Combating Language Barriers in Healthcare:

Community Initiative to Support Arabic-Speaking Patients

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Abstract

Language barriers in healthcare significantly impact patients with limited English proficiency. There are limited resources for healthcare providers to learn Arabic medical terminology. To help bridge this gap for Arabic-speaking patients, healthcare providers need easily accessible resources to learn common medical phrases. Project E.A.C.H. (Enhancing Arab Communication in Health), a nonprofit organization, launched to address this need. By providing free online courses and interactive workshops in collaboration with medical schools and universities, we aim to broaden access to Arabic medical translation resources for healthcare providers and trainees. Since its launch in 2021, the Project E.A.C.H. website has been accessed in over 40 states across the United States and 60 countries worldwide. To further enhance our impact, we seek to expand our website curriculum, provide specialty-focused workshops, and offer cultural competency seminars to strengthen culturally informed clinical communication. This paper aims to highlight the gap in medical translation for Arabic-speaking patients and presents a platform for healthcare professionals to learn and strengthen their Arabic medical terminology (project-each.org).

Keywords: Communication barriers, Translating, Cultural Competency, Minority Groups, Arab American, Education

Introduction: Language Barriers in Healthcare

Effective patient care requires a comprehensive understanding to provide every patient with equitable, high-quality care.[1] Language barriers in healthcare may lead to medical errors, inequitable care, less adherence to treatment, and worse health outcomes for patients.[2] The United States has a growing, diverse population, with approximately 40% of the total population identifying as a race or ethnicity other than non-Hispanic as of 2020.[3] As of 2019, the Arab American population in the United States was estimated to be 3.6 million people.[4] A study examining the amount of time physicians spend with non-English speaking patients found that over 90% of physicians caring for non-English speaking patients spent more time with them compared to English-speaking patients, and over 50% reported accomplishing less during the visit.[5] While perceived to be true, do these findings reflect reality? Do patients with limited English proficiency receive less efficient and quality care due to language barriers?

The impact of language barriers in medicine is continually being studied. A 2010 study assessing the cost of language barriers in healthcare found that language barriers result in patients requiring more services and an increased number of visits.[6] A 2022 study reports that patients with limited English proficiency were less likely to speak up or question decisions made by their providers.[7] This may lead to misunderstandings, increased anxiety, decreased trust in providers, lower adherence to medical treatments, and medical error.[2]

Existing interventions to address language barriers

In the last 40 years, great strides have been made to provide various resources to combat language barriers in healthcare. Beginning in the late 1980s and early 1990s, hospitals provided in-person medical interpreters and telephone interpreter services. For immediate interpretation for patients, there has also been a surge of technological tools allowing for immediate translation. However, a 2025 study found that their "usability is often constrained by challenges related to translation accuracy, accessibility, and learnability."[8]

Importantly, there has been an increase in resources allowing individuals to become trained interpreters via university programs, community colleges, and online certification courses, though they have shortcomings. It is crucial to sustain and increase the languages taught in these programs to broaden the range of these language interpretation services provided to patients. Many medical interpretation programs do not teach the language but rather focus on teaching the basis of medical interpretation via an oral and written exam in the language. Many multilingual speakers may be able to speak fluently regarding common conversational topics, but medical terms are not always common knowledge, even for fluent multilingual speakers. Moreover, assessing which languages are available to learn on medical interpreter websites is important so that we may then work to fill current gaps. There are exceptional websites and programs for a diverse set of languages with a main language being Spanish.[9] Arabic, however, has much fewer resources available to learn medical terminology today.

INTERNATIONAL IMPACT

Top 5 Countries

- USA
- India
- Canada
- Germany
- China

Need for Arabic Medical Interpreter Learning Resources

The population of Arab Americans continues to greatly increase year after year.[12] In fact, Arabic is spoken by over one million people in the United States. For instance, in Dearborn, Michigan, Arabic is the most-spoken non-English language among the population,[13] Given the high number of Arabic-speaking individuals, the need for accessible and linguistically appropriate medical care remains an area of concern. In the United States, Arab Americans, contribute significantly to the uninsured population, which presents barriers to healthcare.[14] In many cases, uninsured patients receive regular check-ups or screenings less frequently, which results in delayed or missed diagnoses such as diabetes, cancer, and cardiovascular diseases.[15] One contributing factor to the lack of diagnoses can be associated with language barriers in minority populations.[15] In fact, a study examining self-rated health of Arab Americans who spoke primarily Arabic was found to be lower than English-speaking Arabs.[14] Therefore, the need for greater representation of Arabic-speaking individuals within the healthcare system remains a priority to encourage Arabic-speaking patients to attend appointments and potentially improve overall health outcomes.

Multiple studies examining the role of interpreters or bilingual providers during healthcare visits for patients with limited English proficiency have described a positive impact on the outcome of the visit and overall patient care experience.[16,17] While a need for language interpretation services continues to increase in the United States, continuous access to language services is less accessible due to the financial burden these services present.[18] Therefore, identifying resources that are not only easily accessible to healthcare workers, but also free of cost, is essential to maximizing their implementation and impact in healthcare settings.

Project E.A.C.H. Program Development & Structure

Project E.A.C.H. is a Michigan-based nonprofit organization providing accessible resources to learn Arabic medical terminology. The mission of Project E.A.C.H. is to bridge the gap between healthcare workers and Arabic-speaking patients by providing an opportunity to practice Arabic medical phrases through online courses and workshops. This project serves as a platform for pre-health students, healthcare professionals, and aspiring medical translators to access a wide range of commonly used medical phrases taught in Modern Standard Arabic.

Website & Courses

In 2020, Project E.A.C.H. was developed by creating a medical curriculum in Arabic, inspired by a review of existing translation resources and interviews with healthcare professionals, patients, and parents of chronically ill children. These interviews were done to assess the needs of the community and aid to properly arrange and outline the curriculum. Soon after, a team of volunteers were recruited to help translate the English course material into Arabic. The curriculum was then refined into structured, activity-based learning resources, including worksheets and printable summaries for each module. The website launched in April 2021 during Arab American Heritage Month and included three free courses: Basics to Conversation, Office and Clerical, and General Patient Care.

As our initiative expanded, we added new features to our courses to improve usability and learner engagement. Enhancements include the incorporation of diacritical marks

(Harakat), which dictate short vowels and grammatical endings, to encourage proper pronunciation and short video lessons to allow users to hear and practice the phrases aloud.

Since the launch date, our website has been used in 64 countries including the United States (U.S.), India, Canada, Germany, and China. Within the U.S. our website has been used in 42 states including Michigan, Ohio, Illinois, California, and Virginia. While the website demonstrates strong engagement for self-directed learners with a year-over-year growth rate of 39%, we recognize that interactive experiences can provide additional support and hands-on learning opportunities.

Workshops

To provide collaborative resources, Project E.A.C.H. began hosting live workshops in November of 2022 to offer the course material to an audience. Project E.A.C.H. currently offers four workshops: Basics & Taking Vitals, Patient History, Physical Examination, Surgery & Lab Tests. These first four workshops were selected based on the wide applicability of the phrases taught. Each session highlights a focused set of commonly used medical phrases that are manageable to learn in a two-hour time frame. Our workshops are designed using evidence-based learning strategies, emphasizing active recall and repetition.[19,20]

Our workshops were conducted through both independently organized sessions and collaborative partnerships with undergraduate universities, medical schools, and nonprofit organizations. We have collaborated with organizations such as Medical Arabic at the University of Michigan Medical School, where our team hosted a series of virtual workshops for students and healthcare professionals across the country. We also collaborated with the National Arab American Medical Association (NAAMA) chapter at Oakland University William Beaumont School of Medicine

Figure 1. Project E.A.C.H.'s first workshop Basics and Taking Vitals, 2022.

to host in-person workshops for medical students.

Preliminary satisfaction surveys suggest increased participant confidence in using new phrases, as well as high satisfaction with services, content, and learning methods provided by Project E.A.C.H. Formal research studies are currently being conducted to systematically assess our workshop effectiveness.

Limitations & Ethical Considerations

Our project has important ethical considerations and limitations. Project E.A.C.H. provides a disclaimer during every workshop stating that by participating in our workshop, participants understand and agree that we are not certifying them to be medical translators. Project E.A.C.H is a learning resource and is not responsible

for any possible mistranslations or complications that occur during their experiences in healthcare. Our team specifically provides certificates of completion that signify the participant attended and engaged in our workshop.

An important limitation to our work regards the linguistic diversity within the Arabic language. Our curriculum teaches Modern Standard Arabic; however, the Arab world includes many regional dialects. Although Modern Standard Arabic is widely understood, it may not reflect the colloquial form spoken by all Arabic-speaking patients. Consequently, our resources may not eliminate language barriers for all Arabic-speaking patients.

Future Directions

Within five years, Project E.A.C.H. has successfully provided free, accessible resources to many individuals internationally, ranging from medical students and trainees to practicing physicians and healthcare professionals. By removing financial and accessibility barriers, we have fostered meaningful impact across diverse healthcare environments through our curriculum. Moving forward, our goal is to expand our reach to broader audiences while continuing to strengthen and evolve our curriculum to suit the needs of healthcare professionals and their patients. We will prioritize increasing the number of courses available on our website and improve the interactivity of our material through new activities and practice-based learning tools.

Moreover, we aim to conduct formal research on our workshops to evaluate the effectiveness of the activities presented, along with introducing new teaching methods within our workshops. We also plan to integrate cultural competency workshops and health-related seminars tailored to our community in hopes of empowering patients to better understand their illnesses while promoting health literacy.

Figure 2. Poster Presentation, Arab Conference at Harvard (ACH), 2024

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