



# Determining Language Needs of English as a Second Language Medical Students

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## BACKGROUND

Efforts in diversity and inclusion in medicine often focus on race, ethnicity, gender, sexual orientation, and socioeconomic status. However, language barriers affect all aspects of professional development. Literature review demonstrates that English as a Second Language (ESL) can affect reading and presentations skills, participation behavior, test scores, and mentorship relationships.<sup>1,2,3</sup> ESL students performed statistically worse on longer multiple-choice questions on USMLE Step 2 CK.<sup>3</sup> Other challenges faced by ESL students include differences in culture, feedback, language, conceptual clarity, and academic writing differences.<sup>4</sup> A validated needs assessment survey instrument related to ESL in US medical school students is lacking.

## OBJECTIVE

Our project aims to evaluate the challenges for ESL medical students at Indiana University through a survey designed to identify the needs and areas for improvement in professional development.

## PROJECT DESCRIPTION

- Grant proposal selected by the American Society of Anesthesiologists' Committee on Professional Diversity Mentoring Grant, awarded \$1000.
- Survey tool created using Qualtrics in conjunction with the Department of Second Language Studies
- IRB exemption and IUSM approval was obtained from the Data and Survey Vetting Committee for distribution to the IUSM student newsletter and various student groups.

*"...asking for a letter of rec is a very direct favor activity that is culturally different. I know some people who learned English later maybe struggle with Ethics questions since those are so cultural/wording dependent."*

-Medical Student Survey Respondent

## RESULTS

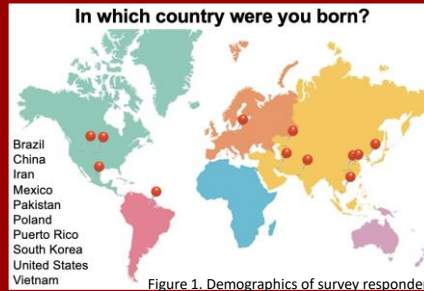


Figure 1. Demographics of survey respondents

*"I have always felt I've struggled more due to English being a second language for me, however it has been difficult to determine if this is true as I don't have a base of comparison and do not know how much other people in my shoes struggle or don't."*

Medical Student Survey Respondent

- We received 22 surveys from MS1-MS4 and analyzed 12 that were completed
- 6 learned to speak English between the ages of 0-5, 6 between the ages of 6-12
- 8 spoke 2 languages, 4 spoke 3 languages
- Languages included Arabic, Assyrian/Aramaic, Mandarin Chinese, Korean, Polish, Portuguese, Spanish, Urdu, and Vietnamese

	How challenging is each of the following items because of English as a second language?	VERY CHALLENGING	MODERATELY CHALLENGING	SLIGHTLY CHALLENGING	NOT CHALLENGING
		1	2	3	4
Q10_1 Basic Science Exams (MS1/MS2)		1	4	4	3
Q10_2 Clinical Rotation Exams (MS3/MS4)		2	2	5	2
Q10_3 Step 1		0	3	2	3
Q10_4 Step 2 Clinical Knowledge		0	2	1	4
Q10_5 Step 2 Clinical Skills		1	0	2	1
Q11_1 Reading medical literature in English		0	5	3	4
Q11_2 Writing medical literature in English		1	4	3	4
Q11_3 Taking notes during medical training in English		1	2	2	7
Q11_4 Performing a chart review		0	2	2	6
Q11_5 Writing clinical notes		0	2	3	5
Q11_6 Drafting a personal statement		2	4	4	1
Q12_1 Listening to medical teaching		0	2	4	6
Q12_2 Understanding questions during medical training		0	1	6	5
Q12_3 Answering questions during medical training		0	2	4	6
Q12_4 Participating in medical discussions in English		1	2	3	6
Q12_5 Asking questions during medical training		1	1	2	8
Q12_6 Pronouncing medical English terms correctly		2	1	3	5
Q13_1 Gathering information from patients		0	1	4	7
Q13_2 Delivering information to patients		0	1	3	7
Q13_3 Presenting patients verbally to Attendings		0	1	5	4
Q13_4 Communicating patient handoffs / signouts		0	2	3	4
Q13_5 Consulting specialty services		0	1	4	5
Q13_6 Asking for clinical rotation feedback		0	1	2	6
Q14_1 Medical Student-Patient interaction		0	1	4	7
Q14_2 Medical Student-Medical Student interaction		0	0	4	8
Q14_3 Medical Student-Resident interaction		0	0	5	6
Q14_4 Medical Student-Attending interaction		0	0	5	6
Q14_5 Medical Student-Nurse interaction		0	1	2	8
Q14_6 Medical Student-Administrative staff interaction		0	2	2	8
Q15_1 Asking for letters of recommendation		1	2	2	6
Q15_2 Interviewing for residency		1	1	3	3
Q15_3 Seeking leadership opportunities		2	1	3	5
Q15_4 Seeking research opportunities		2	2	3	4
Q15_5 Receiving mentorship		2	1	3	5

## DISCUSSION

There are few studies on ESL medical students in the US, and this survey only captured a small group of students. Items that are most challenging include reading and writing medical literature, writing a personal statement, English pronunciation of medical terms, and basic science and clinical rotation exams. In addition, leadership, research, and mentorship opportunities are a challenge.

The various interactions between medical student, resident, attending, nurse, administrative staff, and patient were considered less challenging. This may be related to limited clinical exposure depending on level of training or may already be addressed in the curriculum. It could be that verbal communication is easier to overcome or more often practiced than written communication.

Adaptations ESL students have made include translating difficult topics, performing internet searches of medical terminology, listening to pronunciations on YouTube, and procrastinating less to allow more time for language issues. Medical schools can improve support for ESL students by including clear presentation and communication of learning material, providing formal training sessions on how to communicate with medical staff and patients, and using potentially difficult vocabulary in the classroom like that used on standardized exams (ex: attenuate).

## CONCLUSIONS

Diversity, equity, inclusion, and justice efforts need to expand the category of study and include ESL in their programming. More research is necessary to evaluate the prevalence of challenges for ESL medical students and identify the best approaches for ensuring their academic and professional success.

## REFERENCES

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