INTRODUCTION

- Limited English proficiency (LEP) status has an impact on health care utilization and health status.
- LEP patients have decreased access to care, continuity of care, and preventive screening, greater difficulty communicating with providers about informed consent, instruction, adherence, and follow up.
- Poor communication leads to increased healthcare costs, including decreased use of preventive care, misdiagnosis, unnecessary testing, and increased ER admission.
- The rising number of LEP patients, particularly Spanish speaking, and the critical role of the ER as the entry point into the US healthcare system makes linguistic interpretation paramount.
- Linguistic interpretation ameliorates health disparities among LEP patients: less use of emergency departments, better adherence to treatment plans, and fewer missed appointments.
- Linguistic interpretation also mitigates costs for providers and hospitals: decreased unnecessary testing and lower admission rates.
- Existing evidence suggests that in-person and videoconferencing interpretation methods are superior to phone or ad-hoc base on patient evaluations.
- Little evidence exists that compares in-person vs videoconferencing methods from the patient, provider, and hospital perspective.

Hypothesis: There is a significant difference in in-patient/family, provider preferences between in-person vs videoconferencing Spanish interpretation methods as demonstrated by a self-administered survey. What are the hospital-based metrics for utilization of in-person vs videoconferencing Spanish interpretation methods?

MATERIALS & METHODS

- Population: Children’s Hospital Colorado Emergency Department Providers
  - Lack proficient Spanish language skills
  - Patient Families
  - Parent or legal guardian of admitted patient
  - Lack of proficient English language skills

- Methods:
  - Patient/Family Surveys
    A 9 question self-administered survey after an initial encounter assessing:
    - Quality of Communication with Provider
    - Understanding of Patient’s Health Concerns
    - Information Comprehension
    - Respect of Privacy
    - Respect of Cultural Values
    - Satisfaction with interpretation

RESULTS

Provider Surveys
A 9 question self-administered survey after an initial encounter assessing:
- Quality of Communication with Interpreter
- Quality of Communication with Patient
- Provider Engagement with Patient Cultural Values
- Provider Engagement with Patient Main Health Concern
- Encounter Efficiency
- Interpretation Aid in Medical Decision Making
- Satisfaction with Interpretation

Hospital Based Outcomes
Utilization and cost data was obtained for in-person and videoconferencing interpreters Children’s Hospital of Colorado.
- # of minutes/encounter
- # of encounters/month
- Total monthly cost
- Monthly cost/encounter

COMIRB Protocol #: 18-1008
The presenter has no conflicts of interest to report regarding the study.

Table 1: Provider-reported Quality of 80 Language Interpreted Medical Visits by Interpretation Mode

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<thead>
<tr>
<th>Mode</th>
<th>Score</th>
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<td>In-Person</td>
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<td>Videoconferencing</td>
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Table 2: Patient/Family reported Quality of 90 Language Interpreted Medical Visits by Interpretation Mode

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DISCUSSION

Conclusions:
- Patient/Family Surveys
  - Data collected suggests an in-person preference for:
    - Information comprehension
    - respect for privacy
    - general satisfaction.
- Provider Surveys
  - Data collected suggests an in-person preference for:
    - Quality of communication with interpreter
    - Provider engagement with cultural values
  - Data collected suggests a videoconferencing preference for:
    - Aid in Medical Decision Making
- Cost-Benefit Analysis
  - Fig 1: Videoconferencing encounters are shorter in duration than in-person encounters.
  - Fig 2: Videoconferencing interpreters are utilized more than in-person interpreters.
  - Fig 3: Videoconferencing costs more per month than in-person.
  - Fig 4: Videoconferencing and in-person interpreters cost about the same per encounter. Limitations:
    - Providers and patient/family are aware of the methods already available, thus they may have inherent preference bias.
    - Lack of sufficient survey acquisition and power for the study.
    - Selection bias based on researcher schedule and season.
- Future Directions:
  - Further data acquisition and expand study to other languages.
  - Develop a training program for all incoming providers that discussed patient/provider preferences in interpretation and how to access each of the methods.

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