

# Pilot of Outpatient Preoperative Evaluation Through Teleassistance

Claudia Regina MACHADO<sup>a,1</sup>, Mario Fritsch NEVES<sup>a</sup>, Yago COSTA<sup>b</sup> and Claudia LUNARDI<sup>c</sup>

<sup>a</sup> Faculty of Medical Sciences, Pedro Ernesto University Hospital -State University of Rio de Janeiro, Brazil

<sup>b</sup> Pedro Ernesto University Hospital, Post-Graduation in Public Health Management of the Institute of Social Medicine Hesio Cordeiro - State University of Rio de Janeiro, Brazil

<sup>c</sup> Pedro Ernesto University Hospital, Master's student of the Professional Master's Degree in Health, Laboratory Medicine and Forensic Technology, - State University of Rio de Janeiro, Brazil -State University of Rio de Janeiro, Brazil

ORCID ID: Claudia Regina Machado - <https://orcid.org/0000-0002-9709-7958>

Mario Fritsch Neves - <https://orcid.org/0000-0002-0797-572X>

**Abstract.** The pilot project of pre-anesthetic evaluation through telemedicine at the Pedro Ernesto University Hospital (HUPE) of the State University of Rio de Janeiro (UERJ) is a commendable initiative that aims to address the challenges faced by patients in accessing preoperative care. The objective of this study was to reduce the waiting time between the surgical recommendation and its clinical clearance for the procedure. A service flow was established to enable patients to undergo a comprehensive evaluation, including examination and complementary tests, during a single visit with a general practitioner. Based on the type of surgery and the patient's comorbidities, the Teleconsultants Center assessed the case and provided the necessary guidance. A total of 20 patients were attended to in face-to-face sessions during morning shifts, with the participation of Internal Medicine and Anesthesiology. Subsequently, these patients' evaluations were scheduled for teleconsultation to assess their surgical risk. There has been a significant reduction in the time between the surgical recommendation and the clearance for the procedure with a notable improvement compared to the previous protocol. These initial outcomes demonstrate the project's potential to enhance the efficiency and effectiveness of the preoperative evaluation process through teleassistance.

**Keywords.** Preoperative evaluation, Teleassistance

## 1. Introduction and Objective

The COVID-19 pandemic has had several consequences related to healthcare delivery, breaking paradigms and making teleconference-based care an irreversible reality. By eliminating the need for travel, patients can save on transportation costs and avoid the physical strain associated with commuting, which can be especially challenging for

---

<sup>1</sup> Corresponding Author: Claudia Regina Machado, +55(21)99629-2151, E-mail: [claudia.machado@hupe.uerj.br](mailto:claudia.machado@hupe.uerj.br).

individuals with limited mobility. Additionally, the telemedicine approach can significantly expedite the preparation process for surgical procedures [1].

The objectives of this study were to reduce the waiting time between the surgical recommendation and its clinical clearance for the procedure, to decrease the demand for in-person consultations and to alleviate internal queues for scheduling.

## 2. Methods

A service flow was established to enable patients to undergo a comprehensive evaluation, including examination and complementary tests, during a single visit with a general practitioner. Subsequently, the patient received follow-up care through teleassistance, tailored to their specific surgical needs and comorbidities. Based on the type of surgery and the patient's comorbidities, the Teleconsultants Center assessed the case and provided the necessary guidance [1,2]. The patient was then included in the waitlist for surgery without needing to travel to the hospital until admission. The selection criteria for referral to teleconsultation were based on surgical complexity and the risk associated with comorbidities and cardiovascular health, as determined by the Lee score and American Society of Anesthesiologists. A flowchart was created for a visual representation of this process. The execution was only possible due to Brazilian regulations that supported telemedicine modality leveraged by the pandemic [3,4].

## 3. Results

The project was initiated in March 2023 and since it involves new workflows, the protocol faced initial challenges in gaining adherence. Between March 1st and June 15th, a total of 20 patients were attended to in face-to-face sessions during morning shifts, with the participation of Internal Medicine and Anesthesiology. Subsequently, these patients' evaluations were scheduled for teleconsultation to assess their surgical risk. There has been a significant reduction in the time between the surgical recommendation and the clearance for the procedure. This improvement can be attributed to two key factors: the efficiency in scheduling the surgical risk assessment within a one-week timeframe and the project's ability to expedite the process, with patients being cleared for surgery on average within 10 days after their initial consultation. This represents a notable improvement compared to the previous protocol, which typically required patients to wait between 60 to 90 days for the same clearance. Importantly, this streamlined approach also minimizes the burden on patients, as they only need to visit the hospital once, resulting in significant time and cost savings.

## References

- [1] Davenport A, et al. Exploring Patient Perspectives Surrounding Telemedicine Versus In-Person Preoperative Visits. *Urogynecology (Phila)*. 2023 Jun 1;29(6):323-329.
- [2] Mullen-Fortino et al. Presurgical Assessment Using Telemedicine Technology: Impact on Efficiency, Effectiveness, and Patient Experience of Care. *Telemed J E Health*. 2019 Feb;25(2):137-142.
- [3] BRASIL. Lei Nº 13.989, de 12 de abril de 2020. (2020a) Dispõe sobre o uso da telemedicina durante a crise causada pelo coronavírus (SARS-CoV-2).
- [4] Silva, AB. *Telessaúde no Brasil – conceitos e aplicações*. Rio de Janeiro: Editora DOC, 2014.