



# Research, Education, and Community Health in the San Joaquin Valley (REACH SJV): Improving Medical Education & Healthcare Delivery

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## Purpose

REACH SJV is a student-driven team-based project centered in Fresno, CA established to improve the quality of healthcare delivery by understanding the physician deficit in the San Joaquin Valley (SJV), and to enrich our medical education. The program aims to increase the number of physicians with Valley ties through collaboration with an established pipeline program and retain UCSF-Fresno trained physicians in the SJV by identifying key motivators of practice location. Furthermore, we recognize the time constraints of our education limit the necessary community exposure vital to increasing our cultural awareness. By supplementing our clinical skills with community immersion within the Valley, we shift our focus to patient-centered care to ultimately improve the quality of our healthcare delivery.

## Background

The SJV is located in Central California, spanning from Stockton to Bakersfield. It is a region with significant healthcare disparities, evidenced by 53 Health Professional Shortage Areas.<sup>1</sup> According to a 2008 California HealthCare Foundation report, the number of active primary care physicians (45) and specialists (74) per 100,000 individuals in the SJV are well below the recommendations made by the USDHHS.<sup>2</sup> In addition, the SJV is home to many diverse communities with more than 100 languages spoken and over 70 different ethnic groups present.<sup>3</sup>

UC Davis School of Medicine's mission is to cultivate a passion within us to improve lives and transform the health of the communities we will serve through our education. We receive sufficient theoretical teachings on diverse communities through our curriculum, such as Doctoring courses and interprofessional TEAM-PEACE exercises. However, outside of the clinical arena, we do not have the opportunity for the cultural immersion necessary to better understand the community's needs. Our program aims to understand the physician shortage in the SJV and improve our understanding of the diverse communities we plan to serve.



## Methods

### COMMUNITY IMMERSION

- Met with four community groups in their homes or cultural institutions to understand their experiences in the SJV
- Community groups included:
  - Sikh Institute of Fresno
  - Hmong Community at Stone Soup
  - Farmworkers of Corcoran
  - Centro Binacional para el desarrollo Indigena Oaxaqueña

### CLINICAL PRECEPTORSHIP

- History taking & physical exam
- Clinical reasoning
- Home hospice visits
- Clinical sites included:
  - UCSF-Fresno Alzheimer's & Memory Center
  - Fowler Family Health
  - Ambulatory Care Center at Community Regional Medical Center
  - Tzu Chi Mobile Clinic

### MENTORSHIP

- Seminars
- Workshops
- Individualized mentorship
- Team-building exercises

### RESEARCH

- Quantitatively identify motivators that influence UCSF-Fresno graduating residents' practice inside or outside of the SJV

**Community Immersion:** Group reflection sessions were conducted to identify anecdotes, pictures, or stories that best represented community engagement. **Clinical Preceptorships:** Changes in medical student comfort levels with clinical skills during preceptorships were assessed by pre- and post-program surveys. **Mentorship:** Partnership was established with Fresno State's Health Careers Opportunity Program (HCOP). Data of the 2015 HCOP premedical mentorship cohort who applied to medical schools and were accepted was collected. Mentorship program participants also quantitatively and qualitatively assessed the mentorship component using a post-program survey. **Research:** A cross-sectional study was conducted at UCSF-Fresno residency programs through an anonymous survey. Data were analyzed using Mplus statistical software and a p value of  $\leq 0.05$  was considered significant.

## Results

### Community Immersion: Anecdotes



"Shamanism isn't just about the healing process; it's about bringing family together in a way that Western Medicine does not."



"If you listen to [the farmworkers'] stories, you can tell it's not just their health that's affected. They've been exposed to so much trauma, they just need to be heard."

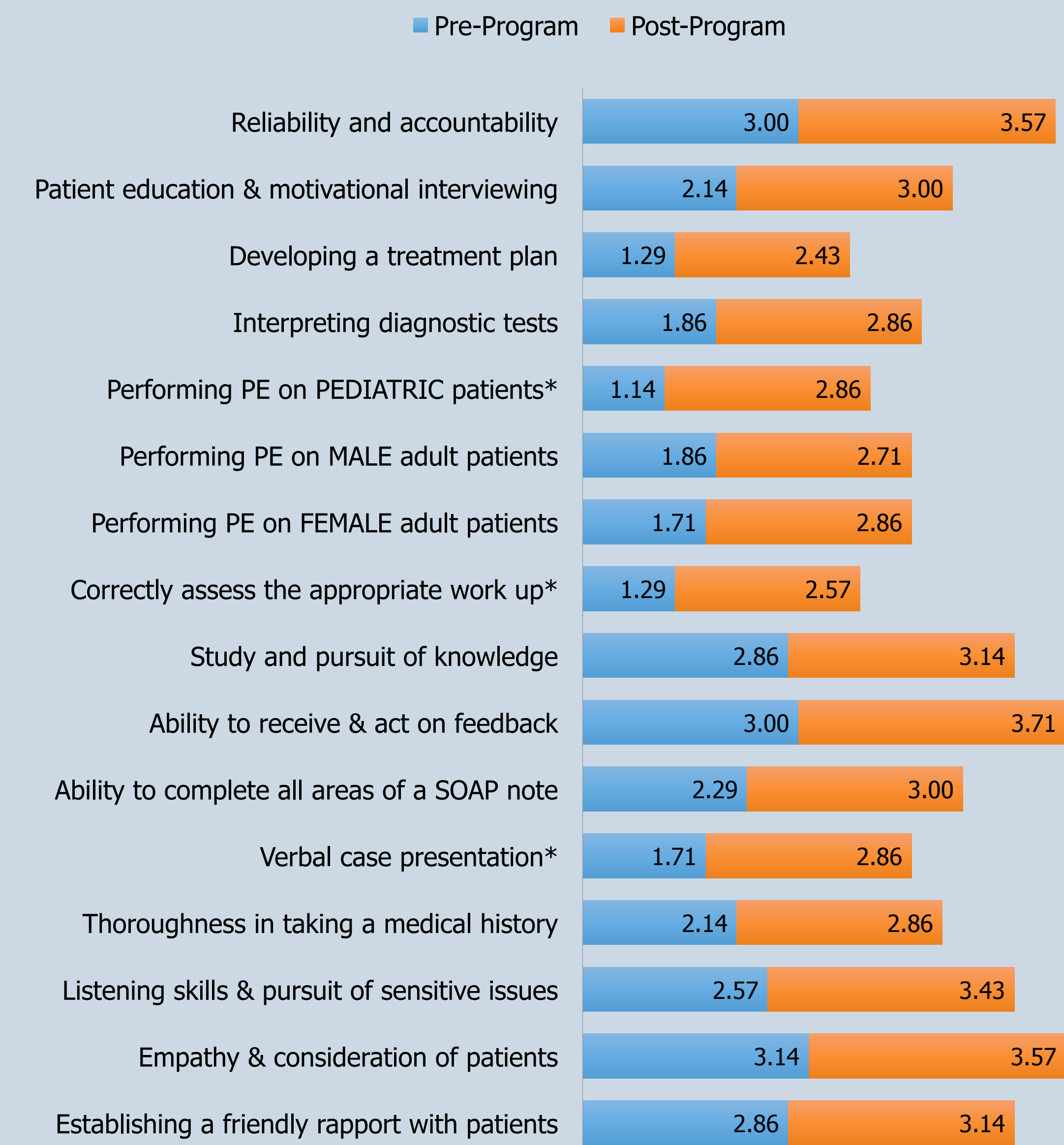


"Mixteco es un idioma, no es un dialecto."



"Their temple wasn't built solely for the Sikh community; it was selflessly built for the entire community."

### Clinical Preceptorships: Figure 1. Self-Assessed Comfort Levels with Clinical Skills Before & After Program



**Mentorship:** 17 Fresno State HCOP undergraduates participated in the mentorship component; two applied and received admission offers to medical schools. The average evaluation score for mentorship program satisfaction was 4.69 out of 5. Suggestions for improvement included incorporating a medical student Q&A panel for future programs.

### Research: Table 1. Associations between Practice Decision Factors and Intent to Practice in San Joaquin Valley

Individual Characteristics and Decision Factor:	Adjusted Odds Ratio (95% CI)	P value
<b>Primary Care Physician</b>	<b>16.02 (1.11-275.89)</b>	<b>0.021*</b>
<b>Debt &gt; 200K</b>	<b>0.07 (0.01-0.70)</b>	<b>0.011*</b>
Birth year before 1985	1.97 (0.21-19.63)	0.276
Male	0.38 (0.04-2.79)	0.174
White	2.52 (0.20-36.31)	0.240
Fellowship	0.38 (0.04-3.11)	0.184
Research	2.20 (0.20-25.46)	0.259
<b>Teaching opportunities</b>	<b>0.09 (0.01-0.78)</b>	<b>0.014*</b>
Location of family	0.91 (0.08-10.87)	0.469
Cultural ties to practice location	0.16 (0.01-1.72)	0.069
<b>Serving a defined patient population</b>	<b>15.74 (1.42-237.46)</b>	<b>0.012*</b>
Salary, benefits, retirement funds	5.68 (0.23-163.04)	0.149
Work hours and lifestyle	4.28 (0.18-107.66)	0.186
Environmental impacts on health	0.35 (0.03-3.79)	0.199
<b>Environmental impacts on lifestyle</b>	<b>0.05 (0.01-0.93)</b>	<b>0.022*</b>
Loan repayment programs	3.91 (0.30-64.65)	0.153
Quality of practice facilities	1.74 (0.08-43.55)	0.360
Provider team	0.27 (0.01-6.48)	0.211
Reimbursement	0.38 (0.02-6.72)	0.256
Information technology	0.24 (0.01-7.36)	0.209

## Discussion

**Community Immersion:** Dialogue with different communities enhanced our communication across cultural backgrounds and provided insight into population-specific health issues not otherwise understood in preclinical years. **Clinical Preceptorships:** Improvement of comfort levels with clinical skills highlight a positive educational experience. Based on this medical student cohort response, these clinical sites could be considered as additional preceptorships in preclinical years. **Mentorship:** The satisfaction scores suggest that mentorship was beneficial to the participating students. Our efforts to help students apply to medical school also appears to be beneficial based on this cohort's acceptance rate. A low mentee-to-mentor ratio, having mentors with strong ties to the Valley, and having medical students who have recently gone through the application process are unique factors of our mentorship component. A future study includes following this cohort through time to see the cumulative acceptance rates to medical schools. **Research:** Identification of selection factors as predictors for future practice location suggests additional non-academic factors that may be taken into account for resident recruitment and retention.

REACH SJV is a team-based approach that enhanced leadership, and as leaders, we can improve the quality of our medical education and healthcare delivery by adding cultural humility to our technical skills and helping recruit the future physicians of the SJV. Future directions include identifying better assessment methods and funding.

## Acknowledgements

In addition to our faculty mentors, we would also like to thank Patty Gonzalez, MA, Linda Alvarez, Juan Carlos Gutierrez, DC, MA, MSOM, and the UC Davis PRIME Programs for their impactful participation and guidance.