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A Medical Spanish Curriculum Model for Resident Physicians

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Language and cultural barriers play an enormous role in driving patient's health outcomes. These barriers are often a concern among non-English speaking patients when pursuing medical care. As the US population continues to evolve, it has become apparent that multilingualism is crucial in the medical community. In the United States, Spanish is the second most spoken language. According to the 2020 US census, 18.17% of the US population identify as Latinx/Hispanic¹, of those individuals, 13.2% speak Spanish at home and 39.3% of those speak English 'less than very well.'² In Reading city, PA 68.96% identified as Latinx/Hispanic and 55.1% of all polled Reading City residents speak Spanish at home³.

When comparing these data with the availability of Spanish-speaking health care providers, an enormous barrier to healthcare becomes apparent. According to the Association of American Medical Colleges (AAMC), only 6% of physicians identify as Hispanic and only 2% of the non-Hispanic physicians speak Spanish⁴. Such disparities can lead to language discordance among physicians and their patients, which can further lead to ineffective communication, patient dissatisfaction, and overall poor quality of care. Similarly, there have been several studies that focus on the impact of language concordance on patient care.

A 2019 study of SCAN Health Plan, a Medicare Advantage health plan in California, found that non-English speaking patients who had patient-physician language concordance was associated with larger primary care utilization and lower specialist, inpatient, and ED utilization⁵. Another study that focused

on glycemic control showed that Spanish-speaking patients with diabetes who had changed from a language-discordant to a language-concordant primary care provider significantly improved their glycemic control⁶. Similarly, a 2019 systematic review⁷ demonstrated better outcomes for patients receiving language-concordant care in various aspects of healthcare including quality of care (subdivided into primary care, diabetes, pain management, cancer care), satisfaction with care/communication, medical understanding, and mental health. These findings highlight the importance of a medical Spanish curriculum in medical education.

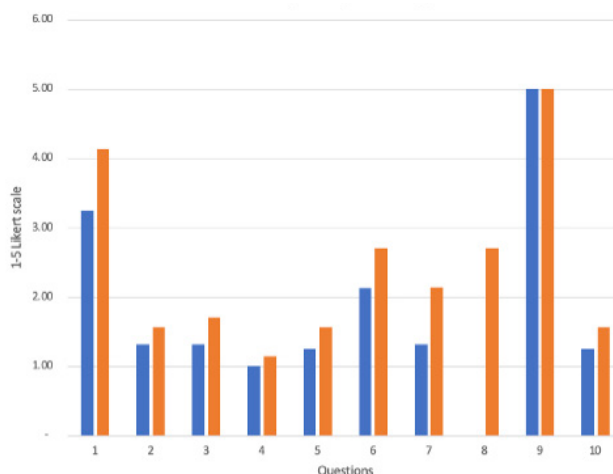
Although several US medical schools⁸ have integrated some form of medical Spanish curriculum into their medical education, this trend has not translated to resident education. Our literature review only identified two residency programs with a formal medical Spanish curriculum^{9,10}. The medical Spanish curricula in medical schools vary and typically include didactic instruction, role play, and immersion activities with increasing scores of self-reported medical Spanish proficiency⁷. There are limited standardized, validated assessment tools to evaluate the proficiency level of medical Spanish learners upon graduation from medical schools or even residency programs.

To help bridge the language gap between Spanish-speaking patients in our Reading Hospital community, we created a medical Spanish curriculum for the Family Medicine Residency program. The medical Spanish curriculum served a two-fold purpose. One: teach basic medical Spanish to our residents. Two: study the impact of the curriculum on residents' self-reported confidence in medical Spanish proficiency. The participants were given a pre and post-intervention questionnaire inquiring about their self-reported confidence in their medical Spanish proficiency using a 1-5 Likert scale (*Figure 1*). The proficiency questionnaire was developed by the study team, given that the existing validated tools

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Figure 1. Summary of pre and post self-reported confidence in medical Spanish proficiency



- 1 How confident are you about greeting a patient in Spanish?
- 2 How confident are you about gathering medical history in Spanish?
- 3 How confident are you about explaining a physical exam to a patient in Spanish?
- 4 How confident are you about explaining your medical decision making to a patient in Spanish?
- 5 How confident are you in providing instructions to a patient in Spanish?
- 6 How confident do you feel about being able to establish rapport with a Spanish-speaking patient?
- 7 How confident do you feel about using medical Spanish with your day-to-day interactions with patients?
- 8 How confident do you feel the medical Spanish course has enhanced your care of Spanish speaking patients?
- 9 Do you utilize interpreting services via phone, video or in person?
- 10 Have you done any additional medical Spanish study?

analyze true competency, which was not the intent of our program. This project was reviewed by the Reading Hospital IRB.

Our medical Spanish curriculum was implemented during the protected FM residency didactic conferences. The curriculum was divided into monthly 45-minute sessions. It consisted of one introductory lecture and three case-based lectures that alternated with two interactive games. Each case-based lecture was further subdivided into greetings, history taking, physical exams, and formulating plans. This was followed by role-playing the learned scenario. Cases were selected from an initial survey that asked participants to identify common and practical cases to review. Participants selected asthma, abdominal pain, and musculoskeletal pain (specifically back and shoulder pain). These selected conditions were the topics of our case-based lectures.

As family medicine residents encounter patients in diverse settings, cases were chosen to simulate those acute and chronic scenarios as well as different demographics (children, adults, females, and males). The lectures included voice recordings for each of the learned words and phrases for easy review. Finally, they were made available to all FM residents on a shared Q-drive. After each case-based lecture, the following monthly session included a review. The review session imitated a fun, interactive, and competitive virtual game show. Brief 10-minute pop quizzes were also conducted on weeks that did not include the 45-minute medical Spanish lecture or review sessions. Quizzes were in the form of either a role play, written, or oral assessments and were designed to review/reinforce any of previous lecture material. Our curriculum lasted a total of 6 months. On review of the self-reported confidence in medical Spanish proficiency scale, the participants had an overall increase in their confidence of using medical Spanish with their patients (*Figure 1*), albeit not a statistically significant increase. Additionally, most participants noted that the curriculum enhanced their care for Spanish-speaking patients.

Historically, there has been criticism of medical Spanish curricula for not having ‘standards of curricular structure, faculty educators, learner assessment, and institutional credit’⁷. We attempted to mitigate this by having a structured curriculum taught by a Family Medicine resident who has previously worked as a medical interpreter as well as having weekly quizzes to reinforce learning. A limitation we encountered was the fluctuating residents’ schedules which decreased their exposure to in-person lectures. We alleviated this by including voice recordings and providing access to lectures and review materials on the

shared Q-drive. Although our sample size was small, consisting of only 17 participants, a larger study can be considered in the future by including residents from other departments at Reading Hospital. The improvement in medical Spanish self-proficiency and clinical outcomes of patients such is a topic for future research. We hope that our curriculum can inspire other residency programs to implement such educational programs to bridge the language gap and address this important healthcare disparity.

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