

Commentary

Emergence of Telehealth for anesthesiologists in COVID-19—boon for all!

Dear Editor,

Telehealth is a known entity in health care and its role has been reemphasized during the present pandemic of coronavirus disease-2019 (COVID-19).^[1] It allows health care professionals to assess and follow up the patient virtually using readily available technology like computer webcams, handheld devices, and smartphones. Telemedicine has been successfully used in

various medical specialties effectively in the past.^[2-5] Its role in patient monitoring, triaging, consultation, and in-ambulance for real-time communication to the command center had been well envisaged in emergency medicine.^[3]

COVID-19 shall stay well beyond the current period and we need to adapt to this “new normal.” The basic preventive strategies of restricted travel, social distancing, hand hygiene, wearing mask, and other personnel protective equipment remains important during COVID-19. Even though COVID-19 shall continue, but the need of surgical interventions shall also continue. However, patient visit for preanesthetic check-up (PAC) and follow-up needs to be curtailed. Routinely, PAC is done in advanced and much prior to the scheduled surgery. To curtail

the patient visits, the PAC on the day of surgery may be done but the detection of comorbidities or need of further evaluation may lead to postponement of surgery.^[3] The cancellation on day of surgery due to this inadequate PAC has financial and psychological impact. This mandates thinking out of the box for strategies for providing effective and safe perioperative care to the patients. Probably, telemedicine integration in anesthesiology practice in this COVID-19 pandemic shall be a right choice. The prime usefulness of telemedicine shall be for remote PAC and follow-up of patients after discharge following surgery.^[3,6,7]

This issue of the journal publishes a manuscript titled “Tele-Preanesthetic check-ups (TelePAC) during COVID-19: apprehensions and possibilities” where authors have emphasized the importance of starting PACs via virtual modality during this COVID-19 pandemic.^[8] The paper describes a plan for utilizing the telePAC effectively.

Primarily, preanesthetic evaluation includes focused history (including review of the patients’ medical records), examination (general and focused including airway assessment) laboratory reports, and radiological imaging. The telePAC can be efficiently be used to achieve majority of these preoperative evaluation components [Figure 1]. All these components and source of information needs to be integrated electronically on a single platform. It appears that the effective use of telePAC would require an integrated platform for both synchronous and asynchronous modality.^[2] The synchronous mode of tele-medicine uses real-time communication while asynchronous mode uses stored data which is transferred to remote physician to assess for further action. Integration of e-hospital and picture archiving and communication system shall allow the telePAC physician to retrieve the laboratory report and radiological imaging on the unified platform.^[2] A telePAC questionnaire that can be filled by the patient in electronic format before video-conferencing shall be useful for collecting basic patient-related information. The initial assessment allows for further need of any additional investigations, referrals, need of optimization, and finally tailoring a perioperative care plan.^[6] The telePAC mode can be used to monitor blood pressure or blood sugar charting, etc., Future inclusion may consider the integration of physiological data from routinely used devices like mobile-based wristwatch, fit-bit wrist band, glucometers, and other similar Bluetooth-enabled devices.^[2] However, validation of such monitoring tools which are device based or patient based to the actual clinician based monitoring is required. TelePAC can be used for lifestyle modification counseling like cessation of smoking, deep breathing exercises, increased daily physical activity, etc.^[1-3] TelePAC platform can be linked with informative videos for rehabilitation and basic information related to perioperative care to allay anxiety among patients. TelePAC shall be useful for the preoperative instructions to the patients like fasting advice, advice pertaining to continuation, or discontinuation of certain medications,

etc., The telePAC may also include surgical team to discuss any concerns and take appropriate decisions accordingly.

Certain specific examination, such as airway assessment, auscultation of heart or lungs of the patient, needs to be required during PAC. The options during telePAC could be to wait till scheduled surgeries and perform examinations on admission prior to surgery or asking the patient to visit to the PAC clinic. However, both the situations shall have its own concern of extra visit or delaying of the surgery if some clinical findings mandate further evaluation. The availability of tele-equipments like tele-otoscope, tele-stethoscope, tele-ultrasound allows a remote physician to observe real-time findings.^[2,3] However, their availability remains a major constraint. It was reported that telemedicine and in-person airway examinations were equivalent, although in-person had greater calculated sensitivity.^[4] Options in these situations could be to use intermediary like primary health centers or a nurse/paramedic, and train them adequately for PAC-related examinations. Picture capture from the online interface-based airway assessment tools may also be developed and needs validation as well.

Though the telePAC appears quite promising, its short-coming and limitations should also be considered. Patient safety should always be the primary goal in any attempt to deliver anesthesia consultations at a remote location.^[3] The telePAC would be new technology for all, especially in Indian context. So, an educational module for its efficient and effective use needs to be made for professionals and patients. The limitation for its efficient use by patient in remote areas, network connectivity, sharing of documents (absence of centralized health-related record), etc., are also contemplated. It may not suitable to all patients, especially who needs emergent surgical intervention. Also, specific group of patients like pediatrics shall be difficult to handle on telePAC.^[9] So, a checklist would help to triage the patients who are suitable for telePAC from those who needs physical presence to anesthesiologists. Presently, no such validated tool and questionnaire exists and thus the need of designing and validation of these tools is warranted. The need to address sensitive topics, especially if there is patient discomfort or concern for privacy is another concern. The conventional face-to-face meeting appears to be building trust and rapport. This aspect needs to be adjusted and accepted while adapting to telePAC. The state and local regulatory requirements for the use of telemedicine needs to be

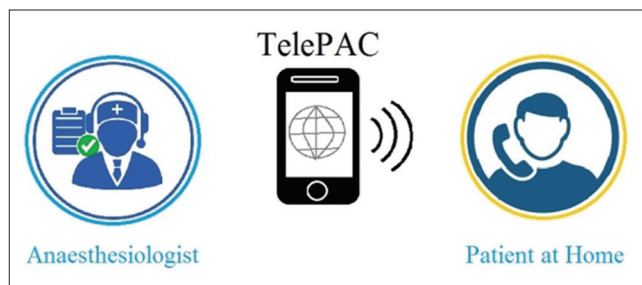


Figure 1: Need of telePAC

followed. The Board of Governors (BoG) in supersession of MCI in partnership with NITI Aayog released the telemedicine practice guidelines with an objective to provide health care facilities to patients along with requirements that need to be adhered by the health care practitioners.^[10] Patient consent is necessary for any telemedicine consultation. The future impact of telePAC needs to be audited for short-comings and suitability in real-time effect with regards to perioperative concerns for patient who received telePAC.

The effective integration of telePAC shall be a useful tool for patient care in the future and can be useful in various disaster scenarios as well. This telePAC may be extended in the postoperative period as well. It shall be a good modality for continuity of care for follow-up, especially after daycare surgeries, pain management, and rehabilitation support. The additional advantage for telePAC in future shall be cost containment, better quality, and satisfaction, and lesser chances of case cancellation just prior to surgery.

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References

- Schoen DC, Prater K. Role of telehealth in pre-anesthetic evaluations. *AANA* 2019;87:43-9.
- Chatrath V, Attri JP, Chatrath R. Telemedicine and anaesthesia. *Indian J Anaesth* 2010;54:199-204.
- Galvez JA, Rehman MA. Telemedicine in anesthesia: an update. *Curr Opin Anesthesiol* 2011;24:459-62.
- Applegate RL, Gildea B, Patchin R, Rook JL, Wolford B, Nyirady J, *et al.* Telemedicine pre-anesthesia evaluation: A randomized pilot trial. *Telemed J E Health* 2013;19:211-6.
- Kamdar N, Huverserian A, Regev A, Beck L, Mahajan A. Telemedicine for anesthesiologists: Preoperative evaluation and beyond. *ASA Monitor* 2018;82:16-9.
- Lozada MJ, Nguyen JT, Abouleish A, Prough D, Przkora R. Patient preference for the pre-anesthesia evaluation: Telephone versus in-office assessment. *J Clin Anesth* 2016;31:145-8.
- Fishman M, Mirante B, Dai F, Kurup V. Patient preferences on telemedicine for preanesthesia evaluation. *Can J anesth* 2015;62:433-4.
- Srivastava D, Solanki SL, Ambasta S, Chandra A. Tele-Preanesthetic check-ups (TelePAC) during COVID-19: Apprehensions and possibilities. *J Anaesthesiol Clin Pharmacol* 2020;36:415-7.
- Rogers G. Using telemedicine for pediatric preanesthesia evaluation: A pilot project. *J Peri Anesthesia Nurs* 2020;35:3-6.
- Telemedicine Practice Guidelines. Board of governors in supersession of the Medical Council of India in partnership with NITI Aayog. Available from: <https://www.mohfw.gov.in/pdf/Telemedicine.pdf>. [Last accessed on 2020 Jul 06].

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