944
- #4 (((Wuhan*[Text Word] OR Hubei*[Text Word] OR China*[Text Word] OR Chinese*[Text Word] OR Huanan*[Text Word]) AND (respiratory symptom*[Text Word] OR respiratory disease*[Text Word] OR respiratory illness*[Text Word] OR respiratory condition*[Text Word])) OR ((Wuhan*[Text Word] OR Hubei*[Text Word] OR China*[Text Word] OR Chinese*[Text Word] OR Huanan*[Text Word]) AND ("seafood market"[Text Word] OR "food market"[Text Word] OR pneumonia*[Text Word])) OR ((Wuhan*[Text Word] OR Hubei*[Text Word] OR China*[Text Word] OR Chinese*[Text Word] OR

- Huanan*[Text Word]) AND (outbreak*[Text Word] OR wildlife*[Text Word] OR pandemic*[Text Word] OR epidemic*[Text Word])) 16895
- #3 (("2019-nCoV"[Text Word] OR 2019nCoV[Text Word] OR nCoV2019[Text Word] OR "nCoV-2019"[Text Word] OR "COVID-19"[Text Word] OR COVID19[Text Word] OR "CORVID-19"[Text Word] OR CORVID19[Text Word] OR "WN-CoV"[Text Word] OR WNCov[Text Word] OR "HCoV-19"[Text Word] OR HCoV19[Text Word] OR "2019 novel*"[Text Word] OR Ncov[Text Word] OR "n-cov"[Text Word] OR "SARS-CoV-2"[Text Word] OR "SARSCoV-2"[Text Word] OR "SARSCoV2"[Text Word] OR "SARS-CoV2"[Text Word] OR SARSCov19[Text Word] OR "SARS-Cov19"[Text Word] OR "SARSCov-19"[Text Word] OR "SARS-Cov-19"[Text Word] OR Ncover[Text Word] OR Ncorona*[Text Word] OR Ncorono*[Text Word] OR NcovWuhan*[Text Word] OR NcovHubei*[Text Word] OR NcovChina*[Text Word] OR NcovChinese*[Text Word] OR SARS2[Text Word] OR "SARS-2"[Text Word] OR SARScoronavirus2[Text Word] OR "SARS-coronavirus-2"[Text Word] OR "SARScoronavirus 2"[Text Word] OR "SARS coronavirus2"[Text Word] OR SARScoronavirus2[Text Word] OR "SARS-coronavirus-2"[Text Word] OR "SARScoronavirus 2"[Text Word] OR "SARS coronavirus2"[Text Word])) 9282
- #2 ((coronavirus*[Text Word] OR coronovirus*[Text Word] OR coronavirinae*[Text Word] OR CoV[Text Word])) 20578
- #1 ((Coronavirus[Mesh] OR "Coronavirus Infections"[Mesh])) 16596

Search terms for other resources used in various combinations:

covid-19, coronavirus, resumption, re-opening, re-starting, delayed treatment