

Advocacy for COVID-19 vaccination at perioperative consultations: an opportunity for protection

The perioperative consultation is widely recognised as a teachable moment for health promotion.¹ Clinicians successfully encourage patients to quit smoking, reduce their alcohol intake, improve their diet and exercise more frequently.² This framework is applicable to vaccination against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) prior to surgery.

There is a compelling need for strategies to reduce SARS-CoV-2 transmission and infection in surgical patients. The risk of infection varies depending on the local incidence of community infection, and the testing and infection control practices of healthcare institutions. Worldwide, nosocomial transmission has occurred,^{3,4} although universal mask wearing by staff and patients may have reduced this risk.⁵ Nosocomial SARS-CoV-2 infection has occurred in ENT,⁶ general and orthopaedic surgery,^{7,8} and is associated with a high post-operative mortality risk.⁹ There is an ethical obligation to discuss nosocomial SARS-CoV-2 infection as a risk of surgery, and ensure preoperative SARS-CoV-2 vaccination is available to surgical patients. Ensuring patients receive appropriate vaccination prior to surgery will prevent both acquisition of infection and reduce the severity of disease.

Surgery has been substantially curtailed during SARS-CoV-2 outbreaks to reduce the risk to patients and release resources to care for patients with SARS-CoV-2.¹⁰ Vaccination has the potential to reduce risk and facilitate continued surgical activity.¹¹

Vaccination against SARS-CoV-2 confers excellent protection against severe illness and death.¹² Whilst no studies have examined the effect of SARS-CoV-2 vaccination against post-operative death, the mortality risk of perioperative SARS-CoV-2 is high,⁹ and vaccination should reduce risk. Infections in staff caring for patients with SARS-CoV-2 have also occurred, and vaccination of surgical patients should reduce this risk.

Imminent surgery does not contraindicate vaccination. Ideal timing of vaccination depends on balancing the urgency of surgery with maximising vaccine effectiveness.¹³ Current recommendations suggest vaccination a minimum of one week before or after surgery, so that vaccine adverse events such as fevers are not confused with surgical complications. For non-urgent elective surgery, patients should complete the full vaccine course before surgery. For more urgent surgery, the first dose of vaccine should be given at least 14 days prior to surgery, with partial protection being elicited within 12 days of the first dose¹⁴ and good protection against severe disease from 21 days.¹⁵ For very urgent surgery, the vaccination can be given at least one week prior to surgery.

Side effects from vaccines are extremely rare, and clinicians should refer to existing guidelines for patients with specific medical

conditions. Where there is doubt, patients should be referred to specialist immunisation services.

There has been a rise in vaccine hesitancy following safety scares with the AstraZeneca vaccine. Vaccine hesitancy is complex and is not unique to SARS-CoV-2 vaccination. Vaccine hesitancy is the convergence of complacency, convenience and confidence, and cannot be addressed by health policy makers alone. Individual physicians have an essential role in promoting vaccination, and the perioperative consultation offers an opportunity to promote uptake among vulnerable patients. Advice should be consistent within the profession to avoid damaging community confidence.

We have used a high-risk perioperative clinic to discuss and facilitate vaccination for patients with an elevated risk of both perioperative and SARS-CoV-2 related morbidity and mortality. The consultation provides a unique setting for vaccine education; tailoring discussion to a patient's comorbidities, addressing specific concerns, combating misinformation and building confidence. Ideally, vaccination would be readily available to all patients attending any perioperative clinic. Providing on-site, same-day access would remove barriers and improve uptake. This model could be extended to other vaccinatable diseases that can be endemic in hospitals, including influenza.


The perioperative consultation represents a golden opportunity to encourage vaccination against SARS-CoV-2 to patients at high risk of morbidity and mortality. Clinicians from all disciplines should discuss vaccination with patients, including the risk of nosocomial infection. Organisations should facilitate vaccination for patients planned for surgery. Vaccination will reduce the risks for patients and staff members and may facilitate continuing elective surgery during SARS-CoV-2 outbreaks. Despite a low current community prevalence, multiple outbreaks across Australia are highly likely in the future and we strongly encourage patients be vaccinated before surgery to protect themselves and their community.

Author contributions

Ned Douglas: Conceptualization; writing-original draft; writing-review & editing. **Katherine Gregorevic:** Conceptualization; writing-original draft; writing-review & editing. **Mandy Law:** Writing-original draft; writing-review & editing. **Benjamin Thomson:** Writing-original draft; writing-review & editing. **Douglas Johnson:** Writing-original draft; writing-review & editing.

References

- Robinson A, Slight R, Husband A, Slight S. The value of teachable moments in surgical patient care and the supportive role of digital technologies. *Perioper Med.* 2020;**9**:2.
- Robinson A, Husband AK, Slight RD, Slight SP. Digital technology to support lifestyle and health behaviour changes in surgical patients: systematic review. *BJS Open.* 2021;**5**:1–5.
- Abbas M, Robalo Nunes T, Martischang R, Zingg W, Iten A, Pittet D, et al. Nosocomial transmission and outbreaks of coronavirus disease 2019: the need to protect both patients and healthcare workers. *Antimicrob Resist Infect Control.* 2021;**10**:7.
- Gregorevic K, Maier A, Miranda R, Loveland P, Miller K, Busing K, et al. Presenting symptoms of COVID-19 and clinical outcomes in hospitalised older adults. *Intern Med J.* 2021;**51**:861–7. <https://doi.org/10.1111/imj.15286>.
- Richterman A, Meyerowitz EA, Cevik M. Hospital-acquired SARS-CoV-2 infection: lessons for public health. *JAMA.* 2020;**324**:2155–6.
- Ren J, Yang X, Xu Z, Lei W, Yang K, Kong Y, et al. Prevention of nosocomial COVID-19 infections in otorhinolaryngology-head and neck surgery. *World J Otorhinolaryngol Head Neck Surg.* 2020;**6**:S6–10.
- Luong-Nguyen M, Hermand H, Abdalla S, Cabrit N, Hobeika C, Brouquet A, et al. Nosocomial infection with SARS-Cov-2 within Departments of Digestive Surgery. *J Visc Surg.* 2020;**157**:S13–8.
- Lakhani K, Minguell J, Guerra-Farfán E, Lara Y, Jambrina U, Pijoan J, et al. Nosocomial infection with SARS-CoV-2 and main outcomes after surgery within an orthopaedic surgery department in a tertiary trauma centre in Spain. *Int Orthop.* 2020;**44**:2505–13.
- Brown WA, Moore EM, Watters DA. Mortality of patients with COVID-19 who undergo an elective or emergency surgical procedure: a systematic review and meta-analysis. *ANZ J Surg.* 2021;**91**:33–41.
- Rheumatology TL. Too long to wait: the impact of COVID-19 on elective surgery. *Lancet Rheumatol.* 2021;**3**:e83.
- COVIDSurg Collaborative, GlobalSurg Collaborative. SARS-CoV-2 vaccination modelling for safe surgery to save lives: data from an international prospective cohort study. *Br J Surg.* 2021;**00**:1–8. <https://doi.org/10.1093/bjs/zxab101>.
- Olliaro P, Torreale E, Vaillant M. COVID-19 vaccine efficacy and effectiveness—the elephant (not) in the room. *Lancet Microbe.* 2021;**2**:e279–80.
- Australian Government Department of Health. COVID-19 vaccine – clinical considerations. Australian Government Department of Health; 2021. <https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/information-for-covid-19-vaccination-providers/covid-19-vaccine-clinical-considerations>. Accessed 12 June 2021.
- Australian Government Department of Health. Is it true? How long does it take to have immunity after vaccination?. Australian Government Department of Health; 2021. <https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/is-it-true/is-it-true-how-long-does-it-take-to-have-immunity-after-vaccination>. Accessed 12 June 2021.
- Vasileiou E, Simpson CR, Shi T, Kerr S, Agrawal U, Akbari A, et al. Interim findings from first-dose mass COVID-19 vaccination roll-out and COVID-19 hospital admissions in Scotland: a national prospective cohort study. *Lancet.* 2021;**397**:1646–57.

Ned Douglas,*†‡ MBBS 

Katherine Gregorevic,†§ MBBS, PhD

Mandy Law,¶|| MBBS

Benjamin N. J. Thomson,**†† MBBS, DMedSc

Douglas F. Johnson,‡‡§§ MBBS, PhD

*Department of Anaesthesia and Pain Management, Royal Melbourne Hospital, Melbourne, Victoria, Australia, †Proactive care of Older People having Surgery at the Royal Melbourne Hospital (POPS – RMH), Melbourne, Victoria, Australia, ‡Department of Critical Care, University of Melbourne Faculty of Medicine and Health Sciences, Melbourne, Victoria, Australia, §Department of Geriatric Medicine, Royal Melbourne Hospital, Melbourne, Victoria, Australia, ¶COVID-19 Vaccination Service, Royal Melbourne Hospital, Melbourne, Victoria, Australia, ||Department of Nephrology, Royal Melbourne Hospital, Melbourne, Victoria, Australia, **Department of General Surgical Specialties, Royal Melbourne Hospital, Melbourne, Victoria, Australia, ††Department of Surgery, University of Melbourne Faculty of Medicine and Health Sciences, Melbourne, Victoria, Australia, ‡‡Department of General Medicine, Royal Melbourne Hospital, Melbourne, Victoria, Australia and §§Victorian Infectious Disease Service, Royal Melbourne Hospital, Melbourne, Victoria, Australia

doi: 10.1111/ans.17066

The impact of computers on the surgical consultation

The modern incorporation of electronic medical systems into the hospital environment shifts the dynamics of the patient–doctor interaction to include a third party—the computer. Current literature is limited regarding how patients perceive their hospital experience as such technology is introduced. This study aims to understand how patients are impacted by the presence of computers during surgical outpatient consultations.

Methods

Post-consultation surgical patients were approached in the Outpatient Department of The Queen Elizabeth Hospital in August 2019. They

were asked five Likert-style questions which were delivered verbally to improve the likelihood of receiving a patient response. To prevent duplicate responses, patients confirmed they were not previously approached with the same survey. Additional patient feedback was recorded. No information about the patient, their consultant, their medical problem or any other identifiable factors was recorded.

Responses to each question were assigned to levels on a 5-point Likert scale, the tally of each level converted to percentages of the total response and represented as bar graphs (Fig. 1). The scoring categories were 1 ‘not at all’, 2 ‘slightly’, 3 ‘moderately’, 4 ‘a lot’ and 5 ‘extremely’. Mean and standard deviation (SD) were