

What Factors Affect a Physician's Decision to Practice in a Federally Designated Health Professional Shortage Area (HPSA)?

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ABSTRACT

Purpose of Study: There is growing recognition that the geographic maldistribution of physicians is more problematic than the overall supply. In general, physicians tend to congregate in more affluent urban areas, while rural and other high needs populations remain underserved. Despite increasing efforts by medical schools to encourage physicians to practice in these underserved areas, uneven distribution of physicians continues to be a challenge. This study examines factors that affect a physician's decision to practice in a federally designated Health Professional Shortage Area (HPSA).

Methods: The primary data source for the study was the New York Resident Exit Survey. This annual survey of physicians completing residency or fellowship training in New York has been conducted in collaboration with teaching hospitals in the state since 1998 (61% response rate). The survey collects extensive information on new physicians' demographic and educational backgrounds, post-training plans, and job market experiences. This study used the last 3 years of survey data (2015-2017) and includes only physicians with confirmed practice plans (n = 3,004). The primary analytic technique was a logistic regression model.

Key Findings: Several factors were associated with a physician's decision to practice in a HPSA, including race, citizenship status combined with medical school location, specialty, and education debt. Underrepresented minorities (URMs), International medical school graduates (IMGs) with an exchange visa, primary care specialties, and physicians with higher education debt were most likely to report plans to practice in a HPSA. Job market experiences and lifestyle factors, such as relationship status and having dependent children, did not significantly affect a physician's practice location choice.

Implications: This study found that a number of factors affect a physician's decision to practice in a Health Professional Shortage Area. These findings have broad implications. The factors found to be related to a physician's practice location choice may help inform programs designed to encourage physicians to practice in underserved areas.

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INTRODUCTION

There is growing recognition that the geographic maldistribution of physicians is more problematic than the overall supply. In general, physicians tend to congregate in more affluent urban areas, while more rural locations and other high needs populations remain underserved. Despite increasing efforts by medical schools to encourage physicians to practice in these underserved areas, uneven distribution of physicians continues to be a challenge. This study examines factors that affect a physician's decision to practice in a federally designated Health Professional Shortage Area (HPSA).

METHODS

The primary data source for the study was the New York Resident Exit Survey. This annual survey of physicians completing residency or fellowship training in New York has been conducted in collaboration with teaching hospitals in the state since 1998 (61% response rate). The survey collects extensive information on new physicians' demographic and educational backgrounds, post-training plans, and job market experiences.

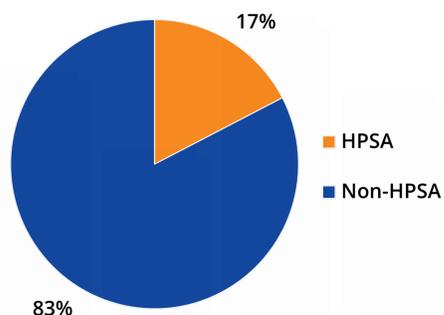
A logistic regression model was used to explore the relationship between practice in a HPSA and various factors, including demographic and educational characteristics, lifestyle factors, and job market experiences. The model pools data from the last 3 years of the survey (2015-2017). Only physicians with confirmed practice plans were included in this analysis (n=3,004).

RESULTS

Majority of newly trained physicians do not plan to work in a HPSA.

- Among the physicians surveyed, 17% indicated plans to practice in a HPSA. Eighty-three percent were either not entering a HPSA or were unsure if their future practice was located in a HPSA.

Figure 1. Percentage of Respondents Entering Practice in a HPSA, 2015-2017



RESULTS (cont.)

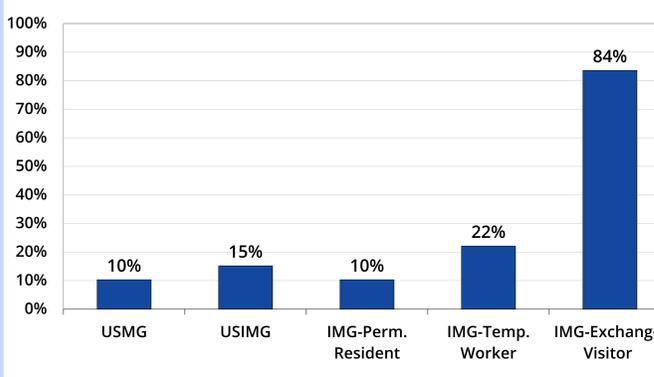
Underrepresented minorities (Blacks, Hispanics/Latinos, and American Indians/Alaska Natives) were more likely to practice in a HPSA compared to White or Asian physicians.

Table 1. Distribution of Physicians' Race/Ethnicity by Practice Location, 2015-2017

Race/Ethnicity	HPSA		Non-HPSA	
	n	%	n	%
Underrepresented Minority (URM)	117	27%	316	73%
Non-URM	399	15.5%	2,172	84.5%
Total	516	17.2%	2,488	82.8%

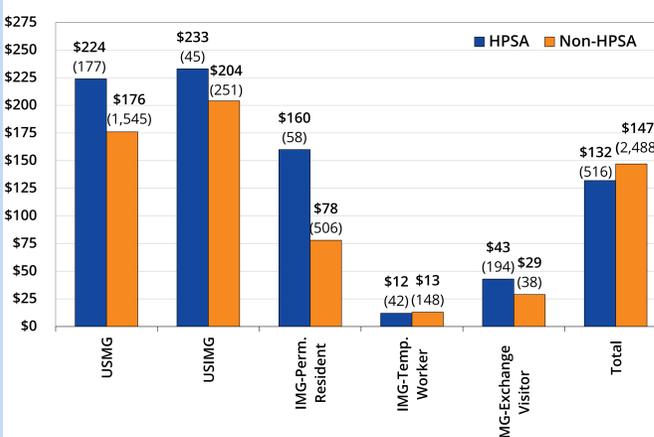
A greater percentage of international medical school graduates (IMGs) with an exchange visa planned to practice in a HPSA compared to all other citizenship groups.

Figure 2. Percentage of Respondents Entering Practice in a HPSA by Citizenship/Medical School Location, 2015-2017



Physicians with higher education debt were more likely to practice in a HPSA after accounting for citizenship/medical school location.

Figure 3. Education Debt of Respondents by HPSA Practice and Citizenship Status/Med. School Location, 2015-2017



RESULTS (cont.)

The following table provides results of the logistic regression analysis.

Table 2. HPSA Practice Logistic Regression Model, 2015-2017

Variable	Exp(B)	Sig.
Demographics		
Female	1.214	0.101
URM	1.966	0.000
IMG-Native Born	1.471	0.048
IMG-Permanent Resident	1.149	0.447
IMG-H1, H2, H3 Temp Worker	3.976	0.000
IMG-J1, J2 Exchange Visitor	71.692	0.000
Education Characteristics		
Osteopathic (DO)	1.306	0.149
Primary Care Specialty	1.788	0.000
Mean Education Debt (in \$1,000s)	1.003	0.000
Lifestyle Factors		
Married/Long-term Relationship	0.789	0.099
Dependent Children	1.258	0.080
Predictable Workday	0.897	0.570
Length of Workday	0.945	0.780
Overnight Calls	0.763	0.162
Weekend Duties	1.418	0.070
Job Market Experiences		
Difficulty Finding Position	1.092	0.540
Number of Job Offers	0.996	0.848
Perception of National Job Market (Likert Score)	1.059	0.558

NOTE: Reference category is USMG for citizenship/medical school location

KEY FINDINGS

A number of factors were significantly associated with a physician's decision to practice in a HPSA, including race, citizenship status combined with medical school location, specialty, and education debt.

- Underrepresented minorities (URMs) were more likely to enter practice in a HPSA than White or Asian physicians.
- Primary care specialties (family medicine, general pediatrics, and internal medicine) were more likely to indicate plans to practice in a HPSA than non-primary care specialties.
- IMGs who were US citizens, temporary workers, or had an exchange visa were more likely to practice in a HPSA compared to US medical school graduates (USMGs).
- Physicians who reported greater education debt were more likely to practice in a HPSA after accounting for citizenship and medical school location.
- Job market experiences and lifestyle factors did not significantly affect a physician's choice of practice location.

These findings have broad implications. The factors found to be related and not related to a physician's practice location choice may help inform programs designed to encourage physicians to practice in underserved areas.