

Title: Family-Initiated Interpretation: A Novel Approach to Communication in the Pediatric Intensive Care Unit

NCT Number: Not Yet Assigned

Document Date: 3/20/2023

IRB #: IRB 2022-5221

Title: A Novel Approach to Interpretation in the Pediatric Intensive Care Unit: Family-Initiated Interpretation

Creation Date: 2-1-2022

End Date:

Status: **Approved**

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Review Board: Panel #2

Sponsor:

Study History

Submission Type	Initial	Review Type	Exempt	Decision	Exempt
Submission Type	Modification	Review Type	Expedited	Decision	Approved

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Family Initiated Interpretation: A Novel Approach to Communication in the Pediatric Intensive Care Unit

Specific Aims:

Limited English proficiency (LEP) adversely affects pediatric hospital outcomes. Children from families with LEP are more likely to have longer lengths of stay, an increased number of adverse events, and less pain medication than their counterparts with English proficiency. Although consistent use of professional interpretation mitigates negative outcomes for this population, professional interpretation remains widely underused in the hospital setting. Language barriers may be particularly harmful in the pediatric intensive care unit (PICU), where parents encounter challenging medical decisions like choosing to pursue high-risk therapies or making end-of-life decisions. In the PICU, LEP families report less understanding of what happens on rounds and are dissatisfied with the communication from nursing staff. Spanish speaking families of hospitalized children have reported that one barrier to interpreter use was the inability to directly request services. **Currently, at our institution, families do not have a mechanism to initiate contact with an interpreter.** The study team plans to improve the rate of professional interpretation in the PICU by allowing families to directly request interpreter services.

There have been no published reports of giving families access to interpreter technology and allowing families to initiate calls with an interpreter. In previous research regarding the climate of safety for families with limited English proficiency, the lack of interpreter availability and accessibility have been cited as reasons that most communication with patients with limited English proficiency takes place without an interpreter. In order to improve the hospital environment for these patients and families, the hospital system should make it easier for patients with limited English proficiency to speak up about their questions and concerns. The investigators hypothesize that family-initiated interpretation will be a feasible, usable, and acceptable way to increase the rate of professional interpretation in the PICU. The team will collect baseline demographic and interpreter utilization data from the PICU, initiate our family-initiated interpretation intervention, then collect post-intervention data on interpreter utilization. To accomplish this, the investigators will use the following specific aims:

Specific Aims:

Aim 1: Explore the feasibility, usability, and acceptability of a family-initiated interpreter intervention among healthcare providers as well as families with limited English proficiency. The study team will survey both patients and the healthcare team regarding the acceptability of our intervention, using a validated tool. The study team expects that this will be a feasible, usable, and acceptable intervention.

Aim 2: Examine the impact of family-initiated interpretation intervention on professional interpreter utilization by comparing pre and post-intervention professional interpreter utilization rates in the PICU. All families with a preferred language besides English will be given tablets with video and audio interpreting capabilities. They will be instructed to call an interpreter with any questions or concerns for the medical team. The investigators will measure interpreter utilization before and after the intervention to determine if this intervention increases professional interpreter use.

Significance:

Limited English proficiency (LEP) adversely affects pediatric hospital outcomes. Families with LEP are at risk of longer lengths of stay,¹ increased readmissions,²⁻³ and decreased satisfaction with care.⁴ LEP is also associated with an increased number of adverse events in the hospital,⁵ and these families are less likely to ask questions and speak up when something does not seem right about their child's care.⁶ Multiple studies have shown that professional interpretation can mitigate these negative outcomes, and it has the potential to raise the quality of clinical care for patients with LEP to be equal, or nearly equal, to that of patients without language barriers.⁷ However, professional interpretation is still widely underused.⁸ Most communication with patients with limited English proficiency takes place without an interpreter, even high-risk interactions like medication administration and procedures.⁸⁻¹⁰ Members of the medical team also often take communication shortcuts that make it challenging, if not impossible, for families to ask questions of the staff. One common shortcut is medical staff using their own, insufficient, language skills instead of utilizing a professional interpreter.^{11,12} In the pediatric intensive care unit, families with LEP report less understanding of what happens on rounds and are dissatisfied with the communication from nursing staff.¹³ Spanish speaking families of hospitalized children have reported that one barrier to interpreter use was the inability to directly request services.¹⁴ To correct this injustice, resources must be more equitably distributed and there will need to be changes to institutional norms and practices.¹⁵ By innovating the way that interpreters are incorporated into PICU care, this project aims to decrease healthcare disparities.

To our knowledge, there has been no research on giving limited English proficiency families unfettered access to interpretation technology to initiate communication with the medical team.⁷ The current model of interpretation at our institution relies on a member of the care team electing to use an interpreter, despite the evidence that the medical staff unreliably uses professional interpretation. Families are not given direct access to interpretation technology, nor do they have a way to contact an in-person interpreter. As a result, families cannot guarantee communication with an interpreter while they are in the hospital.

The investigators plan to conduct a quasi-experimental study to investigate whether implementing family-initiated interpretation will lead to greater use of interpreters, compared to the current standard of care. The investigators plan to give all families with limited English proficiency a video interpretation tablet on admission to the PICU. They will be given instructions on how to call an interpreter whenever they would like to speak with a member of the medical staff. The study team hypothesizes that allowing families to control interpretation will lead to increased interpreter utilization.

Innovation:

The underutilization of interpreters by the medical staff and the injurious impact of limited English proficiency on pediatric hospital outcomes is well-described. **However, there is a need for further research on how to improve the care of children and families with limited English proficiency in order to attenuate negative outcomes.** This will be the first study to challenge the existing paradigm of how interpretation is used in the hospital, by allowing families to initiate contact with professional interpreters. The investigators also will be including the non-Spanish speaking LEP population in our design and outcomes, as this population is historically understudied and has worse outcomes than their Spanish speaking counterparts.^{16,17}

Approach:

This will be a quasi-experimental interventional study. First, the study team will collect baseline data regarding baseline patient demographics and interpreter utilization. via electronic medical record (EMR) data extraction and the data from the hospital's remote interpretation vendor. The study team will then initiate our intervention and implement it over 9 months and collect post-intervention data.

Specific Aim #1: Explore the feasibility, usability, and acceptability of a family-initiated interpreter intervention among healthcare providers, and the acceptability of the intervention among families with limited English proficiency.

The investigators will conduct user-testing to ensure usability of the tablet and its instructions. Prior to implementing the intervention, the team plans to observe a random sampling of families with limited English proficiency using the tablet to understand potential pitfalls in the instructions and the team will conduct short interviews with limited English proficiency families after they use the tablets. A bilingual member of the research team will observe use of the tablet and conduct these interviews in Spanish with PICU patients and families. Only Spanish speaking families will be able to participate in the user-testing. The investigators will incorporate feedback about the instructions and presentation of the tablets into our final instructions to families.

After the intervention is implemented, the investigators will assess acceptability, feasibility, and appropriateness of the intervention. Using the validated implementation outcome measures developed by *Weiner et. al.*¹⁸ the investigators will survey the families who used the family-initiated interpretation intervention to explore its acceptability, feasibility, and appropriateness. A survey in the most common languages (Spanish, Arabic, Chinese, Polish, and Burmese) will be distributed to all families who participated in the intervention. These language groups encompass over 90% of the non-English languages spoken among our patient population.

After three months of family-initiated interpretation, the study team will survey the medical team in the PICU to explore the acceptability, feasibility, and appropriateness of the intervention using the validated tools developed by *Weiner et. al.*¹⁸ All members of the PICU medical team will be eligible to complete the survey on feasibility, acceptability, and appropriateness.

Specific Aim #2: Describe the impact of family-initiated interpretation intervention on interpreter utilization.

Patient Population and Enrollment: All patients and families with limited English proficiency admitted to the Ann & Robert H. Lurie Children's Hospital of Chicago Pediatric Intensive Care Unit. A member of the PICU staff will explain the study and give the families with LEP a video interpretation tablet on the family's admission to the PICU.

Approach: Our planned intervention will allow families with LEP to initiate interpretation on hospital provided tablets. A tablet with video interpretation capability will be placed into every LEP patient's room for the duration of their PICU admission. Families will be given instructions in their preferred language on how to use the interpretation technology. Families will be encouraged to initiate a call to the interpreter whenever they would like to communicate with any member of the staff. The PICU team will be oriented to the new

interpreting workflow by key stakeholders — nursing leadership and research team members. Both nursing leadership and medical leadership support this project.

Outcome: Our primary outcome is the number of professional interpretations per LEP patient day before and after the intervention. The investigators will collect baseline interpreter utilization data from the EMR as well as records of telephonic/video interpretation from the remote interpretation vendor.

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