

Geospatial Distribution of JAMP Alumni Physicians in Medically Underserved and High Social Deprivation Areas

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Background

- ❖ Texas faces a worsening physician shortage, especially in high-need areas. Population growth, physician retirements, and uneven distribution continue to strain the healthcare system.^{1,2}
- ❖ Texas has responded by opening new medical schools across the state, bringing the total to 16. These schools aim to improve access to care in underserved regions like El Paso, East Texas, and beyond.³
- ❖ In 2001, the Texas legislature created the Joint Admission Medical Program (JAMP). JAMP supports economically disadvantaged Texas students through mentorship, internships, MCAT prep, and guaranteed interviews, helping them enter and remain in the medical field.⁴
- ❖ Since 2001, JAMP has graduated over 800 physicians, with partnerships across 68 undergraduate institutions and all 14 Texas medical schools. Understanding where alumni practice is key to assessing its impact on underserved communities.

Objective

- ❖ Evaluate the geographic distribution of JAMP alumni physicians to determine whether they are practicing in medically underserved areas across Texas, and assess the program’s impact on addressing regional healthcare disparities.

Methods

- 1

Obtained JAMP Report with Alumni Names

Reached out to JAMP Council with project idea.
- 2

Matched Scholar Names with NPI

Used National Plan and Provider Enumeration System (NPPES), to match scholars.
- 3

Matched NPIs to AMA Physician Masterfile

Obtained results for 503/805 (~75%) of JAMP scholar alumni
- 4

Used HealthLandscape to map results

Using ZCTAs obtained from AMA physician masterfile.
- ❖ Using a list of JAMP scholar names provided by the program, we matched individuals to their National Provider Identifier (NPI) numbers through the NPPES database.
 - ❖ These NPIs were then cross-referenced with the AMA Physician Masterfile to obtain current practice information, including ZIP Code Tabulation Area (ZCTA) and medical specialty.
 - ❖ Approximately 75% of scholars were successfully matched. Of matched scholars, used ZCTAs to determine each physician’s Social Deprivation Index (SDI)
 - ❖ Used Poisson regression to assess whether JAMP alumni were more likely to practice in medically underserved communities based on their Social Deprivation Index.

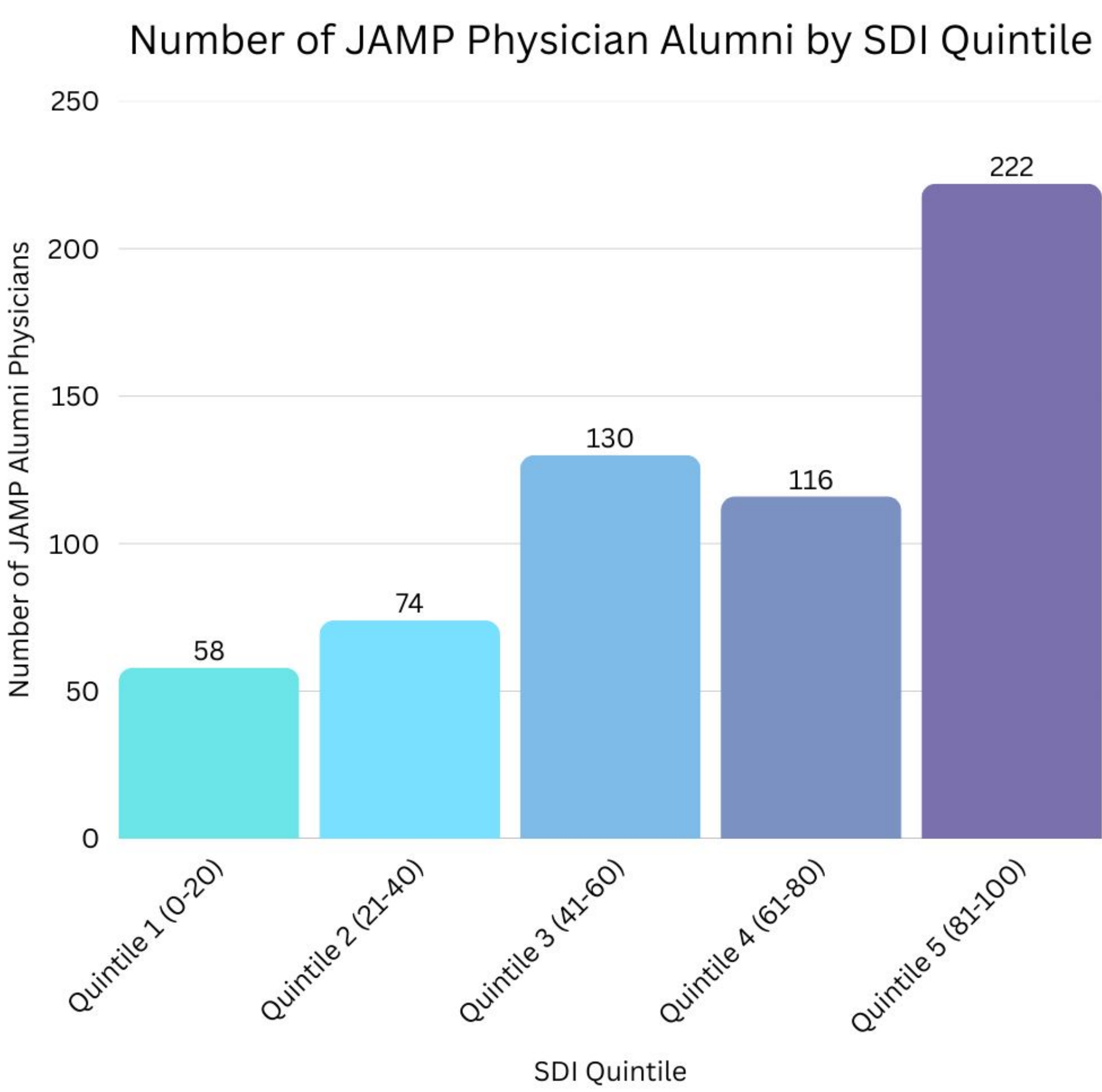


Figure 1. Distribution of JAMP physician alumni by Social Deprivation Index (SDI) quintile.

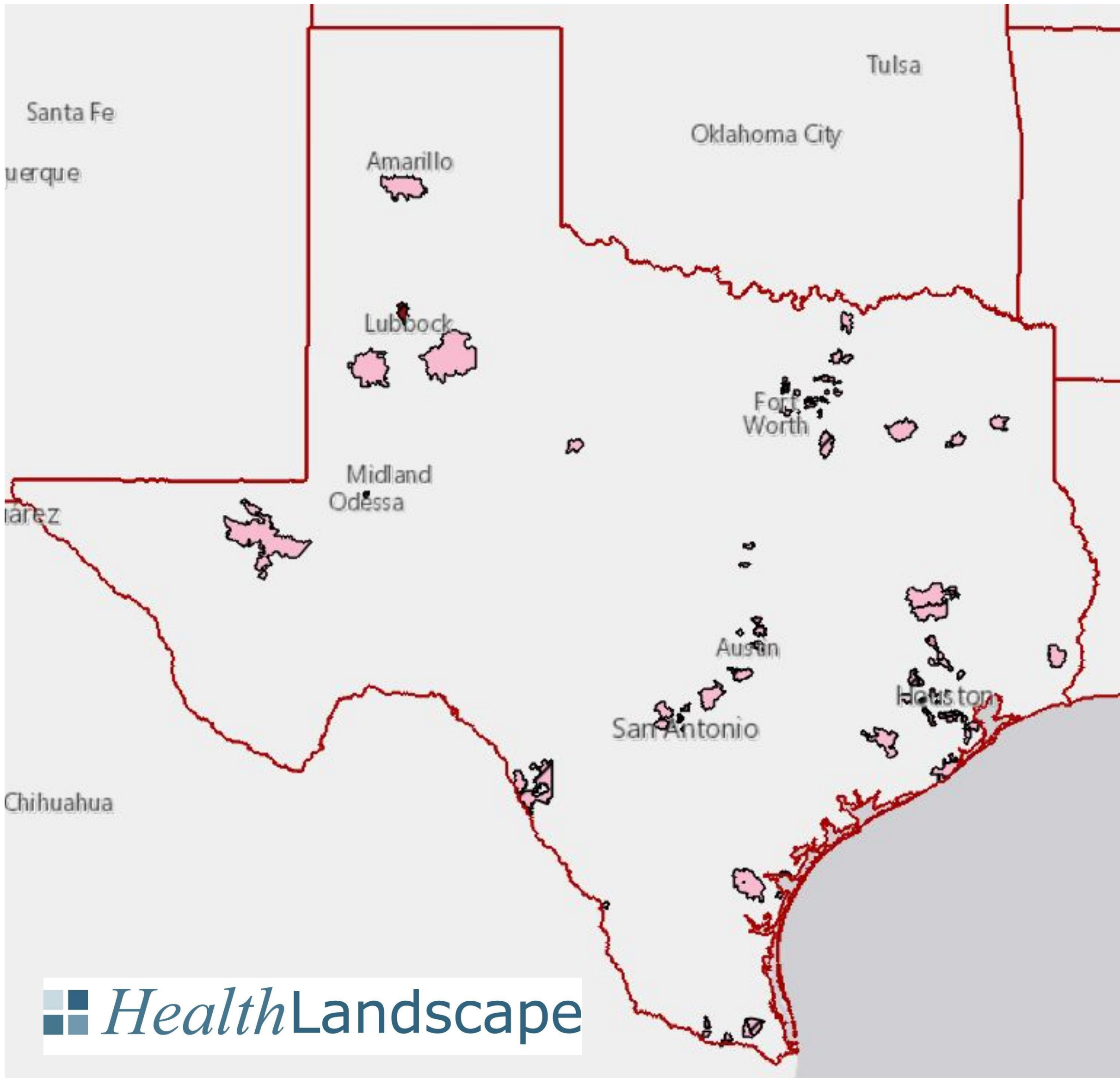


Figure 2: Geographic Distribution of JAMP Scholar Alumni Practicing Primary Care in Texas

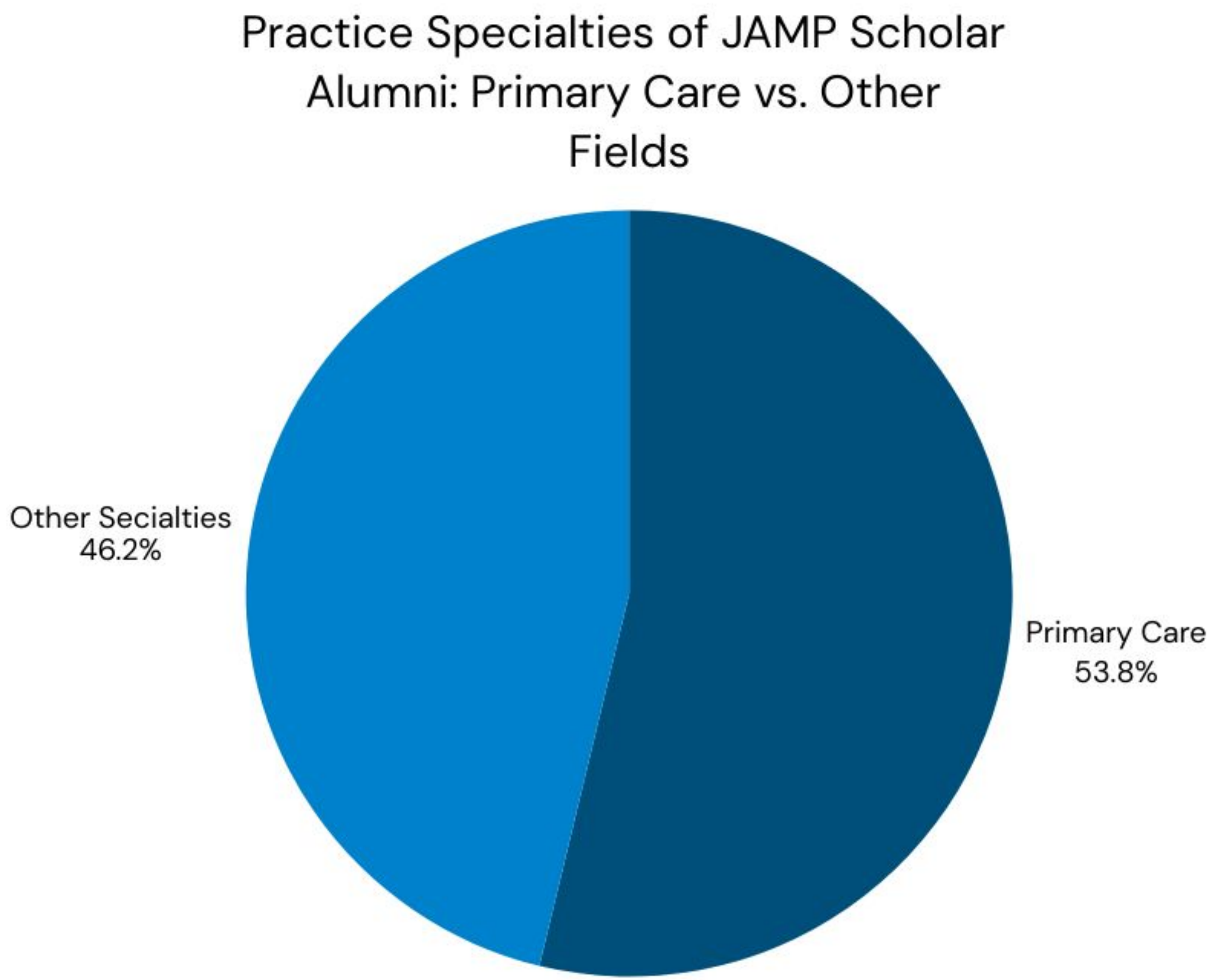


Figure 3. Percentage of JAMP Alumni Physicians practicing Primary Care vs other specialties

Results

- ❖ Poisson regression detected statistically significant increases in physician counts in SDI Quintiles 2 and 5 compared to the least deprived areas (Q1):
 - ZIP codes in Q2 had 42% more physicians than Q1
 - ZIP codes in Q5 had 62% more physicians than Q1.
 - P-value < 0.05
- ❖ JAMP demonstrates a 73% in-state retention rate, with the majority of its graduates actively practicing medicine in Texas.
- ❖ More than half (53%) of JAMP scholar alumni pursue careers in primary care following residency completion.
 - Family Medicine
 - Internal Medicine
 - Pediatrics
 - Internal Medicine and Pediatrics (Med Peds)
 - Geriatrics
 - Sports Medicine

Conclusions

- ❖ Our findings indicate that the Joint Admission Medical Program (JAMP) is fulfilling its mission in multiple ways—including retaining physicians in Texas.
- ❖ JAMP effectively supports the development of a primary care workforce, helping to meet critical healthcare needs across Texas, specifically in high need areas.
- ❖ This targeted approach directly addresses longstanding health disparities and workforce gaps, aligning with broader state goals to improve healthcare access and outcomes.
- ❖ Given its proven effectiveness, expanding JAMP through increased investment would enhance its reach and sustain its impact.
- ❖ The program may serve as a model for other states seeking to improve both physician workforce shortage and distribution in underserved areas.
- ❖ Ongoing tracking of alumni practice locations can help refine placement strategies and guide future resource allocation.

References

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