Evaluation of Outcomes and Feasibility of Audio-Only Telehealth for Pediatric Surgery Patients: A Single Institution Experience

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BACKGROUND

- During the COVID-19 pandemic, there was a loosening of restrictions regarding reimbursement for telehealth visits, including audio-only visits.

However, since the end of the public health emergency, there is uncertainty regarding the future of audio only visits, which are a critical means of access to surgery-related healthcare for rural patients.

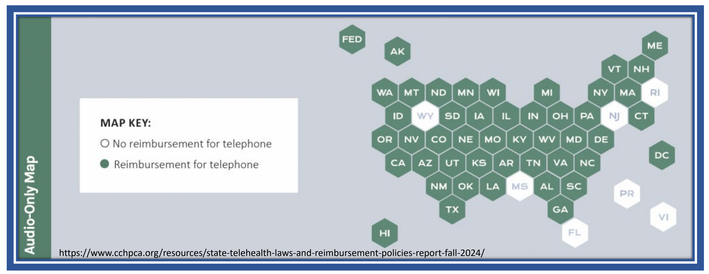

Figure 1. Audio-only reimbursement by state, Fall 2024. Source: CCHP

Telehealth in Pediatric Surgery

- Previous studies on telehealth in pediatric surgery focused on audio-visual platforms for peri-operative clinical evaluation.

- These studies showed no significant differences in postoperative surgical outcomes compared to in-person assessments.

However, the use of audio-only telehealth evaluations in pediatric surgery has not been investigated.

AIM

In this study, we examine the outcomes of audio-only telehealth assessment of pediatric surgery patients compared to traditional in-person outpatient evaluation.

METHODS

Study Design

We conducted a retrospective matched cohort study of pediatric surgery patients <18 years-old undergoing in-person and audio-only telehealth outpatient evaluation at a single tertiary care pediatric center from 8/2021 to 4/2023. In-person and telehealth cohorts were balanced for age, sex, race, residence rurality, insurance type and pediatric comorbidity index (PCI) via 1:1 propensity score matching.

Total patients	**1,538**
Audio-only patients	341 (22.2%)
Male	57.8%
Black	50.4%
Rural	48.4%
Median driving distance	70.3 mi. (0 to 421)

Table 1. Demographics of patients included in study.

RESULTS

In-person surgery-related outpatient utilization within 30, 60, and 90 days was lower in telehealth patients.

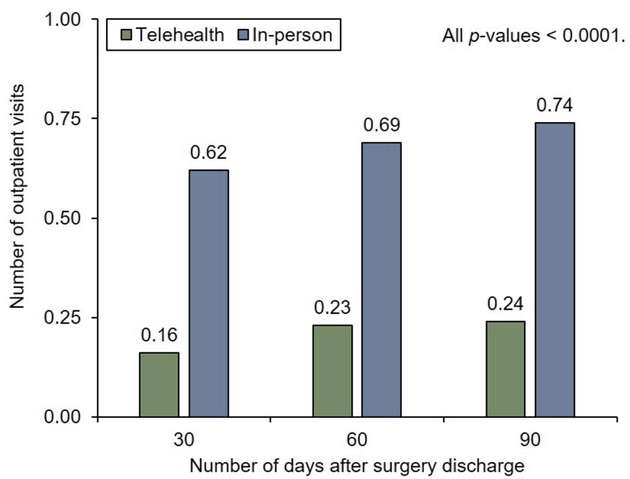

Figure 2. Post-matching number of pediatric surgery-related in-person outpatient visits following index surgery admission, per patient per month (PPPM). The surgery-related 30-day readmission rate for telehealth patients was 4.7% (n=16).

Associated Patient Costs

$121.22 (Telehealth Patients) vs. $227.15 (In-person Patients)

p<0.0001

Use of telehealth lowered costs associated with post-surgery care.

DISCUSSION

Integration of audio-only telehealth into pediatric surgery care is a promising way to:

- ✓ Decrease travel distances
- ✓ Decrease patient costs
  - ➢ Without increasing surgery-related readmission

Investigation is ongoing to demonstrate the utility of various audio-only telehealth use cases in reducing healthcare disparities.

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