

UC San Diego

Independent Study Projects

Title

Assessment of Spanish Language Proficiency of Bilingual Medical Students

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ISP Report

Title: Assessment of Spanish Language Proficiency of Bilingual Medical Students

Abstract:

As the population of patients with limited English proficiency (LEP) grows, healthcare systems will increasingly be tasked with providing care in languages other than English. This project is designed to assess UCSD bilingual providers' Spanish proficiency and attitudes towards LEP patients through a series of surveys and standardized Spanish language assessments. It also offers the opportunity for participants to complete a Spanish language educational experience as an intervention. Pre-test, post-test, and post-intervention surveys were developed based on findings during a literature review. Several companies offering Spanish language testing services were considered and contacted. IRB approval was applied for and is currently in process. Though the project did not progress as far as was expected, it will be continued by a rising MS4.

Introduction:

Language diversity is increasing tremendously in San Diego and throughout the country. According to the US Census Bureau, the number of people who speak a language other than English at home increased by 148% between 1980 and 2009¹. More recent data, compiled between 2009 and 2013 and released in 2015 shows that of 291 million people surveyed, 60 million speak a language other than English at home (20.7%)². Of those, over 37 million speak Spanish. Furthermore, over 25 million "Speak English less than 'Very Well'" (8.6%). Of the nearly 3 million people surveyed in San Diego County, the proportion who speak a language other than English at home (37.3%) and who "Speak English less than 'Very Well'" (16.3%), are much higher than on a national scale. Of note, over 700,000 San Diegans, 24.7% of those surveyed, speak Spanish at home. By the Census Bureau's most recent estimate, the number of "language other than English" speakers will increase by between 11 and 15 percent by 2020¹. This increasing language diversity presents challenges to healthcare systems.

Several studies have demonstrated that providing care in a patient's preferred language is associated with improved medical outcomes. One such study found that adverse events involving LEP patients were more likely to involve physical harm (49.1%), be the result of communication errors (52.4%), and involve a higher level of harm (46.8%) than those involving English speaking patients (29.5%, 35.9%, and 24.4%, respectively)³. Another study reported that LEP patients were more likely to have problems understanding their medical situation, have trouble understanding labels, and have a bad reaction than their English speaking counterparts⁴. Interestingly, LEP patients with language-concordant physicians were still more likely to have difficulty understanding their medical situation than English speaking counterparts (OR 2.2), but were significantly less likely to than LEP patients with a language discordant physician (OR 9.4). This body of evidence emphasizes the necessity of providing care in a patient's own language.

Though trained professional interpreters positively affect LEP patient outcomes and satisfaction⁵, they unfortunately appear to be underused. Two qualitative studies, one involving internal medicine residents and the other Canadian physicians, both recognized underuse of professional

interpreters^{6,7}. This phenomenon, characterized as “getting by”, was seen as the result of conflicts between providing ideal care and recognition of intense physician time constraints. Specific methods of “getting by” included using one’s own second language skills, having a medical student interpret⁸, and utilizing family members in lieu of professional interpreters.

A 2004 study at the University of Rochester School of Medicine and Dentistry investigated this phenomenon⁹. 4th year medical students and residents in family medicine, pediatrics, medicine/pediatrics, internal medicine, obstetrics/gynecology, and emergency medicine were surveyed regarding their Spanish language competency and usage of interpretation services. 83% of the 241 respondents in this population reported that they had less than conversational language skills. However, only 47% of those with less than conversational language skills reported using an interpreter for every clinical encounter with patients who only speak Spanish. They found that medical students were more likely than residents to report always using a medical Spanish interpreter (though this was not a statistically significant trend). 94% of respondents expressed interest in improving their Spanish language skills and 70% of those with at least some level of Spanish language competency reported interest in having their language skills formally assessed.

A different 2010 study investigated providers’ self-perceived Spanish proficiency but also included correlation with results on a standardized language test¹⁰. Surveys were sent to pediatric residents at Seattle Children’s Hospital, Johns Hopkins School of Medicine, and Children’s Mercy Hospitals and Clinics (in Kansas City, Missouri). 78 of 247 residents responded to the survey and were able to take an ALTA language test. This test is conducted over the phone and consists of 12 questions selected from a bank of 120. Results on the ALTA test were divided into “Not proficient”, “Proficient”, and “Highly proficient”. Similarly to other studies, a large number of residents who rated their Spanish skills as “rudimentary” or “basic” reported communicating with patients without aid from interpreter services (6 out of 23 and 13 out of 17, respectively). 19 residents tested as proficient or better, with five of those residents being highly proficient. Positive predictive value of self-reporting Spanish proficiency for proficiency on the test was only 67%; one in three residents who self-reported as proficient did not test as such. This study again demonstrates a high potential for interpreter under-use. It also introduces the worrisome possibility that many of medical providers are significantly overestimating their own Spanish language abilities.

Medical Spanish education and certification will be critical to guarantee competent care for the growing Spanish-speaking population. A 2011 survey of medical schools conducted by the Latino Medical Student Association sought to assess the state of medical Spanish education in the US¹¹. 110 of 132 medical schools responded to their survey. 73 of those 110 schools reported an existing Spanish curriculum. 12 of the 37 without an existing curriculum planned to establish one within two years. 10 of those 37 had previously discontinued their Spanish curriculum. Modalities used within Spanish curricula varied- 90% included didactic instruction, 69% included student role play, 46% included standardized patients, and 43% offered Spanish language immersion experiences. A minority of programs (21%) offered pre-course proficiency evaluations. Post-course evaluations varied, but included OSCEs, oral exams, and written exams. Several programs have already implemented standardized systems for confirming Spanish

proficiency. The University Of New Mexico School Of Medicine utilizes Versant™, an over-the-phone Spanish language test to assess medical students' Spanish language skills. They found that students' self-rated proficiency largely correlated with their results on the standardized exam. Loyola University Chicago Stritch School of Medicine's protocol includes two over-the-phone assessments by ALTA™, a standardized medical language test developed by Kaiser¹². This is combined with specially written Spanish-language observed standardized clinical experiences (OSCEs). Completion of their three-component assessment culminates in the students receiving a "Spanish Bilingual Medical Student Certification" and a "Hablo Español" tag to display on their name badges.

UCSD currently offers a variety of opportunities for medical students and house staff to improve upon their Spanish language skills. Medical students have the opportunity to participate in Spanish immersion experiences during the summer following their first year. Canopy is an online medical Spanish course available to UCSD residents and medical students. Despite the availability of these resources, there is not currently a standardized method for ensuring individual fluency prior to interacting with Spanish-speaking patients.

The goals of this project are to:

1. Make a standardized assessment of Spanish language proficiency available to UCSD medical students and house staff
2. Assess medical student and house staff attitudes towards Spanish-speaking patients
3. Use standardized Spanish assessments as pre- and post-tests for various language learning modalities available to medical students (online courses, immersion experiences abroad, clinical rotations with a high proportion of Spanish-speaking patients, etc.).

Methods:

Surveys:

A pre-test survey was designed as the first step for enrolled participants. A literature review of medical Spanish education curricula, interpreter use in clinical settings, and treatment of LEP and Spanish-speaking patients was conducted. The pre-test survey consists of a total of 46 multiple choice, and free response questions. Six demographic questions are asked of all participants. The number of remaining questions varies based on training level and responses within the survey. Medical students and residents are offered a maximum of 34 additional questions and attending physicians respond to a maximum of 33 additional questions. Many questions were adopted and modified from surveys described in Yawman, et al⁹ and Thompson, et al¹³. The American Council on the Teaching of Foreign Languages (ACTFL) scale, developed by the federal government, was utilized for self-rated Spanish proficiency. A modified Likert scale was used for all questions for which it was appropriate. Items on the pre-test survey assess provider attitudes towards caring for Spanish-speaking patients, self-rated Spanish proficiency, and for trainees, perceived effect of their Spanish proficiency on grading/evaluations.

A post-test survey was designed for administration after participant completion of the standardized Spanish-language assessment. It consists of four multiple choice questions utilizing a modified Likert scale. Items on the survey assess how test results correlated with self-perceived fluency and whether results would change clinical behavior.

A post-intervention survey was designed for administration after participant completion of a Spanish-language learning experience. The post-intervention survey consists of 15 multiple choice items with responses on a modified Likert scale. The survey identifies which Spanish-language intervention was pursued and otherwise duplicates questions from the pre-test survey to assess changes in attitudes towards caring for Spanish-speaking patients and self-rated proficiency.

The pre-test survey was designed and modified based on input from bilingual physician experts, medical Spanish interpreters, and a pilot involving five medical student volunteers who routinely work with bilingual patients at the UCSD Student Run Free Clinics. Post-test and post-intervention surveys have yet to be piloted.

Standardized Assessments:

ALTASM, VersantSM, and CyraCom[®] were identified as potential providers of the standardized language assessment.

ALTA offers the “Qualified Bilingual Staff Assessment” (QBS)¹⁴. This test was developed by Kaiser and is their current method for certifying staff as bilingual. It is available for a number of languages including Spanish. As noted above, this assessment is also utilized within Loyola University Chicago, Stritch School of Medicine’s robust medical Spanish curriculum. The assessment is administered over the phone and is divided into five sections: conversational/social, customer service, nursing diagnosis and instructions, medical terminology, and sight translation. Participants are rated on their ability to communicate in both healthcare and non-healthcare settings. Primary contact person for ALTA was: Derek Ford (DFord@altalang.com). Pricing was quoted at \$100/test with the possibility of a 10% discount after \$10,000 has been spent (100 exams). A free trial assessment is available via Derek.

UCSD Health Sciences has begun to use CyraCom’s language assessment services. CyraCom currently provides over-the-phone translation services at UCSD. Their assessment is also offered over the phone. It is currently available to faculty physicians, but not to medical students or house staff.

Versant is a language testing service offered by Pearson^{©15}. Their language assessment is a 15-17 minute conversation over the phone. Notably, the University of New Mexico uses this test in their medical Spanish curriculum. Participants are asked to: read phrases, repeat phrases, provide antonyms for stated words, answer sample questions, build sentences, retell a story, and answer open-ended questions. It is scored in the areas of sentence mastery, vocabulary, fluency, and pronunciation, which are then combined to form the overall score. Pricing was quoted at \$39.95/test with the possibility of negotiating a university discount.

Population:

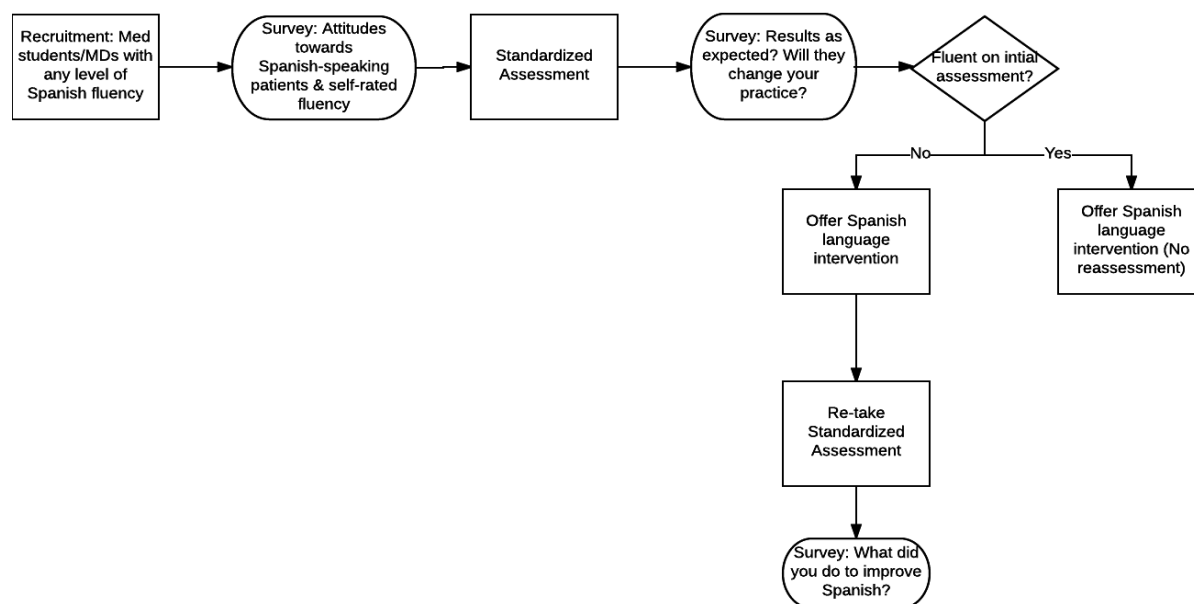
Participants are to be recruited from the UCSD School of Medicine, UCSD Internal Medicine and Family Medicine residency programs, and the Rady Children's Hospital Pediatrics residency program. Any individual with some level of Spanish proficiency is eligible. Of particular interest are those first year medical students who will go on to participate in a Spanish-immersion experience or who will complete a Canopy medical Spanish curriculum.

Possible interventions:

Participants will be offered a number of potential Spanish interventions including, but not limited to: local or international Spanish immersion, work with bilingual providers, or completion of Canopy's medical Spanish course.

Canopy is an online and app-based medical Spanish course. The course is backed by the NIH and is currently used by several medical schools across the country as part of medical Spanish curricula. It is designed to take approximately 50 hours (over three to four months) to complete, and offers a certification upon completion. It is currently available to all UCSD medical students and house staff.

Study design:



Results:

Surveys are included as an addendum.

The three Spanish-language assessments considered were ALTASM, CyraCom[®], and VersantTM.

Advantages of ALTA include its successful incorporation in other health systems (Kaiser and Loyola University Chicago) and its specificity for fluency in the healthcare setting.

Disadvantages of ALTA include its relatively high price point and the possibility that it will require medical knowledge greater than that of the average first year medical student.

Advantages of CyraCom include its ongoing adoption by UCSD Health Sciences. However, in a pilot of the assessment, one of our expert bilingual physicians tested as sub-fluent despite Spanish proficiency that has proven incredibly well suited to the clinical context. Thus, we worry that this assessment would be too difficult for the purposes of this study.

Advantages of Versant include a likely appropriate level of difficulty and its competitive pricing. However, unlike the other assessments, it is not specifically designed for healthcare settings. Overall, Versant will likely be the best suited assessment tool for this project.

Discussion:

Unfortunately, the project did not progress as quickly as we had planned upon its proposal. By this point we had expected to have a cohort of first year medical students and residents who had completed their pre-test survey and first round of assessments. Ideally, there would already be a subgroup of participants completing the Canopy curriculum and/or preparing for summer Spanish immersion experiences who could then be re-assessed. This first round of participants, in our initial timeline would be completing the study protocol as early as September 2017. The primary factor slowing progress was my inability to advance the project throughout a busy academic and interview schedule. This led to significant delays in the IRB application process. The other major challenge facing the project was identification and confirmation of a sustainable funding source. The initial plan was to fund participant assessments with grant money, however that will not be possible in the immediate future. The most promising funding sources will likely be the School of Medicine and residency programs from which participants originate. However, these funding sources must still be ultimately confirmed. A minor challenge was the development of our survey without certainty of which assessment tool would be used. We hoped to phrase survey questions regarding self-perceived fluency with terminology matching assessment score reports. Since our assessment tool is undecided at this point, we instead used the ACTFL proficiency scale, a language proficiency rating system developed by the federal government.

There were also several particularly successful elements of this project's formulation. Our literature review yielded numerous completed studies of medical Spanish proficiency amongst healthcare providers and efforts to improve treatment of LEP patients. From these studies, we were able to assemble and expand upon our survey, developing a robust assessment of provider attitudes towards Spanish-speaking patients. Furthermore, we successfully identified several viable options for our Spanish assessment tool. Establishing contact with each company proved much easier than expected, and I am optimistic that we will be able to secure an appropriate tool at a competitive price point. I am also encouraged by the evolution of this project's scope over the course of its development. In its proposal phase, the project's goal was to implement a standardized-language assessment at the UCSD Student-Run Free Clinics. This goal grew to include recruitment of house staff of UCSD's residency programs, development of three surveys, and post-intervention assessments. With these additions the project will be better equipped to help UCSD address the needs of a growing LEP patient population.

This project will be continued by Monisha Dilip, a rising UCSD MS4. Several steps will be necessary to ensure the project's success. First, the IRB application will need to be accepted. Soon after, a small pilot participant group should be recruited such that our assessment tool and post-test survey can be tested and validated. This test group should include providers with a mix of Spanish proficiency levels ranging from those who have proven fluency in a clinical context to those with intermediate skills. The assessment tool should also be definitively chosen such that final pricing can be confirmed. I anticipate that Versant will be the most apt tool for this project, and am hopeful that further discounts can be obtained to further decrease their already competitive pricing. Finally, the project's funding source(s) will need to be confirmed before rolling it out to a larger study population.

Acknowledgements:

Thank you to my project chair, Dr. Natalie Rodriguez, and committee members, Dr. Sunny Smith and Dr. Felicia Rohan-Minjares. I would also like to acknowledge the significant contribution made by Marcela Zhou-Huang in the development of survey instruments and identification of Spanish assessment tools. Lastly, I would like to thank Monisha Dilip for agreeing to lead this project moving forward.

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Medical Spanish Pre-Assessment Survey

* Required

1. Identifier *

First letter of mother's maiden name, First 3 digits
childhood zip code, Car color

2. Gender *

Mark only one oval.

Female

Male

Other: _____

3. Age *

4. Race/ethnicity *

Check all that apply.

African American/ Black

Asian

Caucasian/ White

Hispanic/ Latino

Decline to state

Other: _____

5. First Spoken Language?

Mark only one oval.

English

Spanish

Other: _____

6. How interested are you in...

Mark only one oval per row.

	Not at all interested	Not Very Interested	Neutral	Somewhat Interested	Very Interested
Working with Spanish-speaking populations?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with the underserved?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming a bilingual provider	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. What is your current clinical role?

Mark only one oval.

- Medical Student *Skip to question 8.*
- Medical Resident *Skip to question 11.*
- Faculty/ Medical Attending *Skip to question 14.*

Medical Students

8. Year in School

Mark only one oval.

- MS1
- MS2
- MS3
- MS4
- PhD Years
- Master's Year
- Other: _____

9. Do you plan on using your Spanish language skills in a clinical setting after medical school?

Mark only one oval.

- No
- Possibly
- Probably
- Yes
- Unsure
- NA, I do not speak Spanish

10. Have you had any patient interaction in your education thus far?

Mark only one oval.

- Yes *Skip to question 16.*
- No *Skip to question 17.*

Skip to question 16.

Residents

11. Year in Program

Mark only one oval.

- PGY-1
- PGY-2
- PGY-3
- PGY-4
- PGY-5
- PGY-6
- Chief Resident Year

12. Specialty

Mark only one oval.

- Emergency Medicine
- Family Medicine
- Internal Medicine
- Medicine/ Pediatrics
- OB/Gyn
- Pediatrics
- Psychiatry
- Surgical specialty
- Other: _____

13. Do you plan on using your Spanish language skills in a clinical setting after you complete residency?

Mark only one oval.

- No
- Possibly
- Yes
- Unsure
- NA, I do not speak Spanish

Skip to question 16.

Attendings/ ancillary staff

14. What setting(s) do you practice in?

Check all that apply.

- Private practice
- Health System
- Academic Institution
- Federally Qualified Health Center (FQHC)
- Free Clinic

15. Specialty

Mark only one oval.

- Emergency Medicine
- Family Medicine
- Internal Medicine
- Medicine/ Pediatrics
- OB/Gyn
- Pediatrics
- Psychiatry
- Surgical specialty
- Other: _____

Patient Demographics

16. How often do you care for patients/ families ____

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Who are Limited English proficiency (LEP)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whom you communicate with using your own non-English language skills?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Who are LEP but you communicate with in English when no professional interpreter is available?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Who prefer to speak in Spanish?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thoughts + Spanish proficiency

17. Of Spanish-speaking patients only, how often do you think patients/ families understand ____

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
their diagnosis?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
discharge instructions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
medications?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
follow-up plans?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. In general, do you feel that "Spanish-speaking only" patients receive a lower quality of care as compared to English-speaking patients?

Mark only one oval.

- No
- Possibly
- Probably
- Yes
- Unsure

19. How would you rate your Spanish proficiency?

Mark only one oval.

- Superior
- Advanced
- Intermediate
- Novice
- NA

20. How did you learn Spanish?

Check all that apply.

- Speaking at Home
- High School
- College/ University
- Medical School
- Travel abroad/Immersion
- Computer-Based Program
- Other: _____

21. How often can you communicate effectively for an entire clinical encounter with a "Spanish-speaking only" patient without the use of an interpreter?

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always

22. **When patients speak Spanish to you, do you understand what they are saying?**

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always

23. **How often do you think your Spanish-speaking patients understand you when you speak in Spanish to them?**

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always

24. **When seeing patients who are "Spanish-speaking only," how often have you attempted to use your Spanish language skills to take a history and/or provide medical advice without the use of an interpreter?**

Mark only one oval.

- Never (I always use a translator)
- Rarely
- Sometimes
- Often
- Always (I never use a translator)

25. **How often do you avoid communicating with patients/ families with limited English proficiency/ Spanish-speaking only?**

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always

26. **If individual language training were provided during your medical training, would you participate?**

Mark only one oval.

- Yes
- No

Interpreter Use

27. **During an encounter with a Spanish-speaking patient, how often do you start in Spanish and realize that the conversation is beyond your language skills?**

Mark only one oval.

- Never - skip following question
- Rarely - answer following question
- Sometimes - answer following question
- Very often - answer following question
- Always - answer following question
- NA - I have not had any patient interaction

28. **During those instances in which you realize that the conversation is beyond your Spanish language skills, how often do you call for an interpreter to finish the encounter?**

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always
- NA - I have not had any patient interaction

29. **What kind of teaching is in place at your current institution regarding how and when to utilize professional interpreters?**

Check all that apply.

- Orientation
- Doctoring/ Practice of Medicine Courses
- Grand round talks
- Human Resources Talks
- Onboarding
- Other: _____

30. **How often do you use an interpreter?**

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always
- NA, I have not had interaction with patients

31. How often do you use the following? *

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Language line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person professional interpreters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Video-line professional interpreters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online or mobile app translation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other residents/ medical students/ Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family members <18 years old	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family members >18 years old	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32. What barriers prevent you from using professional interpreters available to you?

Check all that apply.

- Waiting time for a translator is too long
- Lack of availability
- Cumbersome communication
- Lack of interpreter medical knowledge
- Only a family member/ child was available
- Family, friends, and other staff are adequate translator
- Family preference
- I do not need an interpreter
- Other: _____

33. Do you feel comfortable serving as a Spanish interpreter in the clinical setting?

Mark only one oval.

- Yes
- No

34. Have you ever been professionally certified as ...

Check all that apply.

- A Medical Interpreter?
- A Bilingual Provider?
- Spanish-proficient?
- Other: _____

35. In your profession, have you served as an interpreter for your colleagues?

Note that this question does not refer to the instances in which you had to speak in Spanish to care for and communicate with your own patient. This refers to occasions in which you had to interpret for others, such as ancillary staff, attendings, residents, and medical students that may or may not have been on your team. *reword description of this question as needed*

Mark only one oval.

- Yes
- No *Skip to question 41.*
- NA - I do not speak Spanish *Skip to question 41.*

Serving as an interpreter

36. Was there a time when you served as an interpreter even when you weren't comfortable doing so?

Mark only one oval.

- Yes
- No, skip the following question

37. If you answered yes to the previous question, why?

38. Have you ever voiced your concern about the appropriateness of you serving as an interpreter?

Mark only one oval.

- Yes
- No
- No, I do not think it is inappropriate

39. Did you volunteer to be an interpreter?

Mark only one oval.

- Yes
- No

40. Did you feel forced/ coerced to serve as an interpreter?

Mark only one oval.

- Yes
- No

Effect of language on grades

41. Do you think your language skills affect your grade/ evaluations?

Mark only one oval.

Yes

No Skip to question 44.

Effect of language on grades

42. How do you think your language skills (or lack of language skills) have impacted your grades/ evaluations?

Mark only one oval.

Positive impact

Negative impact

Mixed impact

No impact

43. Explain the impact that your language skills (or lack of language skills) have on your grades/ evaluations.

Effect of language skills on patient selection

44. Did you feel that your medical education/ selection of patients for your learning has been biased based on your language abilities?

Mark only one oval.

Yes

No Stop filling out this form.

Effect of language skills on patient selection

45. How has this bias impacted your medical education?

Mark only one oval.

Positive impact

Negative impact

Mixed impact

No impact

46. Explain the impact that this bias has had in your medical education/ work environment?

(ie. Did it affect your team dynamic? Did it affect your relationship with the team? Did it affect your patient load? Did it affect your grades/ evaluations?)

Medical Spanish Post-Assessment Survey

* Required

1. Identifier *

Same as previous surveys: First letter of mother's maiden name, First 3 digits childhood zip code, Car color

2. The results of my Spanish assessment were _____.

Mark only one oval.

- Significantly better than expected
- Better than expected
- Just as expected
- Worse than expected
- Significantly worse than expected

3. After taking the Spanish assessment I will be more likely to speak with limited English proficiency patients without an interpreter

Mark only one oval.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

4. After taking the Spanish assessment I am more likely to use an interpreter with limited English proficiency patients

Mark only one oval.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

5. I am more likely to pursue further Spanish-language education after receiving the results of my assessment

Mark only one oval.

- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly Disagree
-

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Medical Spanish Post-Intervention Survey

* Required

1. Identifier *

Same as previous survey: First letter of mother's maiden name, First 3 digits childhood zip code, Car color

Thoughts + Spanish proficiency

2. How would you rate your Spanish proficiency?

Mark only one oval.

- Superior
- Advanced
- Intermediate
- Novice
- NA

3. In what Spanish-language intervention(s) did you participate?

Check all that apply.

- Travel abroad
- Immersion program
- Canopy
- Other computer/web-based program
- In-person language classes
- Other: _____

4. How often can you communicate effectively for an entire clinical encounter with a "Spanish-speaking only" patient without the use of an interpreter?

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always

5. **When patients speak Spanish to you, do you understand what they are saying?**

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always

6. **How often do you think your Spanish-speaking patients understand you when you speak in Spanish to them?**

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always

7. **When seeing patients who are "Spanish-speaking only," how often have you attempted to use your Spanish language skills to take a history and/or provide medical advice without the use of an interpreter?**

Mark only one oval.

- Never (I always use a translator)
- Rarely
- Sometimes
- Often
- Always (I never use a translator)

8. **How often do you avoid communicating with patients/ families with limited English proficiency/ Spanish-speaking only?**

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always

Interpreter Use

9. During an encounter with a Spanish-speaking patient, how often do you start in Spanish and realize that the conversation is beyond your language skills?

Mark only one oval.

- Never - skip following question
- Rarely - answer following question
- Sometimes - answer following question
- Very often - answer following question
- Always - answer following question
- NA - I have not had any patient interaction

10. During those instances in which you realize that the conversation is beyond your Spanish language skills, how often do you call for an interpreter to finish the encounter?

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always
- NA - I have not had any patient interaction

11. How often do you use an interpreter?

Mark only one oval.

- Never
- Rarely
- Sometimes
- Often
- Always
- NA, I have not had interaction with patients

12. How often do you use the following? *

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Language line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person professional interpreters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Video-line professional interpreters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online or mobile app translation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other residents/ medical students/ staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family members <18 years old	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family members >18 years old	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. What barriers prevent you from using professional interpreters available to you?

Check all that apply.

- Waiting time for a translator is too long
- Lack of availability
- Cumbersome communication
- Lack of interpreter medical knowledge
- Only a family member/ child was available
- Family, friends, and other staff are adequate translator
- Family preference
- I do not need an interpreter
- Other: _____

14. Do you feel comfortable serving as a Spanish interpreter in the clinical setting?

Mark only one oval.

- Yes
- No

15. Have you ever been professionally certified to serve as ...

Check all that apply.

- A Medical Interpreter?
- A Bilingual Provider?
- Spanish-proficient?
- Other: _____

16. In your profession, have you served as an interpreter for your colleagues?

Note that this question does not refer to the instances in which you had to speak in Spanish to care for and communicate with your own patient. This refers to occasions in which you had to interpret for others, such as ancillary staff, attendings, residents, and medical students that may or may not have been on your team. *reword description of this question as needed*

Mark only one oval.

- Yes
- No
- NA - I do not speak Spanish

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