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Rural Family Physicians Have a Broader Scope of Practice than Urban Family Physicians

Lars E. Peterson, MD, PhD; Bo Fang, PhD

Overview of Key Findings

- Little is known about whether rural family physicians provide a broader scope of practice, defined as the range of clinical and procedural services that they provide, than metropolitan family physicians.
- Using data from 18,846 family physicians, we examined variations in the provision of 21 clinical services (e.g., inpatient care, home visits, and obstetrics) and 18 procedural services (e.g., prenatal ultrasound, endoscopy, and office skin procedures) across metropolitan, large rural, small rural, and frontier areas.
- We found that the percentage of family physicians providing each type of clinical and procedural service rises with increasing rurality.

Introduction

Rural America has faced a perpetual disadvantage with fewer health care resources compared to urban areas. Due to lower availability of specialized health care services in rural areas and often long travel times to access such services, rural clinicians may be called upon to provide a broader range of health care services and procedures than their urban counterparts. Family physicians are the most prevalent physicians in rural areas and their training and scope of practice is unbounded by gender, age, organ system, or site of care. Past work has documented that the scope of practice of the average family physician is contracting¹⁻³ but that rural family physicians maintain a broader scope of practice than urban family physicians.^{4,5} Prior research has also shown that patients of physicians with a broader scope of practice have lower overall health care costs and lower odds of hospitalization.⁶ Despite these findings, it remains unknown whether scope of practice becomes broader with increasing rurality and whether procedures commonly performed in family medicine also vary between rural and urban family physicians.

Study Purpose

The purpose of this study was to determine differences in scope of practice for clinical and procedural care between rural and urban family physicians nationally.

Methods

Data Source. We used data from 18,846 family physicians that completed the American Board of Family Medicine (ABFM) Family Medicine Certification Examination practice demographic questionnaire in 2014 and 2015. Completing the questionnaire is a mandatory component of examination registration and occurs three to four months prior to the examination. Data elements captured include practice organization, size, features, address, and care team members; performance of clinical services; and sites of care. One in four family physicians also answered questions regarding whether they performed specific procedures.

Scope of Practice. Scope of practice was defined as whether a family physician provided each of 21 clinical services (e.g., home visits, inpatient care, and obstetrics) and each of 18 procedural services (e.g., prenatal ultrasound, endoscopy, and office skin procedures).

Rurality. Rurality was determined using four categories derived from Rural Urban Continuum Codes: frontier (<2,500), small rural (2,500-19,999), large rural (20,000-250,000), and metropolitan (>250,000).

Analysis. Differences in scope of practice by rurality of practice setting were determined using Chi-Square tests.

Findings

Our sample included 18,846 family physicians who sought to continue their ABFM certification in 2014 and 2015 (Table 1). Of these, 83.4% were in metropolitan areas, 6.6% in large rural, 8.5% in small rural, and 1.4% in frontier areas. Family physicians in rural areas were generally older, male, and U.S. medical graduates.

Table 1. Characteristics of Sample by Rurality (N=18,846)

Physician Characteristics	Metropolitan (n=15,725)	Large Rural (n=1,248)	Small Rural (n=1,601)	Frontier (n=272)
Mean Age in Years	51.5	52.9	52.8	53.3
(95% Confidence Interval)*	(51.4-51.7)	(52.4-53.3)	(52.4-53.2)	(52.2-54.4)
Male vs. Female (% Male)*	60.1%	70.0%	72.2%	69.9%
MD vs. DO (% MD)	90.7%	88.5%	90.3%	91.5%
US vs. Intl Med Grad (% IMG)*	20.7%	11.9%	10.1%	8.1%

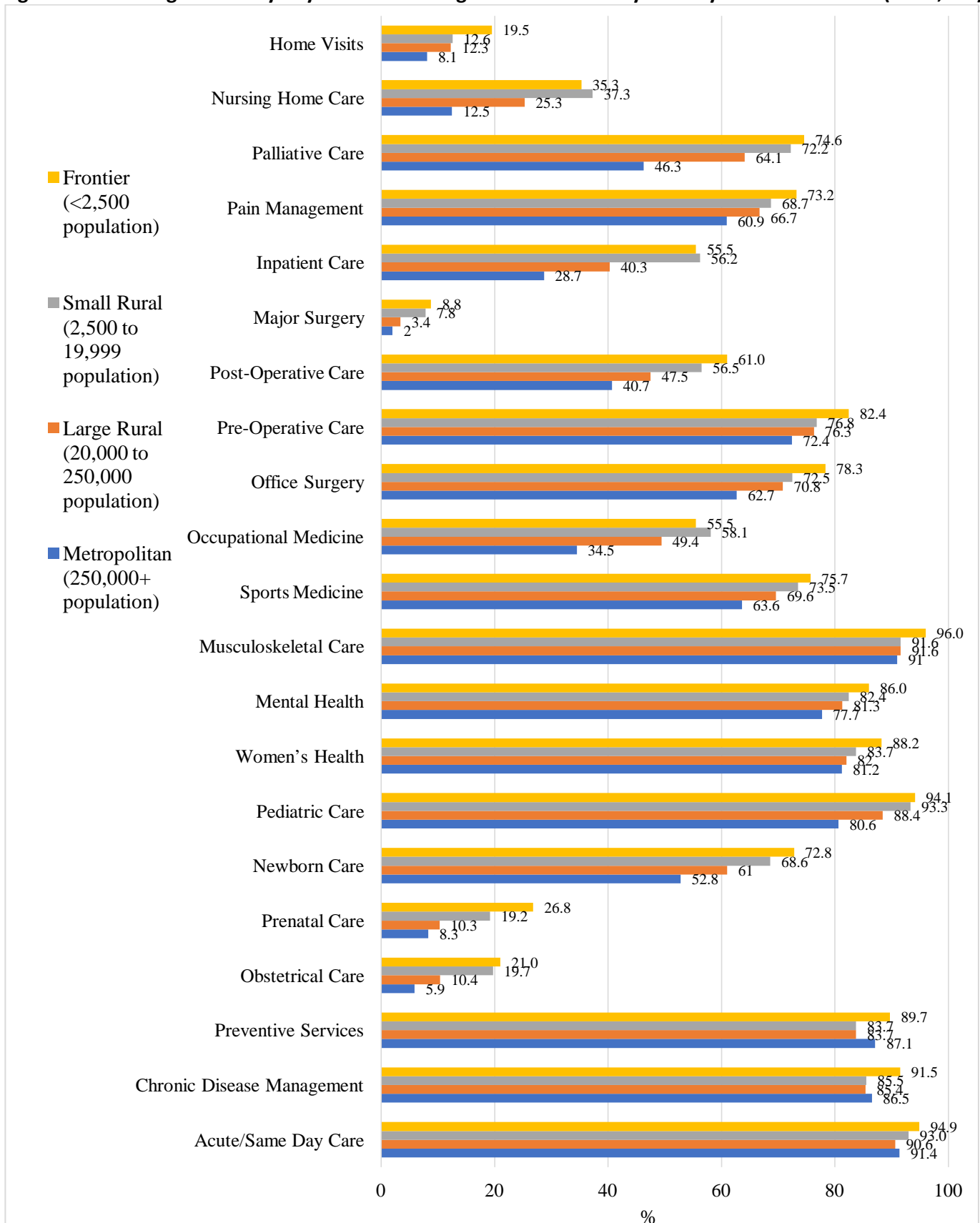
* P value < .05 for either t-test or Chi-Square test across the four categories.

We found significant variation in scope of practice between urban and rural family physicians (Figure 1). Rural family physicians were more likely to provide obstetrical deliveries, newborn care, pediatric care, occupational medicine, sports medicine, palliative care, and mental health care than urban family physicians. Rural family physicians were also more likely to see patients in the hospital and nursing home and to conduct home visits. The percentage of family physicians who provided these services was greater with increasing rurality.

About 24.9%, or 4,702 of the 18,846 respondents, were also asked whether they performed specific procedures. Of these, 321 were in large rural, 397 in small rural, and 72 in frontier areas. Similar to clinical services and sites of care, a higher percentage of rurally located family physicians, in general, provided each procedure than urban family physicians, with the exception of cosmetic procedures, musculoskeletal ultrasound, and both types of procedural contraception (Figure 2).

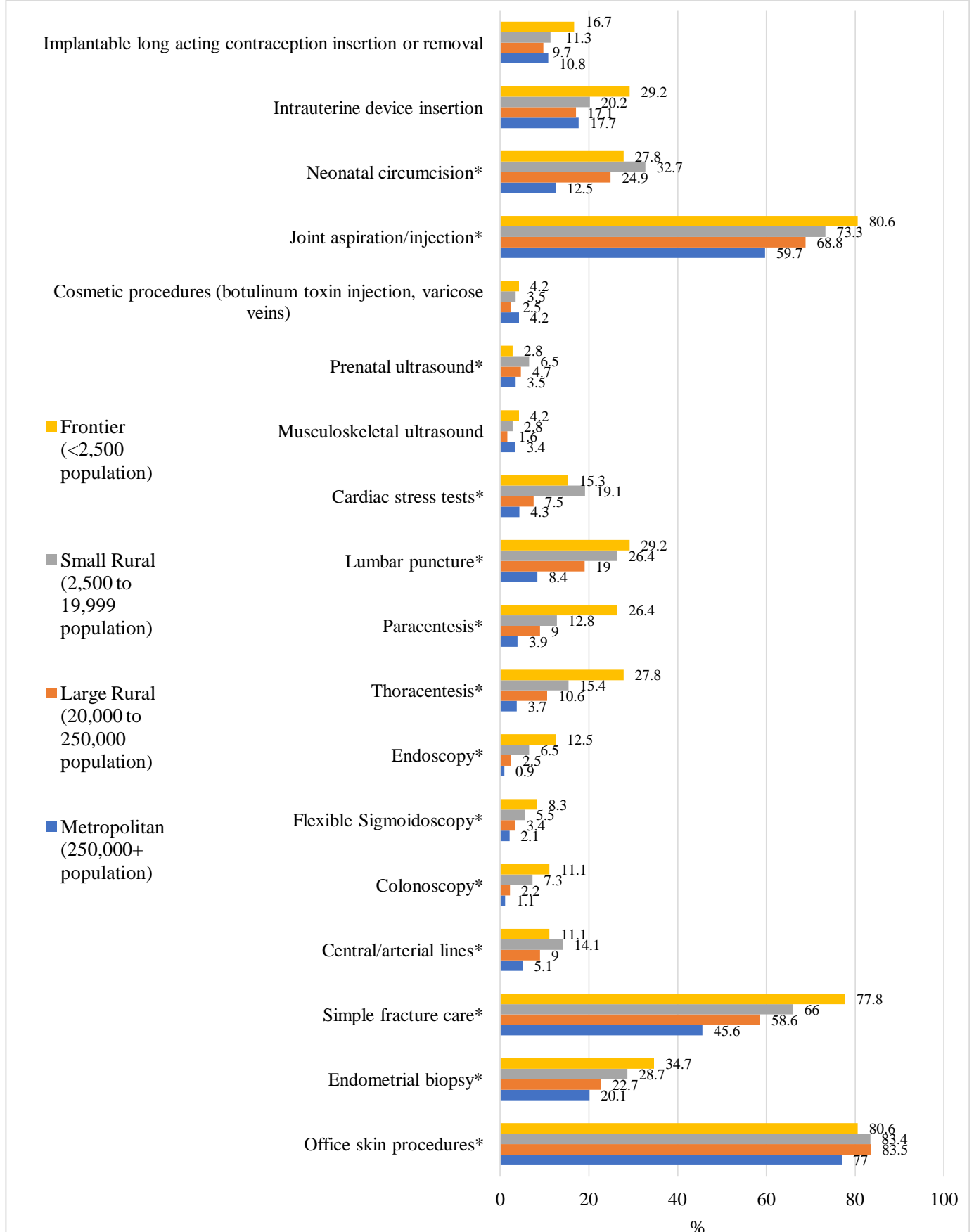
In keeping with rural family physicians providing more musculoskeletal and sports medicine care, they also reported higher rates of performing joint aspirations / injections and fracture care. Consistent with rural family physicians being more likely to see patients in the hospital, they were more likely to also provide lumbar punctures, central lines, and thora- and paracenteses. Rural family physicians were also more likely to provide advanced diagnostic care including endoscopy, colonoscopy, and cardiac stress testing.

Figure 1. Percentage of Family Physicians Providing *Clinical Services* by Rurality in 2014 and 2015 (N=18,846)



Chi-Square test was significant ($P < .05$) across the four categories for all variables

Figure 2. Percentage of Family Physicians Providing *Procedural Care* by Rurality in 2014 and 2015 (N=4,702)



*P value < .05 for Chi-Square test across the four categories

Conclusions and Potential Policy Implications

Using data from over 3,000 rural and 15,000 urban family physicians, we confirmed prior findings that rural family physicians have a broader scope of practice than urban family physicians. We extended existing knowledge by documenting gains in scope of practice and procedural care within rural areas with increasing rurality. Prior research has shown declines in the numbers of family physicians providing pediatric, mental health, and women's health care,¹⁻³ but we found that rural family physicians were providing these services at high levels, consistent with comprehensive care.

In summary, rural family physicians generally have a broader scope of practice than urban family physicians,^{4,5} and the scope of practice expands with increasing rurality. Potential policy implications emerging from this brief include:

- 1) Despite evidence that the scope of practice of family physicians has been shrinking over time, policies that encourage family physicians to maintain a broad scope of practice may be necessary in rural areas where there are fewer options to access more specialized medical services.
- 2) With strong evidence that overall health care costs and hospitalization rates are lower when physicians have a broader scope of practice,⁶ measures of primary care and subsequent payments for care may need to be developed to reward physicians who “do more” for their patients.

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