

# The Utility and Satisfaction of Teledentistry in a Pediatric Hospital Dental Clinic



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## Objectives

This study compares parent-reported experiences and satisfaction with teledentistry visits to in-clinic visits.

**Specific Aim 1:** To evaluate the patient experience with telehealth services in the Department of Dentistry at Boston Children's Hospital (BCH) compared to in-clinic dental visits.

**Specific Aim 2:** To determine the limitations and barriers to participation in teledentistry visits.

## Background

- Teledentistry has the potential to be more cost-effective and increase access to oral health care, especially to underserved children.<sup>1</sup>
- A few studies using professional cameras or smartphone photos with trained assistants have validated asynchronous teledentistry for dental caries diagnosis.<sup>2-6</sup>
- During the COVID-19 pandemic, teledentistry visits were offered by Boston Children's Hospital (BCH) to meet patient needs.

- Parents were asked to submit 5 intraoral photographs using their smartphones by following the BCH Department of Dentistry Photograph Guide. The photographs became part of the patient record.



- During the synchronous or asynchronous teledentistry visits, the dentists utilized submitted photographs to assist with triaging, screening, treatment planning and discussing recommendations.
- With thousands of teledentistry visits completed during the COVID-19 pandemic, we are interested in patient/parent perceptions and satisfaction of their teledentistry visit experience(s), and limitations and barriers to patient participation.

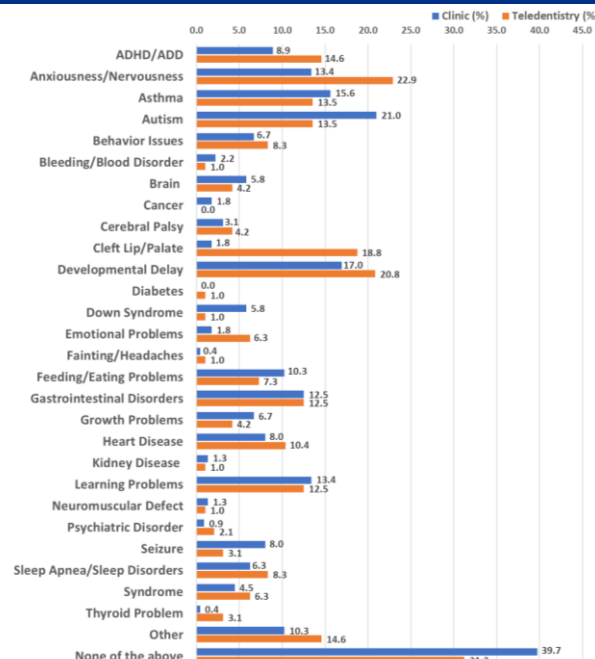
## Methods

Parents whose child completed a teledentistry visit or in-person clinic visit for new patient and recall visits between September and December 2021 at BCH were emailed an electronic RedCap survey one week after their visit inquiring about accessing the care, convenience of the visit, and satisfaction with the service.

Surveys were completed by parents of 103 teledentistry subjects and 237 in-clinic subjects.

Mann-Whitney U and Chi-square tests were used to compare responses from the two cohorts.

## Results

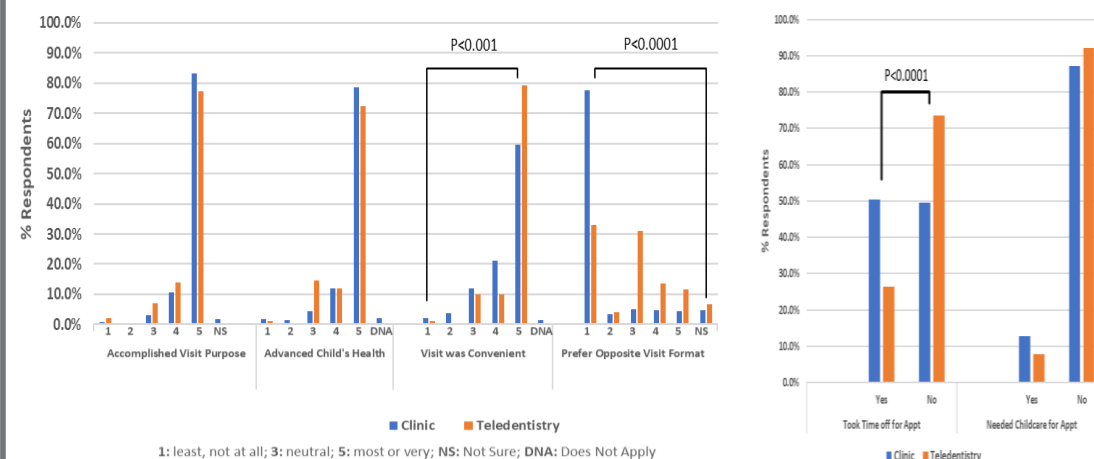


**Figure 1: Medical Conditions.** The past medical history of study of subjects is indicated as a percentage of total subjects in either a clinic or teledentistry setting. Children with a variety of special healthcare needs were served via teledentistry and clinic visits.

## References

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## Results (cont.)



**Figure 2: Visit Satisfaction.** Among teledentistry respondents, 93.2% (96/103) were satisfied with their visit and 91.1% (92/101) felt the visit purpose was accomplished. Teledentistry visits were reported to be significantly more convenient compared to in-clinic visits ( $P<0.001$ ). Significantly more parents that participated in a clinic visit reported that they preferred a clinic visit over a teledentistry visit ( $P<0.0001$ ). Among in-clinic respondents, 95.7% (224/234) were satisfied, and 94% (220/234) felt the visit purpose was accomplished. 9.1% (21/232) would have preferred teledentistry instead.

**Figure 3: Access to Care.** Significantly more parents reported needing to take time off work to accomplish an in-clinic visit compared to a teledentistry visit ( $P<0.0001$ ). No significant differences were observed in need to obtain childcare for either visit type ( $P=0.1169$ ).

## Conclusions

Parents whose children were evaluated through teledentistry were satisfied with the visit and satisfaction rates were comparable to those whose children were evaluated through an in-person clinic visit. Parents were comfortable using video conferencing software and were generally not concerned about the lack of taking x-rays or the lack of an in-person evaluation as part of their child's teledentistry visit. Parents of the teledentistry cohort perceived the visit to be significantly more convenient than parents of the in-person cohort, with significantly less parents having to take time off work for a teledentistry visit. Parents that experienced teledentistry would not have preferred for their child to be seen in-clinic. However, most parents whose child was seen face-to-face would not have preferred a teledentistry visit instead. Teledentistry extended care to children of varying healthcare needs, as seen with in-clinic dental visits.

Teledentistry is a satisfactory means of providing routine dental care. Its utility may be of great value in areas with a paucity of specialists or complement the existing in-person clinical visits when faced with limitations.