A Multimodal Workshop Training for Students on Utilization of Interpretation Services

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BACKGROUND

- The US has seen a significant growth in its immigrant population. As of 2012, 50% of the immigrant population was reported to have a limited english proficiency(LEP)[1].
- Patients with LEP experience disparities and inequitable care due to language and communication barriers [2].
- Communicating with patients in a language they understand is integral to establishing a therapeutic relationship, improving patient outcomes, and providing culturally competent care.
- Not using an interpreter or use of ad hoc interpreters increase the risk of medical errors with adverse outcomes[3].
- There are inconsistencies in Qualified Medical interpreter (QMI) utilization practices amongst healthcare professionals and learners.

RESEARCH OBJECTIVES

- Design a workshop to teach medical students how to use a QMI with a non-English speaking Standardized Patient (SP) effectively.
- By the end of the training, students will:
  1) Demonstrate competency in their ability to obtain focused history with a QMI as demonstrated by a 10% increase on the Faculty Observer Rating Scale (FORS).
  2) Using a Likert scale, students will report an increase in their confidence level when using a QMI

STUDY DESIGN AND METHODS

Pre-workshop:
- Using the Kern's 6 step model of curriculum development, we created an interactive 3-hour workshop. **(Fig. 1)**
- We recruited first-year medical students at a single institution to participate in our workshop by emailing the listserve for volunteers.
- The research team recruited and trained SP.
- In order to increase inter-rater reliability, the facilitators performing the student assessment received training and a norm referenced test on how to complete the modified Faculty Observer Rating Scale (FORS).
- The investigator met with facilitators to discussion variations in score and ensure consistency in ratings.
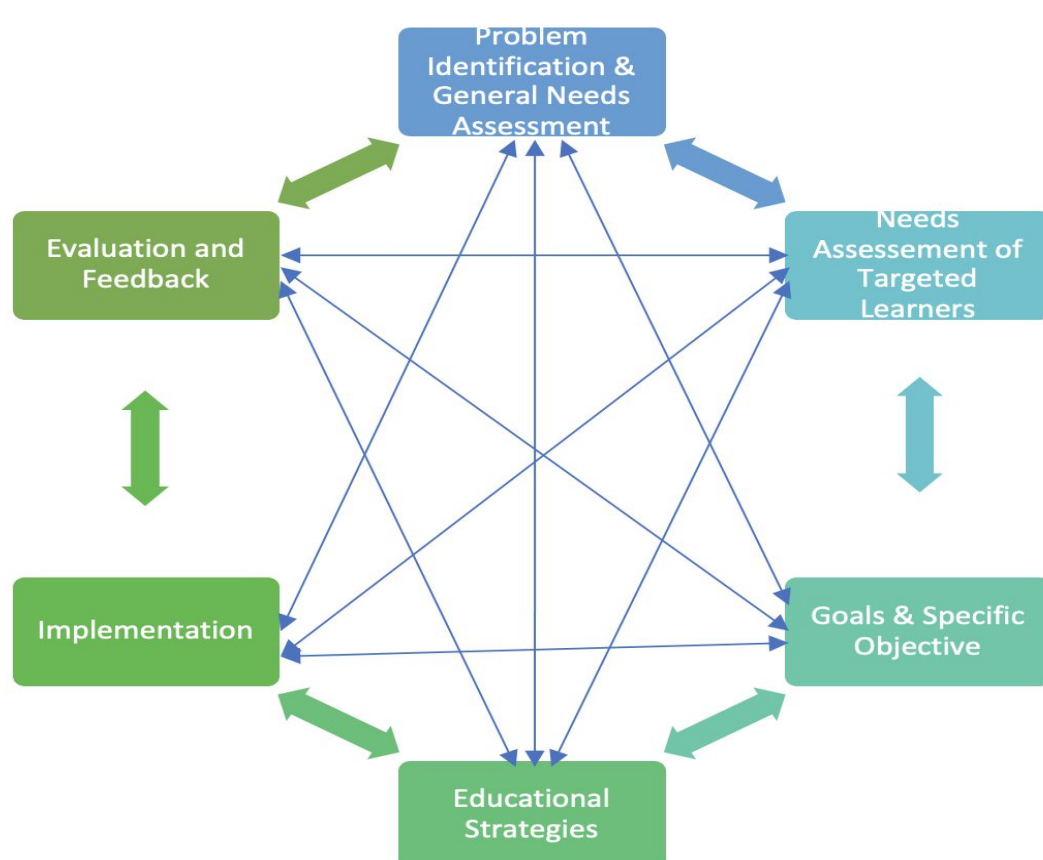

Fig 1. Kern's Six-Step Approach to Curriculum Development

Workshop:
- Before the training, participants took a focused history and physical from a non-English speaking standardized patient using a phone interpreter.
- Trained facilitators assessed the student's performance using the FORS scoring tool.

- Students participated in the interpreter utilization training consisting of multi-modal educational strategies such as didactic, video demonstration, case-based discussion, and role-playing.
- Following the training, facilitators re-assessed students' performance in a different SP encounter using a phone interpreter.
- Students completed a pre- and post-session survey which included questions about demographics, experience, and confidence with interpreter utilization.

Fig 2. Workshop flowchart

Post workshop:
- We measured and compared the pre and post- training percent confidence level
- We compared their median pre- and post-workshop FORS scores.
- Wilcoxon signed-rank test was conducted to compare the median difference between pre- and post-rating scores. Statistical analysis was performed using RStudio (2022.07.1+554)

RESULTS

Table 1. Participant Demographics (N=18)

Gender		Age		Race/Ethnicity	
female	72%	18-24	89%	Asian or Asian American	17%
male	28%	25-34	11%	Black or African American	22%
				Hispanic or Latinx	6%
				White or Caucasian	33%
				Other	22%

Table 2. Participant Confidence Using an Interpreter to Communicate with a Patient (N=18)

	Pre-session	Post-session
Extremely not confident	11%	--
Somewhat not confident	50%	--
Somewhat confident	11%	22%
Confident	28%	61%
Extremely confident	--	17%

- There were 18 participants in our study, of which majority were females (72%) and between ages 18-24 (89%). **(Table 1)**
- Combined 61% of students reported " Extremely and somewhat not confident" before the training. After the training 100% of participant reported confidence in their ability to use an Interpreter. **(Table 2)**
- There was no significant difference between students' post-workshop confidence levels based on their gender (**p=0.97**) or the number of times they reported working with a QMI prior to the workshop (**p=0.49**).
- Student performance on post-workshop FORS significantly improved on 8 out of 11 sub-scores when compared to pre-workshop FORS (**Table 3**).

Table 3. Student Performance on Individual Items of Faculty Observer Rating Scale (N=18)

	Pre-session	Post-session	p
	Q1 **median** Q3 *mean ± SD*	Q1 **median** Q3 *mean ± SD*	p
The trainee adequately explained the purpose of the interview to the interpreter.	1.0 **1.0** 2.8 2.2 ± 1.7	3.0 **5.0** 5.0 3.9 ± 1.3	**0.006**
The trainee explained the interpreter's role to the patient at the beginning.	1.0 **3.0** 3.0 2.3 ± 1.2	3.0 **4.0** 5.0 4.0 ± 1.1	**0.001**
The trainee asked the patient one question at a time.	3.3 **4.0** 5.0 3.9 ± 1.3	5.0 **5.0** 5.0 4.9 ± 0.5	**0.022**
The trainee listened to the patient without unnecessary interruption.	4.3 **5.0** 5.0 4.7 ± 0.6	5.0 **5.0** 5.0 4.8 ± 0.6	0.587
The trainee asked questions to clarify his/her own understanding of the patient's answers.	1.0 **1.0** 3.0 1.9 ± 1.3	3.0 **3.0** 5.0 3.5 ± 1.5	**0.001**
The trainee presented information at a pace that was easy to follow for both patient and interpreter; that is, information was given in digestible chunks.	3.0 **4.0** 5.0 3.9 ± 1.1	5.0 **5.0** 5.0 5.0 ± 0.0	**0.005**
The trainee maintained direct eye contact with the patient (instead of the phone).	2.0 **3.0** 5.0 3.2 ± 1.6	3.2 **4.0** 5.0 4.1 ± 1.1	**0.024**
The trainee addressed the patient in the first person and not as "he/she."	4.3 **5.0** 5.0 4.2 ± 1.5	5.0 **5.0** 5.0 4.9 ± 0.2	0.086
The trainee appropriately closed the encounter: at a minimum, asked the patient if he/she had any questions.	1.0 **1.5** 3.0 2.3 ± 1.6	4.2 **5.0** 5.0 4.4 ± 1.1	**0.001**
The trainee kept the interpreter on track within his/her assigned role, as needed.	3.3 **4.0** 5.0 4.2 ± 0.9	4.0 **5.0** 5.0 4.5 ± 0.7	0.158
Global rating of trainee's effectiveness in using the interpreter for the patient encounter	3.0 **3.0** 3.0 3.0 ± 0.8	4.0 **4.0** 5.0 4.3 ± 0.6	**0.001**

- Significantly more students rated their level of expertise using a QMI as intermediate instead of novice post-workshop compared to pre-workshop (39% vs. 6%, **p=0.041**).
- 94% and 6% of students said the session was "very effective" and "somewhat effective," respectively, in teaching students the skills to use a QMI to communicate with patients.
- 89% of participants agreed their behavior using a QMI in patient encounters will change as a result of this training session.

CONCLUSIONS

- This workshop provides a viable method for increasing medical student familiarity, confidence, and effectiveness at using a QMI during patient encounters.
- Further study is needed to assess external validity across larger groups of students and trainees.

REFERENCES

1. Gambino, Christine P. , Yesenia D. Acosta, and Elizabeth M. Grieco. *English-Speaking Ability of the Foreign-Born Population in the United States: 2012.* American Community Survey Reports, ACS-26. U.S. Census Bureau, Washington, DC. 2014.
2. Karliner, L. S., Jacobs, E. A., Chen, A. H., & Mutha, S. (2007). Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature. *Health services research*, 42(2), 727–754. https://doi.org/10.1111/j.1475-6773.2006.00629.x
3. Flores G, Abreu M, Barone CP, Bachur R, Lin H. 2012. Errors of medical interpretation and their potential clinical consequences: A comparison of professional versus ad hoc versus no interpreters. Ann Emerg Med60:545–553.