

Development of a Standardized Digital Medical Interpretation Services Toolkit: A Quality Improvement Initiative to Advance Health Equity During the COVID-19 Pandemic

Emily Ling¹, Nazia Sharfuddin^{1,2,3}, and Pamela Mathura^{1,4}

¹ Faculty of Medicine and Dentistry, University of Alberta; ² Faculty of Medicine, University of Toronto; ³ Trillium Health Partners; ⁴ Alberta Health Services

Background

- Medical Interpretation Services (MIS) is the gold standard that should be used during clinical assessments with patients who have limited English proficiency (LEP) or hearing loss
- In Alberta, in-person, telephone or video modalities are available
- When MIS are utilized there is an increase in:
 - Patient understanding of their disease processes
 - Patient adherence with their medication and management plans
 - Patient perception of autonomy and dignity within their care
- Cost is covered by Alberta Health Service (AHS), however it is inconsistently utilized
- Providers often opt for ad-hoc interpretation (ex. family, untrained staff, bystanders) which poses significant risks including:
 - Inaccurate patient histories
 - Higher rates of medical errors and adverse hospital events
 - Violating patient confidentiality
- Due to COVID-19 all professional in-person interpretation is suspended, making it crucial for remote MIS to be accessible

Previously, we applied an intervention of digital MIS technology and education for 6 months in a tertiary center Emergency Department which:

- Vastly increased use and streamlined patient communication
- Most clinicians reported to enhance the accuracy of clinical assessments and patient centered care

Aim

Create a standardized digital MIS toolkit to facilitate ease of adoption and dissemination thereby improving usage across clinical settings

Methods

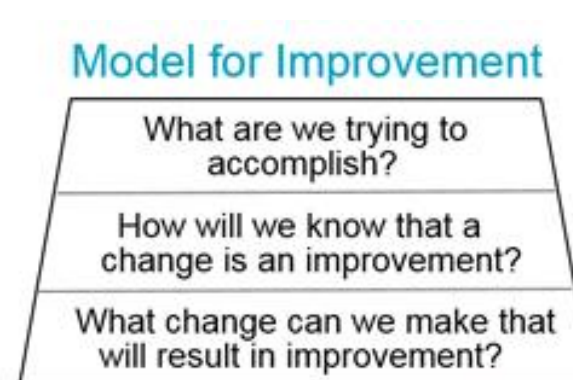


Figure 1: Model for Improvement

- The Model for Improvement provided the quality improvement framework to support our study
- Toolkit was trialed among five Medicine units located at the University of Alberta Hospital (UAH)
 - Measured monthly hospital MIS minutes to assess intervention effect
 - Developed and administered staff questionnaire to assess areas of improvement

Digital Interpretation Toolkit

Interpreter on Wheels (IOW)

- Mobile tablet with LanguageLine®InSight™ app on home screen for easy access
 - Available 24/7 with average connection time of 30 seconds
 - Phone option available in 240 languages
 - Video option available in 40 languages including American Sign Language
- Easily cleaned between uses and stored in secure designated area on the ward
- Troubleshooting guide attached to device



Figure 2: Interpreter on Wheels Device

Personalized Clinical Decision Making Resources

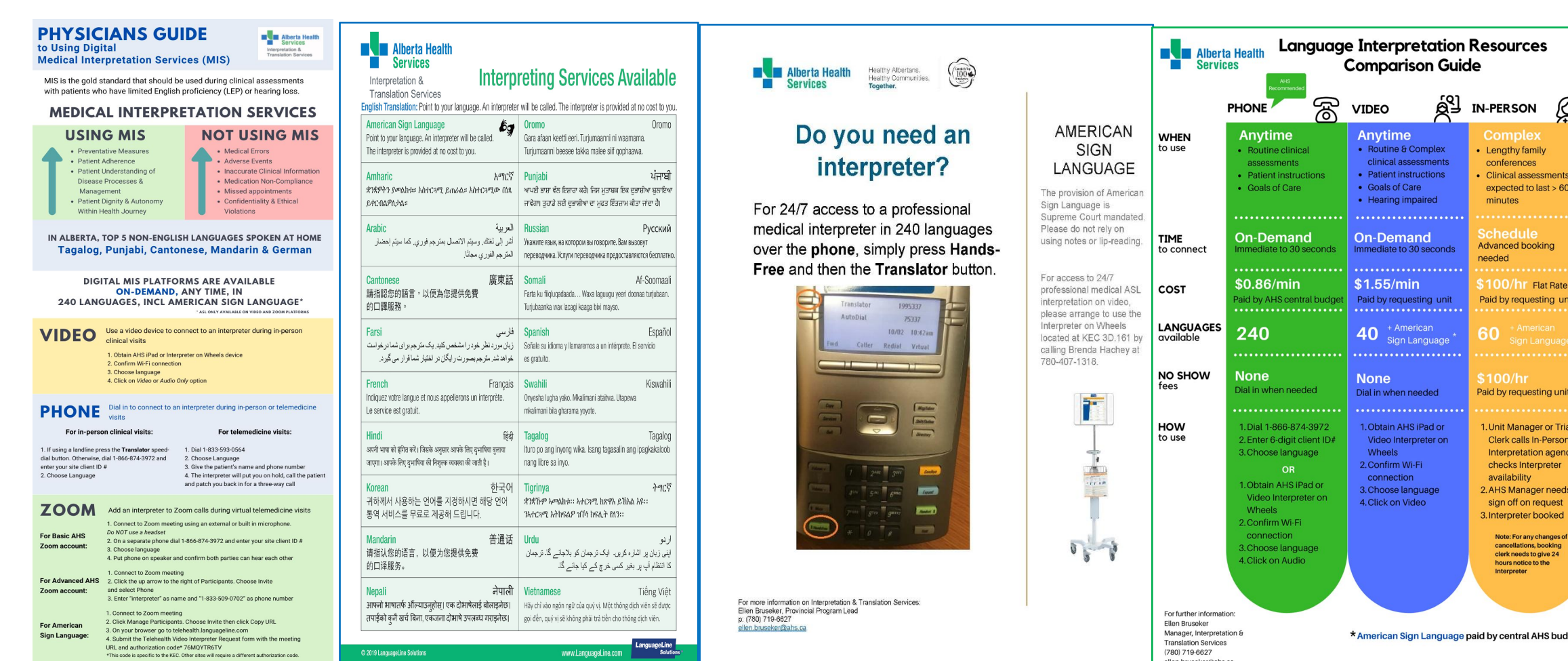


Figure 3: Poster resources posted around the unit

- MIS education and in-person training sessions
- Pre-programming of unit phones with speed dial for MIS
- Poster resources for patients & staff

Results

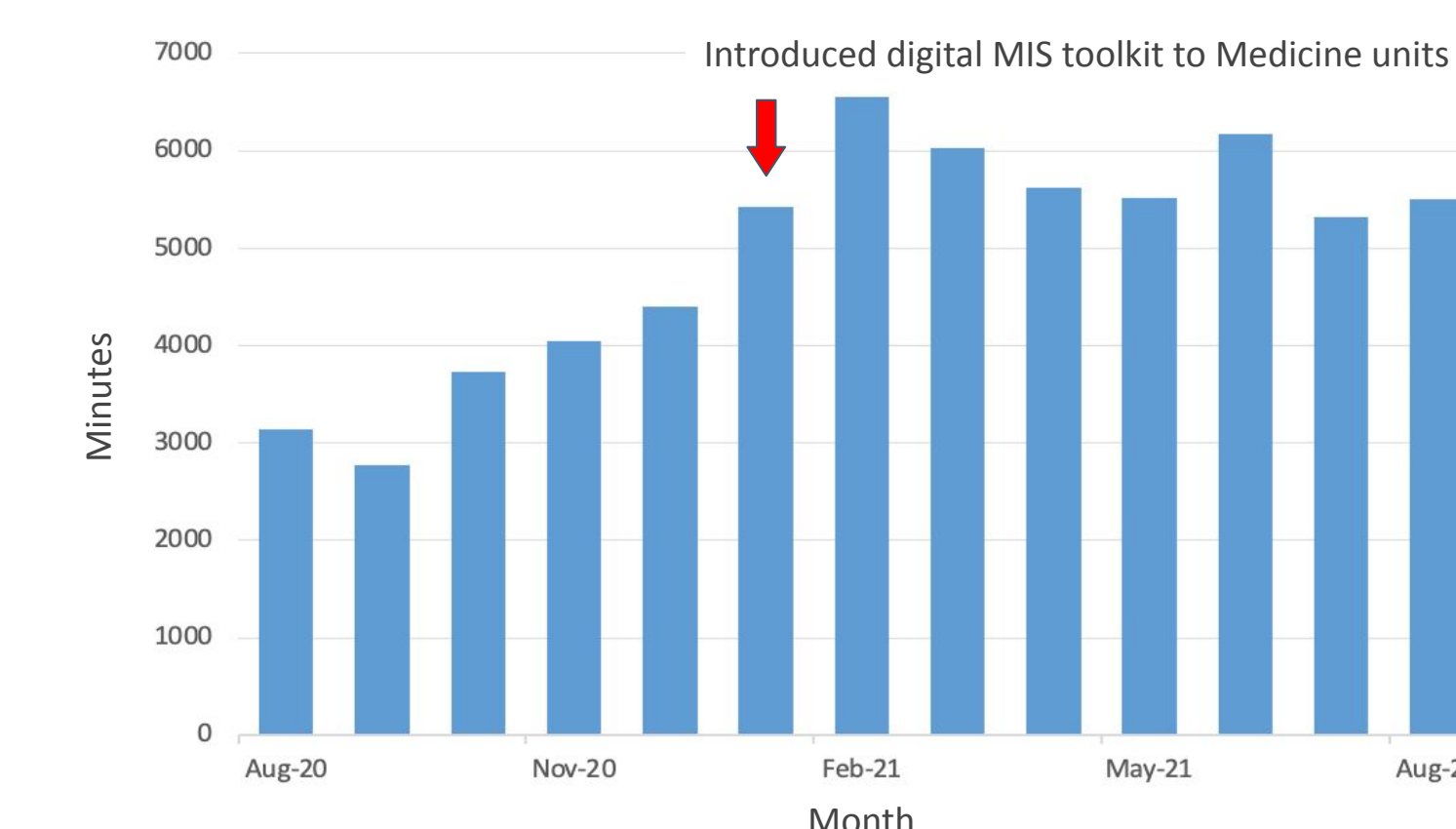


Figure 4: UAH monthly hospital MIS usage minutes (phone & video)

- Overall hospital MIS usage increased over the intervention period*
- 87.9% of unit staff often encounter patients requiring interpretation support
- 63.1% believe that MIS supports better patient care
- 44.7% aware of digital MIS integration and 22.4% used the digital technology
- Barriers to use include lack of time, training and access

*Cannot isolate data to the five Medicine units as a general MIS access code is utilized by the entire hospital

Conclusions

Effective communication between patients and providers is an important determinant of the quality-of-care patients receive and the COVID-19 pandemic has highlighted the urgent need to facilitate accurate medical communication remotely.

Implementing digital MIS promotes patient centered and equitable healthcare while maintaining public health and safety.

Next steps:

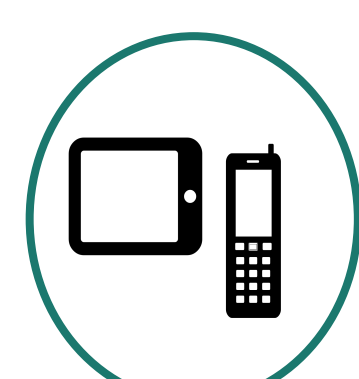
- Provide follow-up education refresher sessions for the Medicine units
- Collaborate with provincial interpretation team to develop MIS training video and hold in-person sessions when possible
- Disseminate patient feedback form to gather patient experience
- Roll out to other UAH departments and Edmonton Zone Hospitals

Implementation Strategy



Stakeholders Meeting

- Team introduces MIS toolkit at Medicine Department Joint Practice meeting
- Determine gaps and resources required to support on-unit use



Unit Set Up

- IOW & phone set up
- Display poster resources at workstations
- Email all staff details regarding digital MIS implementation



Staff Training

- Hands-on IOW training
- Education sessions at department meetings
- MIS presentation at New Hire Orientation
- MyLearning Link course: "Working with English Learners & Interpreters"



Identify & Remedy Gaps

- Staff questionnaire to determine awareness, accessibility and perception of digital MIS integration
- Identify areas for improvement and implement further strategies

References

- Flores G, Abreu M, Barone CP, Bachur R, Lin H. Errors of medical interpretation and their potential clinical consequences: a comparison of professional versus ad hoc versus no interpreters. *Ann Emerg Med.* 2012;60(5):545-553. doi:10.1016/j.annemergmed.2012.01.025
- Hornberger, J., H. Itakura, and S. R. Wilson. 1997. Bridging language and cultural barriers between physicians and patients. *Public Health Reports* 112:410-417.
- Jacobs EA, Lauderdale DS, Meltzer D, Shorey JM, Levinson W, Thisted RA. Impact of interpreter services on delivery of health care to limited-English-proficient patients. *J Gen Intern Med.* 2001;16(7):468-474. doi:10.1046/j.1525-1497.2001.016007468.x
- Juckett G, Unger K. Appropriate use of medical interpreters. *Am Fam Physician.* 2014;90(7):476-480.
- Karliner, Leah S et al. "Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature." *Health services research vol.* 42,2 (2007): 727-54. doi:10.1111/j.1475-6773.2006.00629.x

Acknowledgements

We are grateful for the support of the following members of our team: Ellen Bruseker, Areej Rajeh, Lindsay Bridgland, Yvonne Suryani, Narmin Kassam, and AHS Interpretation and Translation Services Department