

Title Page

Title: Impact of Interpreter Use on Visit Times in Dermatology – A Single-Center
Retrospective Cohort Study

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Dear Editor,

Patients with limited English proficiency experience improved health outcomes when medical interpreters are used.¹ Primary care setting studies have found that patients requiring medical interpreters have longer visit times than their counterparts.² Our study explores the impact of medical interpreter use on visit duration at our dermatology clinic.

A single-center retrospective cohort study was performed using Epic data on outpatient in-person (Michigan Medicine's Taubman Center Dermatology Clinic) and video visits (Michigan Medicine Dermatology) from October 2020 to April 2021. Total visit lengths (measured from time of check-in to check-out) of 100 interpreted and 7739 non-interpreted visits were analyzed. The time of check-in, check-out, or both, were not always documented, resulting in implausibly short or extended visits. Visits shorter than 5 minutes and longer than 180 minutes were included as blank data points. Average total visit times were compared between interpreted and non-interpreted visits and between visits using different interpreting modalities (hospital-provided, phone, patient-provided, and video). Paired t-tests were used to assess statistical significance, with a P value $< .05$.

In-person interpreted visits were 10 minutes longer than non-interpreted visits ($P = .004$), and interpreted video visits ($n = 12$) were 8 minutes longer than non-interpreted video visits ($P = .008$) (Fig. 1). The average visit time for visits utilizing patient-provided interpreters ($n = 10$) was 26 and 37 minutes longer than visits using phone ($n = 39$) ($P = .0495$) and hospital-provided interpreters ($n = 9$) ($P = .01$), respectively (Fig. 2). There

was no statistically significant difference in the visit duration between visits utilizing phone and hospital-provided interpreters ($P = .17$) (Fig. 2).

All visits were longer when utilizing interpreters. For in-person visits, it is unclear how much of this time is provider-facing time, as the total visit length we analyzed includes time spent in the waiting room, with the medical assistant, in the exam room, and with providers. In contrast, video visit duration represents majority provider-facing time. Comparing interpreting modalities, in-person visits using phone and hospital-provided interpreters were comparable in duration but significantly shorter than visits using patient-provided interpreters. Video visits utilizing interpreters had the shortest duration since no time is spent in waiting and exam rooms.

Study limitations include having a small sample of interpreted visits and lack of real-time measurements of visit duration, visit content information (number and severity of medical concerns addressed) and patient satisfaction measures. Also, the generalizability of our findings to other dermatology practices is unclear.

Our study supports the need for extended visits when utilizing interpreters. Ways to accommodate extended visits include scheduling patients at the end of clinic, avoiding scheduling multiple visits requiring interpreters on a given day, or increasing the allotted visit time. If medically appropriate, video visits are a reasonable alternative to in-person visits for individuals requiring interpreters, especially given the ongoing COVID-19 pandemic. Our study supports using professionally trained interpreters, which is the

standard of care at Michigan Medicine. To minimize clinic flow disruptions, steps should be taken to address the need for extended visits when using interpreters.

References

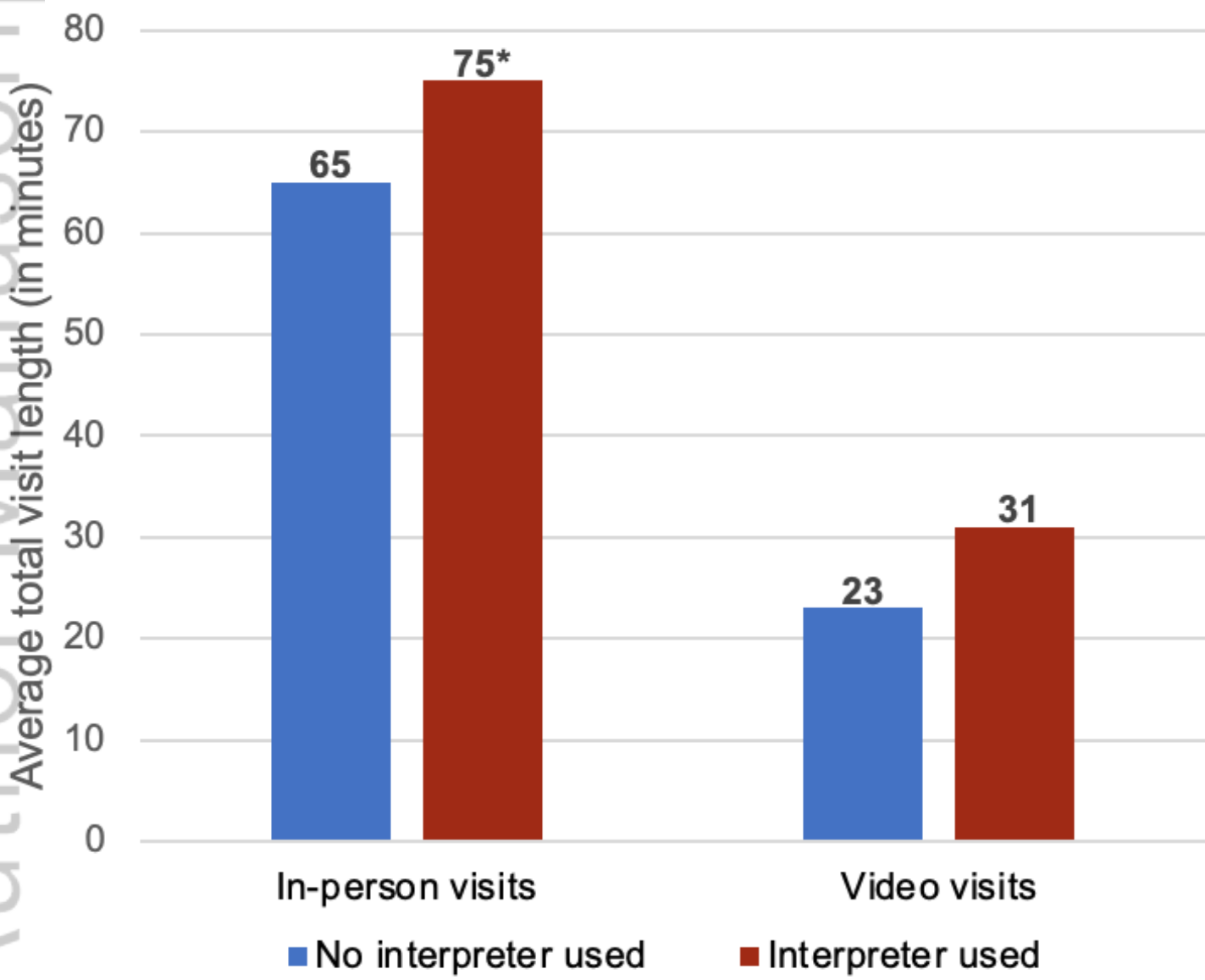
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Figure Legends:

Figure 1. Average total visit times for in-person and video visits using interpreters and those not using interpreters. All in-person visits utilizing an interpreter (n = 88) were analyzed including those in which interpreting modality was not specified.

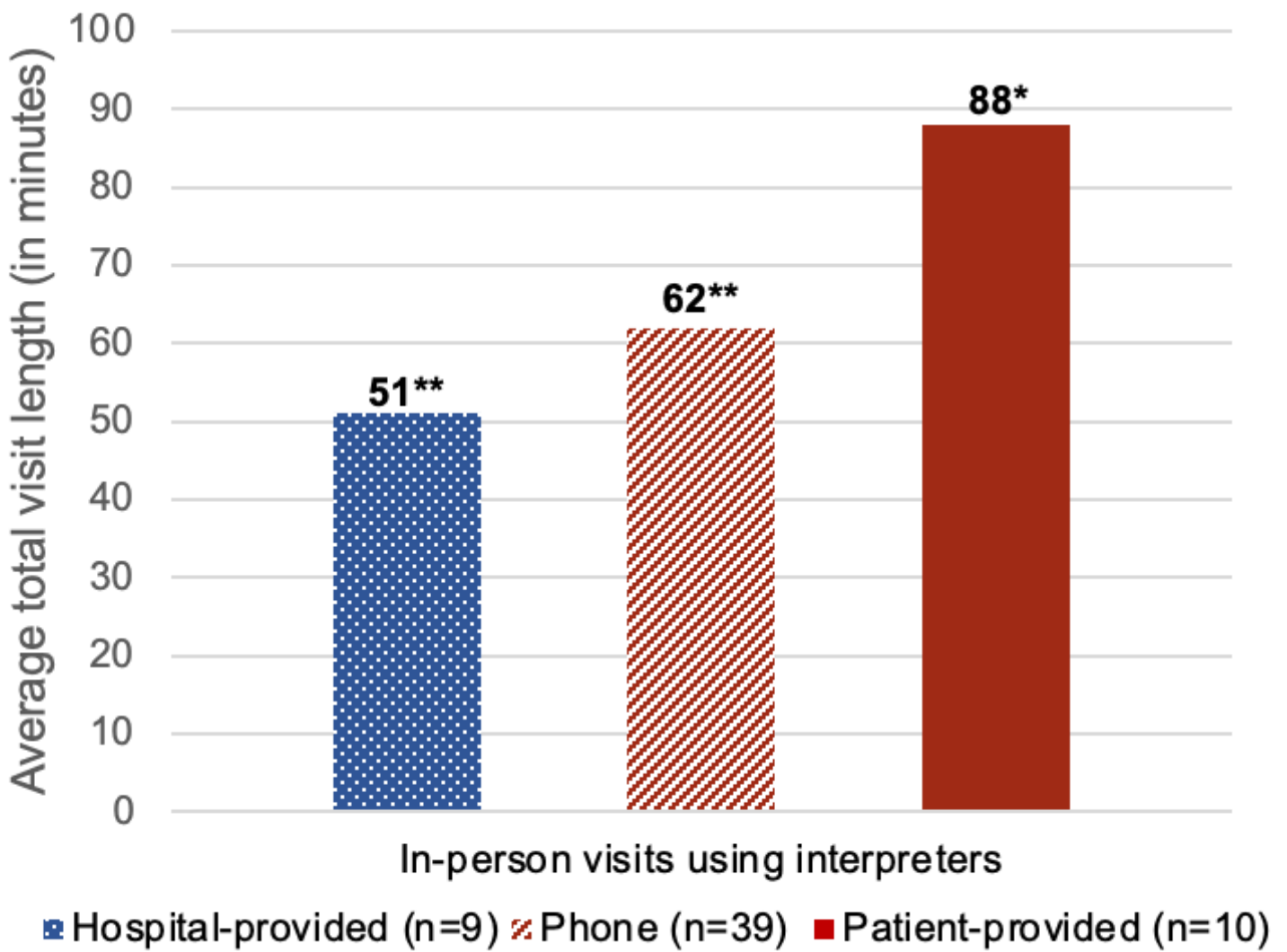
Figure 2. Average total visit length for visits using different interpreter modalities. Interpreted visits without a documented interpreting modality were excluded from this analysis.*Patient-provided interpreters include patients' family members and friends.**No statistically significant difference in average total visit length was detected between phone and hospital-provided interpreting modalities.

Impact of interpreter use on visit times



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Impact of different interpreting modalities on visit times



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