

Designing Privacy-Aware Interactions with AI-based Language Interpreters for Semi-Public Healthcare Settings. A Work In-Progress

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Motivation

Conversations in semi-public healthcare settings, such as front desks, pharmacies, and health insurance kiosks, often involve discussing Personally Identifiable Information (PII) and Protected Health Information (PHI). Designing tech-based language interpretation support for these contexts requires careful attention to privacy, given the risk of unintended disclosure of PII and PHI.

Research Question

What type of social interaction and device is more accessible and conducive to trust in semi-public healthcare settings?



Render of a Vision Department's waiting room.
Courtesy of Lowell Community Health Center.

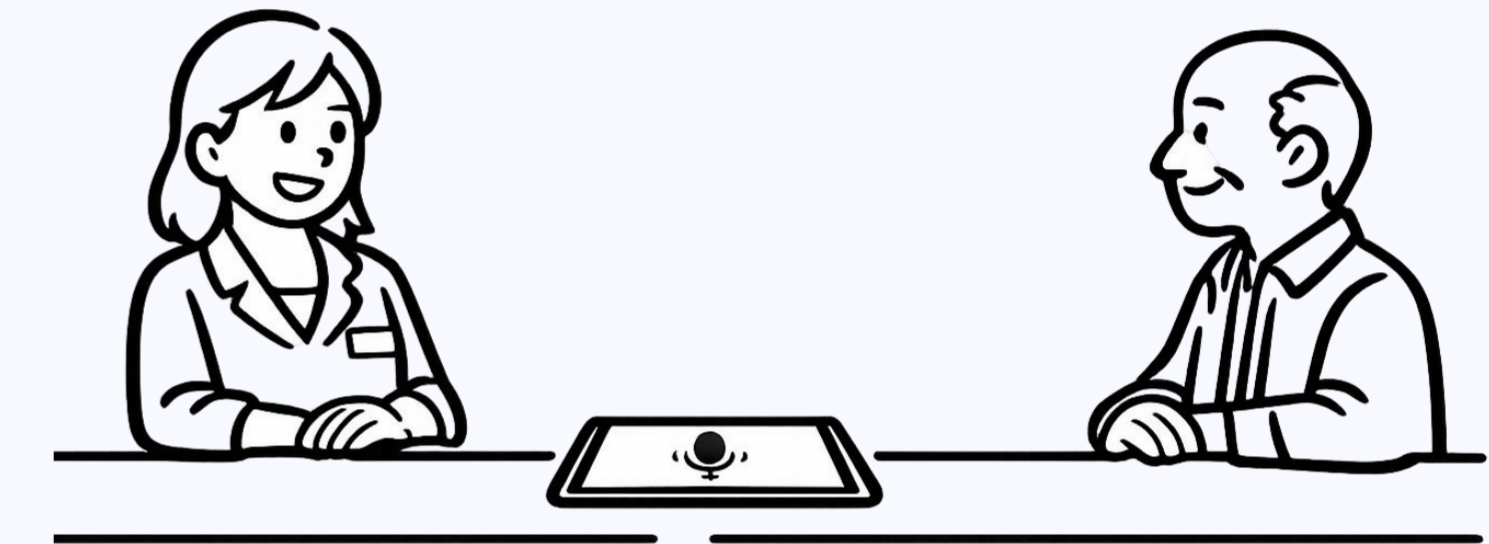
Methodology

The methods draw from previous HCI studies comparing different machine translation modalities, including unpublished academic Lexi work [1, 2]:

- Aiming to pilot 4 modalities of private AI interpretation in a non-clinical front desk of a partner health center, involving 2 staff members interacting with at least 5 patients each per modality.
- Quantitative surveys about staff perception and 15-minute interviews.
- Patients will not be directly surveyed for privacy concerns, but the health center's patient advisory board will be invited to discuss the results.



A) AI voice interpretation through sound only (handset-based phone line), no visual interface



B) AI voice interpretation delivered visually with text through a tablet, no sound



C) AI voice interpretation delivered through both sound (handsets) and a visual interface (tablet)



D) AI voice interpretation delivered through sound (headsets) for both, and visually for the staff (computer)

Anticipated Outcomes

We anticipate staff workers will have preferences based on the perceptions of trust and accessibility from their interactions with patients with the different modalities. Assessing a best-in-class approach will allow us to recommend the method of interaction to other semi-public spaces.