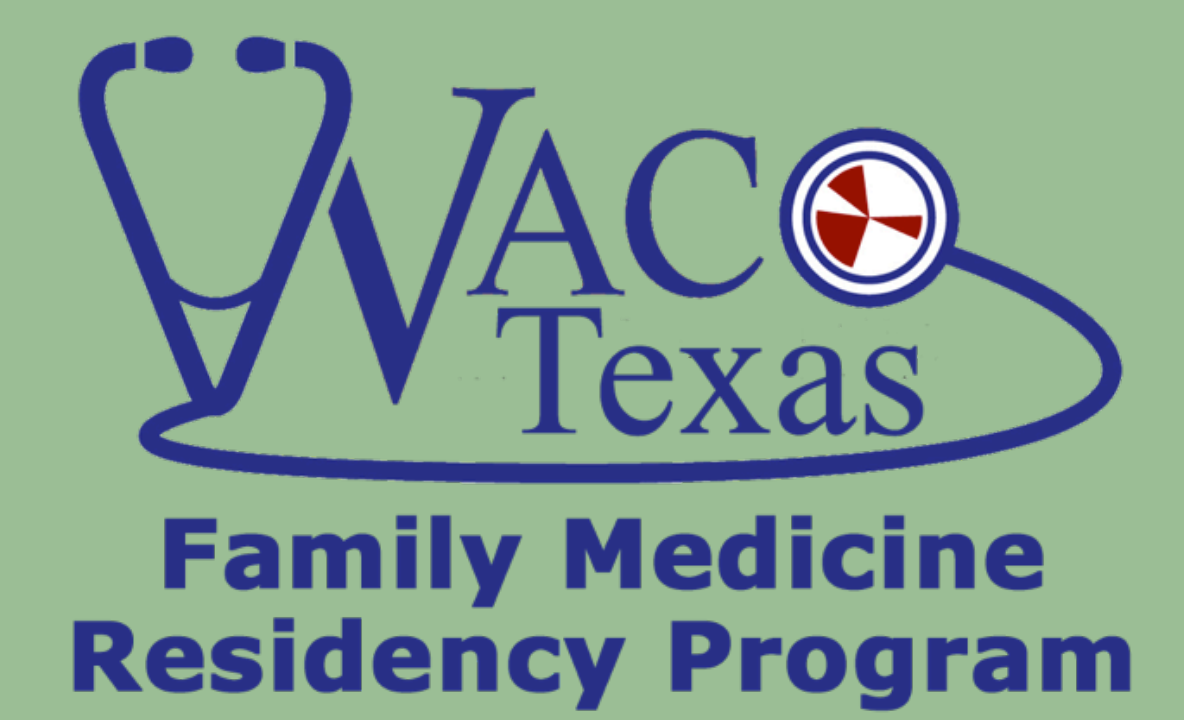




# Implementation of a Spanish Language Track in a Family Medicine Residency Program — Early Results

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## Introduction

- Title VI requires that Limited English Proficiency (LEP) patients receive language-concordant care (Chen, Youdelman, & Brooks, 2007).
- Few outpatient clinics have resources to provide language-concordant care to Spanish-speaking patients.
- LEP patients suffer from poor health outcomes when physicians and interpreters have inadequate training and resources in languages other than English.
- Few studies have measured and reported objective data on the success of language instruction during medical residency education.

## Background

- Latinos comprise 17% of the US population; this is expected to increase to 25% by 2045. Texas' Latino population is approximately 30% (U.S. Census Bureau, 2016, 2017).
- 5% of the US population speaks Spanish and does not speak English "very well" (U.S. Census Bureau, 2016).
- Even bilingual physicians and professional medical interpreters make clinically-significant communication errors (Flores et al., 2003; Prince & Nelson, 1995).
- Only three residency programs included a significant time commitment (100+ hrs/3 years) or external evaluators (Cowden et al., 2012; Gonzalez-Lee & Simon, 1987; Grall et al. 2016).

## Hypotheses

- Six months of participation in a Spanish-language track would improve objective measurement of medical Spanish proficiency.
- Improvement in proficiency would be inversely related to initial proficiency.
- Residents in this program would assess their own Spanish proficiency with relative accuracy.
- Residents who reported high motivation would see greater improvement in their objective scores than those that did not.

## Program Goals

- Increase CCLA score by 10% annually during the 3-year program.
- All participants pass with 80% or higher after 3 years in the program.
- Enable participants to communicate effectively with native speakers.
- Foster cultural humility.
- Provide a model for other residency and medical education programs.

## Methods

- PGY-1 resident participants completed a baseline survey, 40-minute medical Spanish proficiency test (CCLA, ALTA Language Institute), and informal ACTFL proficiency assessment.
- Residents scoring 50% or greater on the CCLA:
  - Met weekly for Spanish *talleres* (workshops) with bilingual physicians
  - Were assigned targeted grammar and vocabulary exercises
  - Were paired with a qualified bilingual interpreter
  - Used Spanish (as able) in patient interactions
  - Were encouraged to present patients to bilingual attendings in Spanish
- Test and survey were repeated 6 months later.

## ACTFL Language Proficiency Descriptions

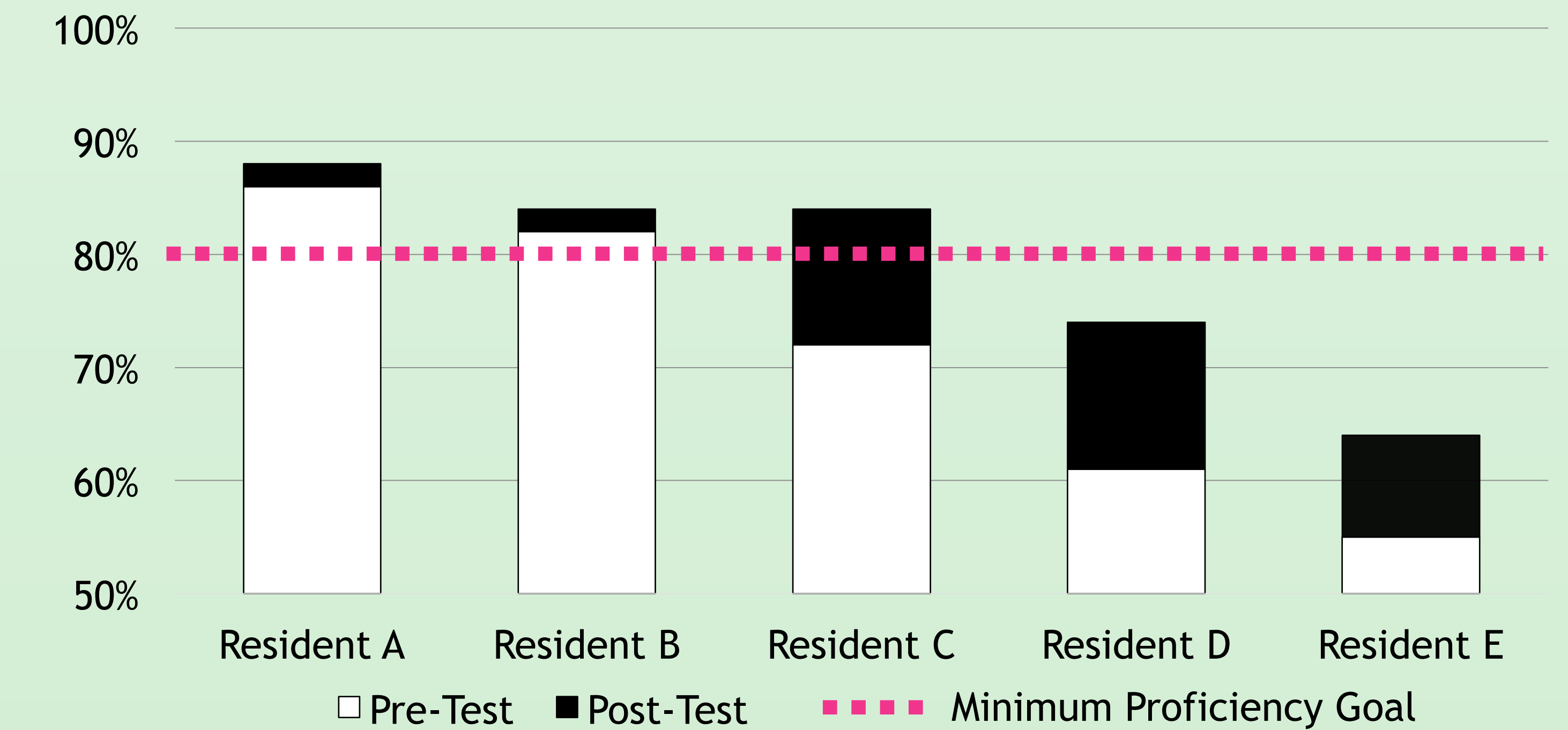
ACTFL Level	Description
Distinguished	Can give sophisticated speeches at academic events and are only potentially differentiated from native speakers by a slight accent, a lack of extraneous cultural references, and extremely rare, insignificant errors.
Superior	Speak without hesitation, making few errors only in uncommon phrasing, and may use phrasing that resembles their native language rather than their target language.
Advanced	Able to talk about a wide variety of topics, especially ones that relate to them or recur in conversation often, but make regular mistakes and are not consistent in their accuracy.
Intermediate	Can hold simple conversations about familiar topics. Corresponds to two semesters of collegiate study to 8 years of study.
Novice	Able to parrot sentences or memorize lists of words. Corresponds to K-6 courses.

## Results

Resident	CCLA Objective Score	ACTFL Level	Survey Self-Assessment (level)	ERAS Level (Descriptor)
A	86%	Advanced Low/Mid	7 (Advanced-Low)	4 (Advanced)
B	82%	Intermediate High	3 (Novice-High)	1 (Basic)
C	72%	Intermediate High	5 (Intermediate-Mid)	3 (Good)
D	61%	Intermediate Low	4 (Intermediate-Low)	2 (Fair)
E	55%	Intermediate Low/Mid	4 (Intermediate-Low)	1 (Basic)

- Residents' self assessment at the time of residency application strongly correlated with their self-assessment at track entry ( $r = 0.94, p < 0.05$ ); i.e., they did not inflate their proficiency rating when applying to the program.
- Other than one outlier, residents accurately predicted their objectively assessed proficiency on the baseline survey, and accuracy improved after 6 months.
- ACTFL assessment strongly correlated with the CCLA objective assessment ( $r = 0.91, p < 0.05$ ).
- Motivation was not linked to improvement in this group ( $r = -0.02, p = 0.97$ ).

## Resident Objective Score Before & After 6 Months



- Average objective score showed an absolute increase of 8% in 6 months:  $t(4) = 3.2, p = 0.02$ .
- Participants with lower initial proficiency showed greater increase which trended towards significance ( $r = -0.85, p = 0.07$ ).

## Limitations

- Small sample size
- Concerns about test learning
- No control group
- No published data correlating ACTFL and CCLA results

## Conclusions

- Intermediate-proficient residents can improve significantly in 6 months with adequate patient volume and instruction.
- Physician language self-assessment with descriptors are correlated with proficiency scores.
- Given appropriate resources, other residency programs can replicate this program.

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