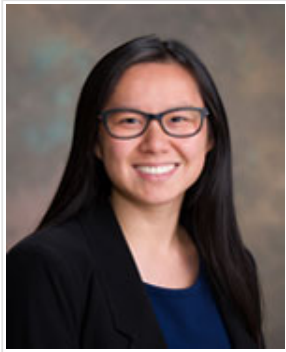


Feasibility Assessment of Tele-Dental Approach to Address Non-Traumatic Dental Condition Visits to the Emergency Departments



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Research area: Oral and Systemic Health

Background: Non-traumatic dental condition (NTDC) visits in emergency departments (emergency rooms and urgent care centers) (EDs), are attributable to multiple reasons including inadequate access to dental care and lack of dental insurance. Annually, NTDCs to EDs represent about 1.4% to 2% of all ED visits. An estimated \$1.7 billion can be potentially saved annually if ED visits were diverted to dental offices. Tele-dentistry has emerged as an alternative modality for improving access to preventive and timely dental care and has the potential to reduce oral health access disparities. The objective of this study was to examine the feasibility of establishing a tele-dental approach to manage NTDC visits to EDs.

Methods: Patients with NTDCs presenting at Marshfield Clinic Urgent Care (UC) and Lakeview Medical Center ED were recruited. Patients with mental disabilities and language barriers were excluded. Participants were interviewed and assessed by tele-dental researcher (TDR) using intra-oral and high-definition pan-tilt-zoom cameras. Information on differential diagnosis provided by the UC provider (UCP) and TDR, waiting time before UCP and TDR interaction, and costs associated with managing the NTDC were evaluated. Participants had the option of receiving 1-2 gift cards for their participation.

Results: Seven participants (average age 33 ± 9.53) were recruited. The agreement for differential diagnosis documented by the UCP and TDR was 85.71%. Average wait time before seeing the UC provider and TDR was 27 and 14 minutes respectively. Applying the cost of an oral examination as a surrogate for the tele-dental exam, the average cost was 64% less than for the UC visit.

Conclusions: Study findings indicate that tele-dentistry can be used with improved patient care outcomes as an alternative model of oral health care to manage NTDCs in EDs. Larger sample size and further economic analysis are required to assess the impact of the proposed alternative oral health care model.