Abstract Title: Telemedicine improves Anesthesia Pre-operative Evaluation Appointment Adherence: A Retrospective Analysis

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Background/Introduction: Amidst the COVID-19 pandemic, the sudden demand for virtual medical visits drove the drastic expansion of telemedicine across all medical specialties. Current literature demonstrates limited knowledge on the impact of telehealth on appointment adherence particularly in preoperative anesthesia evaluations. We hypothesized that there would be increased completion of preoperative anesthesia appointments in patients who received telemedicine visits.

Methods: We performed a retrospective cohort study of adult patients at UCLA who received preoperative anesthesia evaluations by telemedicine or in-person within the Department of Anesthesiology and Perioperative Medicine from January to September 2021 and assessed appointment adherence. The primary outcome was incidence of appointment completion. The secondary outcomes included appointment no show and cancellations. Patient demographic characteristics including sex, age, ASA physical status class, race, ethnicity, primary language, interpreter service requested, patient travel distance to clinic, and insurance payor were also evaluated. Demographic characteristics, notably race and ethnicity, are presented as captured in the electronic health record and we recognize its limitations and inaccuracies in illustrating how people identify. Patient reported reasons for cancellations were also reviewed and categorized into thematic groups by two physicians. Statistical comparison was performed using independent samples t test, Pearson's chi-square, and Fischer's exact test.

Results: Of 1332 patients included in this study, 956 patients received telehealth visits while 376 patients received in-person preoperative anesthesia evaluations. Compared to the in-person group, the telemedicine group had more appointment completions (81.38% vs 76.60%, $p = 0.0493$). There were fewer cancellations (12.55% vs 19.41%, $p = 0.0029$) and no statistical difference in appointment no-shows (6.07% vs 3.99%, $p = 0.1337$) in the telemedicine group (Figure 1). Compared to the in-person group, patients who received telemedicine evaluations were younger (55.81 ± 18.38 vs 65.97 ± 15.19, $p < 0.001$), less likely American Indian and Alaska Native (0.31% vs 1.60%, $p = 0.0102$), more likely of Hispanic or Latino ethnicity (16.63% vs 12.23%, $p = 0.0453$), required less interpreter services (4.18% vs 9.31%, $p = 0.0003$), had more private insurance coverage (53.45% vs 37.50%, $p < 0.0001$) and less Medicare coverage (37.03% vs 50.53%, $p < 0.0001$). Main reasons for cancellation included

patient request, surgery rescheduled/cancelled/already completed, and change in method of appointment.

Conclusions: In 2021, preoperative anesthesia evaluation completion was greater in patients who received telemedicine appointments compared to those who received in-person evaluations at UCLA. We also demonstrate potential shortcomings of telemedicine in serving patients who are older, require interpreter services, or are non-privately insured. Knowledge of these factors can provide feedback to improve access and equity to telehealth for patients from all backgrounds, particularly during the COVID pandemic as virtual evaluations increase.
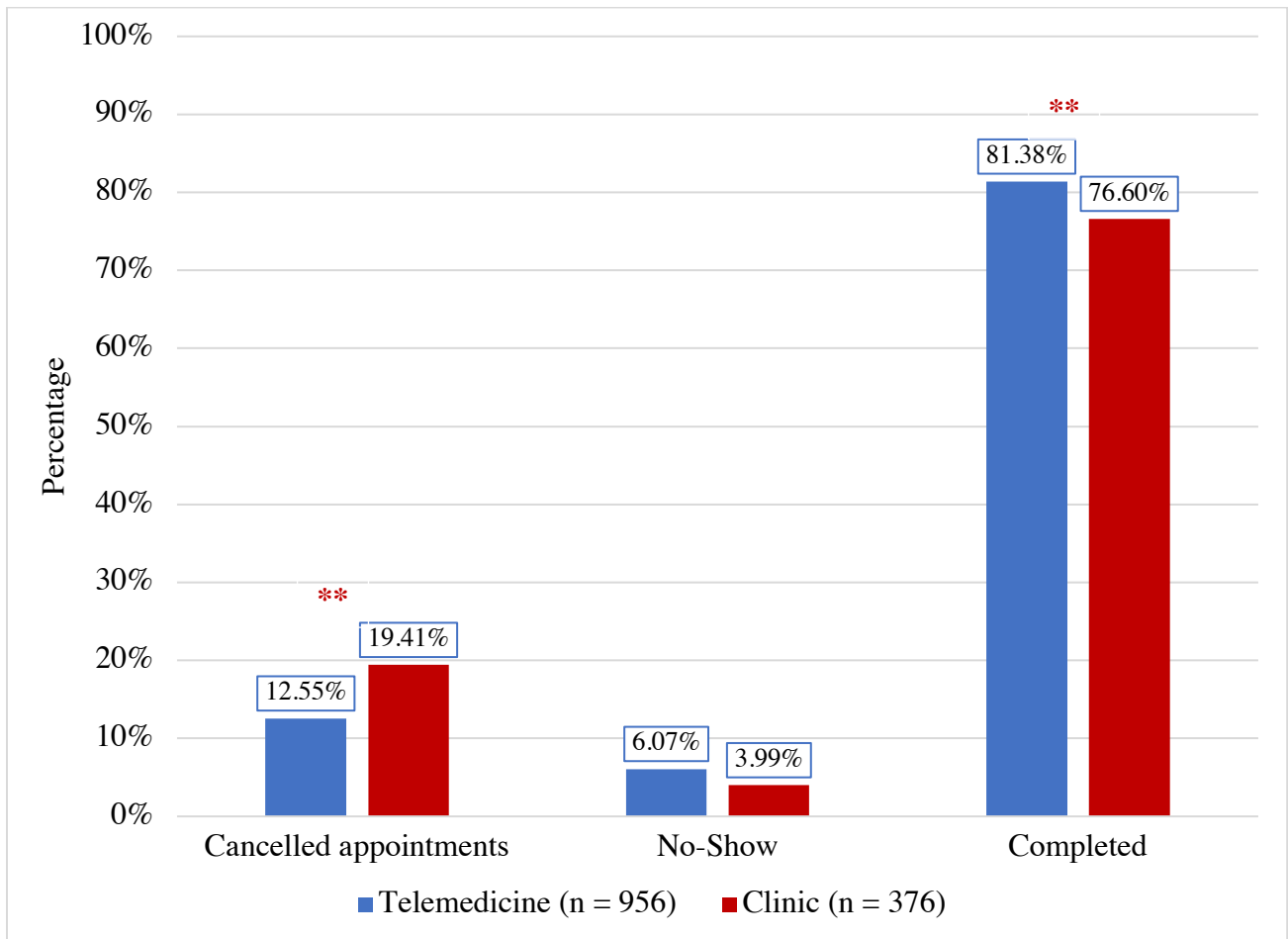
Images:

Figure 1. Comparison of cancellation, no-show, and completion of appointments between patients who received telemedicine or in-person preoperative evaluation appointments. **P values < 0.05 were considered significant.

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