# Evidence Search Service Results of your search request

## Separation of Covid-19 patients/hospitals/admissions

**ID of request:** 23056  
**Date of request:** 5th May, 2020  
**Date of completion:** 5th May, 2020

If you would like to request any articles or any further help, please contact:  Susannah Keill at [Susannah.keill@poole.nhs.uk](mailto:Susannah.keill@poole.nhs.uk)

Please acknowledge this work in any resulting paper or presentation as: Evidence search: Separation of Covid-19 patients/hospitals/admissions. Susannah Keill. ( 5th May, 2020). POOLE, UK: East Dorset Library and Knowledge Service.

**Sources searched**  
Cochrane Library (2)  
EMBASE (9)  
MEDLINE (12)

**Date range used** (5 years, 10 years): None   
**Limits used** (gender, article/study type, etc.): English language   
**Search terms and notes** (full search strategy for database searches below):

I have provided two Cochrane systematic reviews, one looking at quarantine (Nussbaumer‐Streit et al, 2020) the other infection prevention and barriers to achieving this (Houghton et al, 2020).

The remaining articles discuss particular strategies in departments/hospitals and slowing or preventing infection. Examples from Korea mention a walkthrough scanning device (Kim & Lee, 2020), (Kim et al, 2020). I have found articles that also comment on having separate quarantine hospitals, particularly from China. (Chen et al, 2020), (He et al, 2020)

There was little on elective admission (British term) (Firstenberg et al, 2020), (Gilat et al, 2020) but I did find another article which analysed patient transport. (Liew et al, 2020)

For more information about the resources please go to: <https://dorsetnhs.libguides.com>.

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## A. Systematic Reviews

#### Cochrane Database of Systematic Reviews

**Barriers and facilitators to healthcare workers’ adherence with infection prevention and control (IPC) guidelines for respiratory infectious diseases: a rapid qualitative evidence synthesis** (2020)

Catherine Houghton et al

[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=d49f0ab0e0fc498bbfbfc17d9bf90497)

Background This review is one of a series of rapid reviews that Cochrane contributors have prepared to inform the 2020 COVID‐19 pandemic. When new respiratory infectious diseases become widespread, such as during the COVID‐19 pandemic, healthcare workers’ adherence to infection prevention and control (IPC) guidelines becomes even more important. Strategies in these guidelines include the use of personal protective equipment (PPE) such as masks, face shields, gloves and gowns; the separation of patients with respiratory infections from others; and stricter cleaning routines. These strategies can be difficult and time‐consuming to adhere to in practice. Authorities and healthcare facilities therefore need to consider how best to support healthcare workers to implement them. Objectives To identify barriers and facilitators to healthcare workers’ adherence to IPC guidelines for respiratory infectious diseases. Search methods We searched OVID MEDLINE on 26 March 2020. As we searched only one database due to time constraints, we also undertook a rigorous and comprehensive scoping exercise and search of the reference lists of key papers. We did not apply any date limit or language limits. Selection criteria We included qualitative and mixed‐methods studies (with a distinct qualitative component) that focused on the experiences and perceptions of healthcare workers towards factors that impact on their ability to adhere to IPC guidelines for respiratory infectious diseases. We included studies of any type of healthcare worker with responsibility for patient care. We included studies that focused on IPC guidelines (local, national or international) for respiratory infectious diseases in any healthcare setting. These selection criteria were framed by an understanding of the needs of health workers during the COVID‐19 pandemic. Data collection and analysis Four review authors independently assessed the titles, abstracts and full texts identified by our search. We used a prespecified sampling frame to sample from the eligible studies, aiming to capture a range of respiratory infectious disease types, geographical spread and data‐rich studies. We extracted data using a data extraction form designed for this synthesis. We assessed methodological limitations using an adapted version of the Critical Skills Appraisal Programme (CASP) tool. We used a ‘best fit framework approach’ to analyse and synthesise the evidence. This provided upfront analytical categories, with scope for further thematic analysis. We used the GRADE‐CERQual (Confidence in the Evidence from Reviews of Qualitative research) approach to assess our confidence in each finding. We examined each review finding to identify factors that may influence intervention implementation and developed implications for practice. Main results We found 36 relevant studies and sampled 20 of these studies for our analysis. Ten of these studies were from Asia, four from Africa, four from Central and North America and two from Australia. The studies explored the views and experiences of nurses, doctors and other healthcare workers when dealing with severe acute respiratory syndrome (SARS), H1N1, MERS (Middle East respiratory syndrome), tuberculosis (TB), or seasonal influenza. Most of these healthcare workers worked in hospitals; others worked in primary and community care settings. Our review points to several barriers and facilitators that influenced healthcare workers’ ability to adhere to IPC guidelines. The following factors are based on findings assessed as of moderate to high confidence. Healthcare workers felt unsure as to how to adhere to local guidelines when they were long and ambiguous or did not reflect national or international guidelines. They could feel overwhelmed because local guidelines were constantly changing. They also described how IPC strategies led to increased workloads and fatigue, for instance because they had to use PPE and take on additional cleaning. Healthcare workers described how their responses to IPC guidelines were influenced by the level of support they felt that they received from their management team. Clear communication about IPC guidelines was seen as vital. But healthcare workers pointed to a lack of training about the infection itself and about how to use PPE. They also thought it was a problem when training was not mandatory. Sufficient space to isolate patients was also seen as vital. A lack of isolation rooms, anterooms and shower facilities was a problem. Other important practical measures described by healthcare workers included minimising overcrowding, fast‐tracking infected patients, restricting visitors, and providing easy access to handwashing facilities. A lack of PPE, and equipment that was of poor quality, was a serious concern for healthcare workers and managers. They also pointed to the need to adjust the volume of supplies as infection outbreaks continued. Healthcare workers believed that they followed IPC guidance more closely when they saw the value of it. Some healthcare workers felt motivated to follow the guidance because of fear of infecting themselves or their families, or because they felt responsible for their patients. Some healthcare workers found it difficult to use masks and other equipment when it made patients feel isolated, frightened or stigmatised. Healthcare workers also found masks and other equipment uncomfortable to use. The workplace culture could also influence whether healthcare workers followed IPC guidelines or not. Across many of the findings, healthcare workers pointed to the importance of including all staff, including cleaning staff, porters, kitchen staff and other support staff when implementing IPC guidelines. Authors' conclusions Healthcare workers point to several factors that influence their ability and willingness to follow IPC guidelines when managing respiratory infectious diseases. These include factors tied to the guideline itself and how it is communicated, support from managers, workplace culture, training, physical space, access to and trust in personal protective equipment, and a desire to deliver good patient care. The review also highlights the importance of including all facility staff, including support staff, when implementing IPC guidelines.

**Quarantine alone or in combination with other public health measures to control COVID‐19: a rapid review** (2020)

Barbara Nussbaumer‐Streit et al

[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=a840f62402f46ae81bc933cd4e3c870a)

Background Coronavirus disease 2019 (COVID‐19) is a rapidly emerging disease that has been classified a pandemic by the World Health Organization (WHO). To support WHO with their recommendations on quarantine, we conducted a rapid review on the effectiveness of quarantine during severe coronavirus outbreaks. Objectives We conducted a rapid review to assess the effects of quarantine (alone or in combination with other measures) of individuals who had contact with confirmed cases of COVID‐19, who travelled from countries with a declared outbreak, or who live in regions with high transmission of the disease. Search methods An information specialist searched PubMed, Ovid MEDLINE, WHO Global Index Medicus, Embase, and CINAHL on 12 February 2020 and updated the search on 12 March 2020. WHO provided records from daily searches in Chinese databases up to 16 March 2020. Selection criteria Cohort studies, case‐control‐studies, case series, time series, interrupted time series, and mathematical modelling studies that assessed the effect of any type of quarantine to control COVID‐19. We also included studies on SARS (severe acute respiratory syndrome) and MERS (Middle East respiratory syndrome) as indirect evidence for the current coronavirus outbreak. Data collection and analysis Two review authors independently screened 30% of records; a single review author screened the remaining 70%. Two review authors screened all potentially relevant full‐text publications independently. One review author extracted data and assessed evidence quality with GRADE and a second review author checked the assessment. We rated the certainty of evidence for the four primary outcomes: incidence, onward transmission, mortality, and resource use. Main results We included 29 studies; 10 modelling studies on COVID‐19, four observational studies and 15 modelling studies on SARS and MERS. Because of the diverse methods of measurement and analysis across the outcomes of interest, we could not conduct a meta‐analysis and conducted a narrative synthesis. Due to the type of evidence found for this review, GRADE rates the certainty of the evidence as low to very low. Modeling studies consistently reported a benefit of the simulated quarantine measures, for example, quarantine of people exposed to confirmed or suspected cases averted 44% to 81% incident cases and 31% to 63% of deaths compared to no measures based on different scenarios (incident cases: 4 modelling studies on COVID‐19, SARS; mortality: 2 modelling studies on COVID‐19, SARS, low‐certainty evidence). Very low‐certainty evidence suggests that the earlier quarantine measures are implemented, the greater the cost savings (2 modelling studies on SARS). Very low‐certainty evidence indicated that the effect of quarantine of travellers from a country with a declared outbreak on reducing incidence and deaths was small (2 modelling studies on SARS). When the models combined quarantine with other prevention and control measures, including school closures, travel restrictions and social distancing, the models demonstrated a larger effect on the reduction of new cases, transmissions and deaths than individual measures alone (incident cases: 4 modelling studies on COVID‐19; onward transmission: 2 modelling studies on COVID‐19; mortality: 2 modelling studies on COVID‐19; low‐certainty evidence). Studies on SARS and MERS were consistent with findings from the studies on COVID‐19. Authors' conclusions Current evidence for COVID‐19 is limited to modelling studies that make parameter assumptions based on the current, fragmented knowledge. Findings consistently indicate that quarantine is important in reducing incidence and mortality during the COVID‐19 pandemic. Early implementation of quarantine and combining quarantine with other public health measures is important to ensure effectiveness. In order to maintain the best possible balance of measures, decision makers must constantly monitor the outbreak situation and the impact of the measures implemented. Testing in representative samples in different settings could help assess the true prevalence of infection, and would reduce uncertainty of modelling assumptions. This review was commissioned by WHO and supported by Danube‐University‐Krems.

## B. Original Research

1. **A Lesson from Temporary Closing of a Single University-affiliated Hospital owing to In-Hospital Transmission of Coronavirus Disease 2019.**  
   Lee Heayon Journal of Korean medical science 2020;35(13):e145.

At present, Korea has one of the largest outbreak of coronavirus outside of China, bringing the country's total infection to more than 9,000. More than half of these cases have been reported in Daegu, 300 kilometers away from Seoul. Meanwhile a major cluster of infections in Seoul was identified during February 21–26, in an 800-bed university hospital in Eunpyeong-gu, northwest Seoul, linking 14 coronavirus disease 2019 (COVID-19) cases out of 65 cases in the capital at that time.

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[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=1b36c6f529ff00173dc4c4c74652ebb3)

1. **Anesthetic Management of Patients with COVID 19 Infections during Emergency Procedures.**  
   Zhao Shuai Journal of cardiothoracic and vascular anesthesia 2020;34(5):1125-1131.

OBJECTIVESThe aim of the present study was to prevent cross-infection in the operating room during emergency procedures for patients with confirmed or suspected 2019 novel coronavirus (2019-nCoV) by following anesthesia management protocols, and to document clinical- and anesthesia-related characteristics of these patients.DESIGNThis was a retrospective, multicenter clinical study.SETTINGThis study used a multicenter dataset from 4 hospitals in Wuhan, China.PARTICIPANTSPatients and health care providers with confirmed or suspected 2019-nCoV from January 23 to 31, 2020, at the Wuhan Union Hospital, the Wuhan Children's Hospital, The Central Hospital of Wuhan, and the Wuhan Fourth Hospital in Wuhan, China.INTERVENTIONSAnesthetic management and infection control guidelines for emergency procedures for patients with suspected 2019-nCoV were drafted and applied in 4 hospitals in Wuhan.MEASUREMENTS AND MAIN RESULTSCross-infection in the operating rooms of the 4 hospitals was effectively reduced by implementing the new measures and procedures. The majority of patients with laboratory-confirmed 2019-nCoV infection or suspected infection were female (23 [62%] of 37), and the mean age was 41.0 years old (standard deviation 19.6; range 4-78). 10 (27%) patients had chronic medical illnesses, including 4 (11%) with diabetes, 8 (22%) with hypertension, and 8 (22%) with digestive system disease. Twenty-five (68%) patients presented with lymphopenia, and 23 (62%) patients exhibited multiple mottling and ground-glass opacity on computed tomography scanning.CONCLUSIONSThe present study indicates that COVID 19-specific guidelines for emergency procedures for patients with confirmed or suspected 2019-nCoV may effectively prevent cross-infection in the operating room. Most patients with confirmed or suspected COVID 19 presented with fever and dry cough and demonstrated bilateral multiple mottling and ground-glass opacity on chest computed tomography scans.

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1. **Containing COVID-19 in the emergency room: the role of improved case detection and segregation of suspect cases.**  
   Wee Liang En Academic emergency medicine : official journal of the Society for Academic Emergency Medicine 2020;:No page numbers.

AIMSPatients with COVID-19 may present with respiratory syndromes indistinguishable from common viruses. This poses a challenge for early detection during triage at the emergency department (ED). Over a 3-month period, our ED aimed to minimise nosocomial transmission by using broader suspect case criteria for better detection and using appropriate personal protective equipment (PPE) for healthcare workers (HCWs) METHODS: All ED admissions with respiratory syndromes over a 3-month period were tested for COVID-19. The sensitivity and specificity of screening criteria in detecting COVID-19 was assessed. A risk-stratified approach was adopted for PPE usage in the ED, based on high-risk "fever areas" and lower-risk zones. When a case of COVID-19 was confirmed, surveillance was conducted for potentially exposed patients and HCWs.RESULTSA total of 1,841 cases presenting with respiratory syndromes required admission over the study period. Amongst these, 70 cases of COVID-19 were subsequently confirmed. The majority (84.2%, 59/70) were picked up at ED triage as they fulfilled suspect case criteria. Of these, 34 met the official screening criteria; another 25 were picked up by the broader internal screening criteria. Over the 12-week period, the cumulative sensitivity of internal screening criteria was 84.3% (95% confidence interval, CI=73.6%-91.9%), whereas the sensitivity of the official screening criteria was 48.6% (95%CI=36.4%- 60.8%). Given the broadened internal criteria, the pre-existing ED "fever area" was insufficient and had to be expanded. However, there were no cases of nosocomial transmission from intra-ED exposure, despite extensive surveillance.CONCLUSIONFrontline physicians need to be given leeway to decide on the disposition of cases based on clinical suspicion during an ongoing outbreak of COVID-19. If a broader criterion is used at ED triage, ED facilities and isolation facilities need to be readied to accommodate a surge of suspect cases. Usage of appropriate PPE is essential in minimising nosocomial transmission.

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1. **Dynamic adaptation to COVID-19 in a Singapore paediatric emergency department**  
   Tan R.M.R. Emergency medicine journal : EMJ 2020;:No page numbers.

Singapore was one of the earliest countries affected by the coronavirus disease 2019 (COVID-19) pandemic, with more laboratory-confirmed COVID-19 cases in early February 2020 than any other country outside China. This short report is a narrative review of our tertiary paediatric emergency department (ED) perspective and experience managing the evolving outbreak situation. Logistic considerations included the segregation of the ED into physically separate high-risk, intermediate-risk and low-risk areas, with risk-adapted use of personal protective equipment (PPE) for healthcare personnel in each ED area. Workflow considerations included the progressive introduction of outpatient COVID-19 testing in the ED for enhanced surveillance; adapting the admissions process particularly for high-risk and intermediate-risk cases; and the management of unwell accompanying adult caregivers. Manpower considerations included the reorganisation of medical manpower into modular teams to mitigate the risk of hospital transmission of COVID-19. Future plans for a tiered isolation facility should include structural modifications for the permanent isolation facility such as anterooms for PPE donning/doffing; replication of key ED functions in the tent facility such as a separate resuscitation room and portable X-ray room; and refresher PPE training. Dynamic reassessment of ED workflow processes, in conjunction with the hospital and national public health response, may help in managing this novel disease entity.<br/>Copyright &#xa9; Author(s) (or their employer(s)) 2020. No commercial re-use. See rights and permissions. Published by BMJ.

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1. **Emergency Management of the Prevention and Control of Novel Coronavirus Pneumonia in Specialized Branches of Hospital**  
   Ma X. Academic Emergency Medicine 2020;27(4):312-316.

In December 2019, an epidemic of novel coronavirus pneumonia (NCP) broke out in Wuhan, Hubei Province. The outbreak was severe and coincided with the Spring Festival travel season. On January 15, 2020, the West China Hospital of Sichuan University, a large hospital in China, held a seminar on prevention and control in accordance with the requirements of the National Health Commission on Prevention and Control. On January 16, the emergency plan for the prevention and treatment of NCP in West China Hospital of Sichuan University was formulated for the first time.

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1. **Emergency Responses to Covid-19 Outbreak: Experiences and Lessons from a General Hospital in Nanjing, China**  
   Shen Y. CardioVascular and Interventional Radiology 2020;:No page numbers.

Background: The novel coronavirus 2019 (SARS-CoV-2) has caused wide dissemination across the world. Global health systems are facing the unprecedented challenges. Here we shared the experiences and lessons in emergency responses and management from our hospital, a government-assigned regional anti-Covid-19 general hospital in Nanjing, Jiangsu Province, China. <br/>Method(s): Our periodic strategies in dealing with Covid-19 were described in detail. An administrative response including the establishment of Emergency Leadership Committee that was in full charge of management was established. Modifications of infrastructure including the Fever Clinic, inpatient ward, outpatient clinic and operation room were carried out. Special arrangements for outpatient services, hospitalization and surgeries were introduced. Medical personnel training and patient educations were performed. Initiations of Covid-19 researches and application of information technology were introduced. <br/>Finding(s): Since January 16, three cases have been confirmed in our hospital and no healthcare-associated infection was found. During the epidemics, 6.46% staffs suffered depression, 9.87% had anxiety, and 98% were satisfied with the infection control policy. Shortages in staffs and medical consumables, and limitation in space were the obstacles we encountered. <br/>Interpretation(s): As the cost of in-hospital transmission is unbearable, our experiences and lessons suggested that prompt actions should be taken immediately to decrease or eliminate potential in-hospital transmission. Experience shared herein may be useful for those facilities that are and may encounter Covid-19.<br/>Copyright &#xa9; 2020, The Author(s).

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1. **Fangcang shelter hospitals: a novel concept for responding to public health emergencies.**  
   Chen Simiao Lancet (London, England) 2020;395(10232):1305-1314.

Fangcang shelter hospitals are a novel public health concept. They were implemented for the first time in China in February, 2020, to tackle the coronavirus disease 2019 (COVID-19) outbreak. The Fangcang shelter hospitals in China were large-scale, temporary hospitals, rapidly built by converting existing public venues, such as stadiums and exhibition centres, into health-care facilities. They served to isolate patients with mild to moderate COVID-19 from their families and communities, while providing medical care, disease monitoring, food, shelter, and social activities. We document the development of Fangcang shelter hospitals during the COVID-19 outbreak in China and explain their three key characteristics (rapid construction, massive scale, and low cost) and five essential functions (isolation, triage, basic medical care, frequent monitoring and rapid referral, and essential living and social engagement). Fangcang shelter hospitals could be powerful components of national responses to the COVID-19 pandemic, as well as future epidemics and public health emergencies.

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[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=bc440624211e805e7625fc60eeece13a)

1. **Hospital Emergency Management Plan During the COVID-19 Epidemic**  
   Cao Y. Academic Emergency Medicine 2020;27(4):309-311.

The confirmed and suspected cases of the 2019 novel coronavirus disease (COVID-19) have increased not only in Wuhan, Hubei Province, but also China and the world. Enormous demand for handling the COVID-19 outbreak challenged both the health care personnel and the medical supply system. In West China Hospital, emergency department (ED) undertook the mission of clinical reception, primary diagnosis, and interim treatment for the suspected cases of COVID-19.

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1. **How to transform a general hospital into an**   
   He H. Critical Care 2020;24(1):No page numbers.

The newly confirmed coronavirus disease 2019 (COVID-19) cases are still increasing strikingly in many countries according to the data reported by the World Health Organization. Liu et al. suggested that reconstructing an existing hospital into an infectious disease hospital (IDH) is an important strategy to prepare for the epidemic. Here, we will extend their advice and share some of our lessons.

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[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=dffdd461401faeb803c008082bf19c2c)

1. **Initiation of a new infection control system for the COVID-19 outbreak.**  
   Chen Xuejiao The Lancet. Infectious diseases 2020;20(4):397-398.

To try to avoid nosocomial infection, the hospital set up an innovative infectioncontrol system called the observing system, which has been highly recommended by the frontline medical staff.

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1. **Isolation protocol for a COVID-2019 patient requiring emergent surgical intervention: Case presentation**  
   Firstenberg M.S. Patient Safety in Surgery 2020;14(1):No page numbers.

Background: The concerns of the highly contagious and morbid nature of Coronavirus Disease-2019 (COVID-2019) have prompted healthcare workers to implement strict droplet and contact isolation precautions. Unfortunately, some patients who may be or presumptively or confirmed as infected with COVID-2019 may also require emergent surgical procedures. As such, given the high-risk for exposure of many healthcare workers involved the complex requirements for appropriate isolation must be adhered to. Case presentation: We present our experience with a 77-year-old who required emergency cardiac surgery for a presumed acute aortic syndrome in the setting of a presumed, and eventually confirmed, COVID-2019 infection. We outline the necessary steps to maintain strict isolation precautions to limit potential exposure to the surgical Team. <br/>Conclusion(s): We hereby provide our algorithm for emergent surgical procedures in critically-ill patients with presumptive or confirmed infection with COVID-2019. The insights from this case report can potentially be templated to other facilities in order to uphold high standards of infection prevention and patient safety in surgery during the current COVID-19 pandemic.<br/>Copyright &#xa9; 2020 The Author(s).

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1. **Out-of-Hospital Cohort Treatment of Coronavirus Disease 2019 Patients with Mild Symptoms in Korea: an Experience from a Single Community Treatment Center.**  
   Park Peong Gang Journal of Korean medical science 2020;35(13):e140.

The outbreak of Coronavirus Disease 2019 (COVID-19) caused a worldwide pandemic. Less than 6 weeks after the first confirmed cases in Korea, the patient number exceeded 5,000, which overcrowded limited hospital resources and forced confirmed patients to stay at home. To allocate medical resources efficiently, Korea implemented a novel institution for the purpose of treating patients with cohort isolation out of hospital, namely the Community Treatment Center (CTC). Herein, we report results of the initial management of patients at one of the largest CTC in Korea. A total of 309 patients were admitted to our CTC. During the first two weeks, 7 patients were transferred to the hospital because of symptom aggravation and 107 patients were discharged without any complication. Although it is a novel concept and may have some limitations, CTC may be a very cost-effective and resource-saving strategy in managing massive cases of COVID-19 or other emerging infectious diseases.

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1. **Potential Hazards of Concern in the Walk-Through Screening System for the Corona Virus Disease 2019 from the Perspective of Infection Preventionists**  
   Kim K.M. Journal of Korean medical science 2020;35(15):No page numbers.

Korea is developing a number of innovative approaches in the midst of experiencing ordeal of corona virus disease 2019 (COVID-19). A drive-through screening system is one such example. However, with this drive-through as a starting point, newer screening methods that have been applied and modified are being developed, e.g., walk-through, and through an infection preventionists' view, the trend seems to be flowing in a somewhat undesirable direction.

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[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=46192b082cc489266e3a621d344198d0)

1. **Practical recommendations for critical care and anesthesiology teams caring for novel coronavirus (2019-nCoV) patients.**  
   Wax Randy S. Canadian journal of anaesthesia = Journal canadien d'anesthesie 2020;67(5):568-576.

A global health emergency has been declared by the World Health Organization as the 2019-nCoV outbreak spreads across the world, with confirmed patients in Canada. Patients infected with 2019-nCoV are at risk for developing respiratory failure and requiring admission to critical care units. While providing optimal treatment for these patients, careful execution of infection control measures is necessary to prevent nosocomial transmission to other patients and to healthcare workers providing care. Although the exact mechanisms of transmission are currently unclear, human-to-human transmission can occur, and the risk of airborne spread during aerosol-generating medical procedures remains a concern in specific circumstances. This paper summarizes important considerations regarding patient screening, environmental controls, personal protective equipment, resuscitation measures (including intubation), and critical care unit operations planning as we prepare for the possibility of new imported cases or local outbreaks of 2019-nCoV. Although understanding of the 2019-nCoV virus is evolving, lessons learned from prior infectious disease challenges such as Severe Acute Respiratory Syndrome will hopefully improve our state of readiness regardless of the number of cases we eventually manage in Canada.

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1. **Prevention and control strategies for emergency, limited-term, and elective operations in pediatric surgery during the epidemic period of COVID-19**  
   Tang D. World Journal of Pediatric Surgery 2020;3(1):No page numbers.

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 approved 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.<br/>Copyright &#xa9; Author(s) (or their employer(s)) 2020. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

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1. **Projecting hospital utilization during the COVID-19 outbreaks in the United States.**  
   Moghadas Seyed M. Proceedings of the National Academy of Sciences of the United States of America 2020;117(16):9122-9126.

In the wake of community coronavirus disease 2019 (COVID-19) transmission in the United States, there is a growing public health concern regarding the adequacy of resources to treat infected cases. Hospital beds, intensive care units (ICUs), and ventilators are vital for the treatment of patients with severe illness. To project the timing of the outbreak peak and the number of ICU beds required at peak, we simulated a COVID-19 outbreak parameterized with the US population demographics. In scenario analyses, we varied the delay from symptom onset to self-isolation, the proportion of symptomatic individuals practicing self-isolation, and the basic reproduction number R 0 Without self-isolation, when R 0 = 2.5, treatment of critically ill individuals at the outbreak peak would require 3.8 times more ICU beds than exist in the United States. Self-isolation by 20% of cases 24 h after symptom onset would delay and flatten the outbreak trajectory, reducing the number of ICU beds needed at the peak by 48.4% (interquartile range 46.4-50.3%), although still exceeding existing capacity. When R 0 = 2, twice as many ICU beds would be required at the peak of outbreak in the absence of self-isolation. In this scenario, the proportional impact of self-isolation within 24 h on reducing the peak number of ICU beds is substantially higher at 73.5% (interquartile range 71.4-75.3%). Our estimates underscore the inadequacy of critical care capacity to handle the burgeoning outbreak. Policies that encourage self-isolation, such as paid sick leave, may delay the epidemic peak, giving a window of time that could facilitate emergency mobilization to expand hospital capacity.

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1. **Proposed protocol to keep COVID-19 out of hospitals.**  
   Glauser Wendy CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne 2020;192(10):E264.

At-home testing and monitoring of possible COVID-19 cases could ease pressure on hospitals and emergency services and prevent the spread of infection, say experts. Public health officials, hospital leaders and paramedics in the Champlain Local Health Integration Network in Ontario are working on a protocol to do just that.

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1. **Recommendation to Optimize Safety of Elective Surgical Care While Limiting the Spread of COVID-19: Primum Non Nocere.**  
   Gilat Ron Arthroscopy, sports medicine, and rehabilitation 2020;:No page numbers.

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.

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1. **Safe patient transport for COVID-19**  
   Liew M.F. Critical Care 2020;24(1):No page numbers.

Staff must consider patient transfers in between wards, as COVID-19 patients are admitted in isolation facilities to contain infected cases and to avoid nosocomial spread.

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1. **Surgery in COVID-19 patients: operational directives.**  
   Coccolini Federico World journal of emergency surgery : WJES 2020;15(1):25.

The current COVID-19 pandemic underlines the importance of a mindful utilization of financial and human resources. Preserving resources and manpower is paramount in healthcare. It is important to ensure the ability of surgeons and specialized professionals to function through the pandemic. A conscious effort should be made to minimize infection in this sector. A high mortality rate within this group would be detrimental.This manuscript is the result of a collaboration between the major Italian surgical and anesthesiologic societies: ACOI, SIC, SICUT, SICO, SICG, SIFIPAC, SICE, and SIAARTI. We aim to describe recommended clinical pathways for COVID-19-positive patients requiring acute non-deferrable surgical care. All hospitals should organize dedicated protocols and workforce training as part of the effort to face the current pandemic.

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1. **Walk-Through Screening Center for COVID-19: an Accessible and Efficient Screening System in a Pandemic Situation.**  
   Kim Sang Il Journal of Korean medical science 2020;35(15):e154.

With the ongoing novel coronavirus disease 2019 (COVID-19) pandemic, the number of individuals that need to be tested for COVID-19 has been rapidly increasing. A walk-through (WT) screening center using negative pressure booths that is inspired by the biosafety cabinet has been designed and implemented in Korea for easy screening of COVID-19 and for safe and efficient consultation for patients with fever or respiratory symptoms. Here, we present the overall concept, advantages, and limitations of the COVID-19 WT screening center. The WT center increases patient access to the screening clinics and adequately protects healthcare personnel while reducing the consumption of personal protective equipment. It can also increase the number of people tested by 9-10 fold. However, there is a risk of cross-infection at each stage of screening treatment, including the booths, and adverse reactions with disinfection of the booths. These limitations can be overcome using mobile technology and increasing the number of booths to reduce congestion inside the center, reducing booth volume for sufficient and rapid ventilation, and using an effective, harmless, and certified environmental disinfectant. A WT center can be implemented in other institutions and countries and modified depending on local needs to cope with the COVID-19 pandemic.

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| 1. | Medline | (COVID-19 OR coronavirus OR Corona virus OR 2019-nCoV OR SARS-CoV OR MERS-CoV OR Severe Acute Respiratory Syndrome OR Middle East Respiratory Syndrome).af | 31774 |
| 2. | Medline | (coronavirus).me | 8609 |
| 3. | Medline | (1 OR 2) | 31774 |
| 4. | Medline | (separation OR segregation OR partition).af | 333271 |
| 5. | Medline | (3 AND 4) | 99 |
| 6. | Medline | exp "INFECTION CONTROL"/ OR "PATIENT ISOLATION"/ | 62839 |
| 7. | Medline | (infection preven\*).ti,ab | 115632 |
| 8. | Medline | (4 OR 6) | 395722 |
| 9. | Medline | (3 AND 8) | 1028 |
| 10. | Medline | 9 [DT FROM 2019] [Languages English] | 218 |
| 11. | Medline | (7 OR 8) | 505454 |
| 12. | Medline | (3 AND 11) | 2163 |
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| 14. | Medline | HOSPITALS/ OR exp "HEALTH FACILITIES"/ | 801549 |
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| 16. | Medline | 15 [DT FROM 2019] [Languages English] | 36 |
| 17. | Medline | exp HOSPITALIZATION/ OR "PATIENT ADMISSION"/ | 234975 |
| 18. | Medline | (12 AND 17) | 47 |
| 19. | Medline | 18 [DT FROM 2019] [Languages English] | 3 |
| 20. | EMBASE | (COVID-19 OR coronavirus OR Corona virus OR 2019-nCoV OR SARS-CoV OR MERS-CoV OR Severe Acute Respiratory Syndrome OR Middle East Respiratory Syndrome).af | 29916 |
| 21. | EMBASE | (separation OR segregation OR partition).af | 383180 |
| 22. | EMBASE | (infection preven\*).ti,ab | 7872 |
| 23. | EMBASE | exp "INFECTION CONTROL"/ | 102182 |
| 24. | EMBASE | (21 OR 22 OR 23) | 490383 |
| 25. | EMBASE | HOSPITAL/ OR exp "HEALTH CARE FACILITY"/ | 1500673 |
| 26. | EMBASE | "HOSPITAL ADMISSION"/ | 192798 |
| 27. | EMBASE | (20 AND 24) | 2564 |
| 28. | EMBASE | 27 [DT FROM 2019] [English language] | 495 |
| 29. | EMBASE | (20 AND 24 AND 25) | 491 |
| 30. | EMBASE | 29 [DT FROM 2019] [English language] | 87 |
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