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Rural Family Physicians in Patient Centered Medical Homes Have a Broader Scope of Practice

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Overview

- Rural family physicians often have a broader scope of practice, defined as the range of clinical and procedural services that they provide, than urban family physicians. The Patient Centered Medical Home (PCMH) model of care is intended to provide accessible and comprehensive care, but little is known about how practicing in a PCMH is associated with rural family physicians' scope of practice.
- Using data from 18,846 family physicians nationally, we found that rural family physicians working in PCMH practices generally provide a wider scope of clinical and procedural services than those not working in PCMH practices.

Introduction

Rural America generally has fewer health care resources compared to urban areas. Rural clinicians often provide a broader range of services than their urban counterparts due to lower availability of subspecialty care in rural areas. Past work has documented this phenomenon among family physicians.[1,2]

The Patient Centered Medical Home (PCMH) model should provide patients with comprehensive health care, a whole person-centered approach, coordination of care, improved accessibility, and higher quality care. While rural practices have reported equivalent readiness for PCMH transformation compared to urban practices,[3] they may have difficulty transforming their care due to lack of resources.[4] Family physicians are more likely to work in a PCMH when they are in large practices, which are less common in rural areas.[5] This suggests that the PCMH model may be a way for rural family physicians to organize their practices to better meet their patients' needs, but they may lack the financial and human capital infrastructure to do so. Thus, rural practices which have already achieved PCMH status may provide a broader scope of care to their patients.

Purpose

The purpose of this study was to determine whether rural family physicians who work in a PCMH practice have a broader scope of practice than those not in PCMH practices.

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Methods

Data. We used data from 18,846 family physicians seeking to continue their ABFM certification who completed the 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; sites of care; and PCMH status. One in four family physicians also answered questions regarding whether they performed specific procedures.

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

Rurality of Practice. Rurality was defined using 4 categories derived from the Rural Urban Continuum Codes grouping by population size: large rural (20,000-250,000), small rural (2,500-19,999), and frontier (<2,500).

Analysis. As we were interested in differences within rural areas (large rural, small rural, and frontier) by PCMH status, we characterized scope of clinical services and procedural care by PCMH status within each rural category. Statistical significance was determined via Chi-Square tests.

Findings

Sample Statistics. The analytical sample included 3,121 rural family physicians who sought to continue their ABFM certification in 2014 and 2015 (Table 1). Of the 3,121 rural family physicians, 1,248 were in large rural, 1,601were in small rural, and 272 were in frontier areas. Having a PCMH declined with increasingly rurality. Of those family physicians practicing in any rural area, 790 (25.3%) were asked whether they performed specific procedures. Of these, 321 were in large rural, 397 in small rural, and 72 in frontier areas.

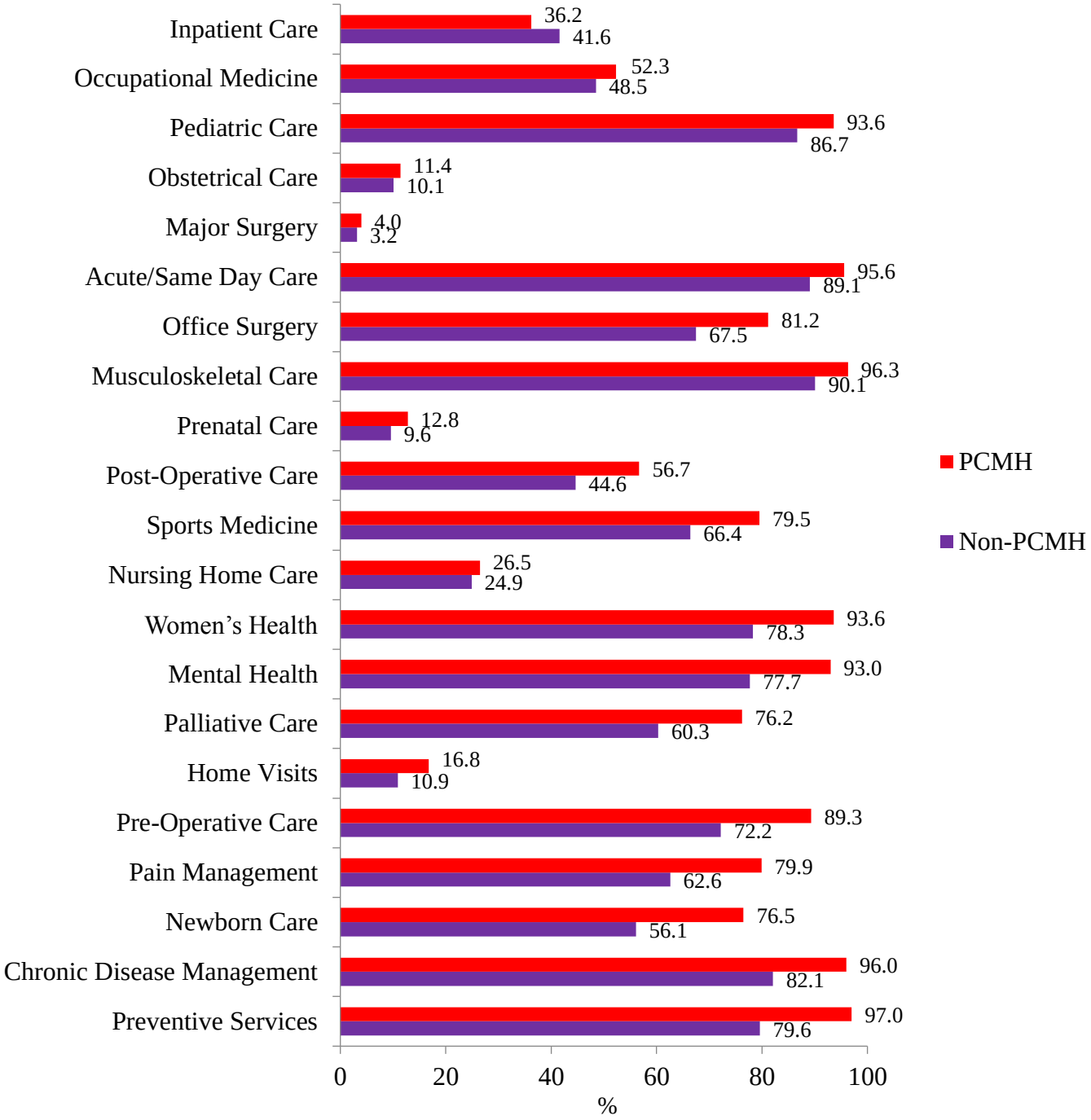
Table 1. Personal and Practice Characteristics of Family Physicians by Rurality

	Large Rural	Small Rural	Frontier
Physician Characteristics	n=1,248	n=1,601	n=272
Mean Age in Years	52.9	52.8	53.3
(95% Confidence Interval)	(52.4-53.3)	(52.4-53.2)	(52.2-54.4)
Male vs. Female (% Male)	70.0%	72.2%	69.9%
MD vs. DO (% MD)	88.5%	90.3%	91.5%
US vs. International Medical Graduate (% IMG)	11.9%	10.1%	8.1%
Practice Characteristics			
PCMH vs. not PCMH (% PCMH)	23.9%	22.2%	21.3%

Scope of Clinical Services Provided by Physicians in PCMH and non-PCMH Practices, by Rurality

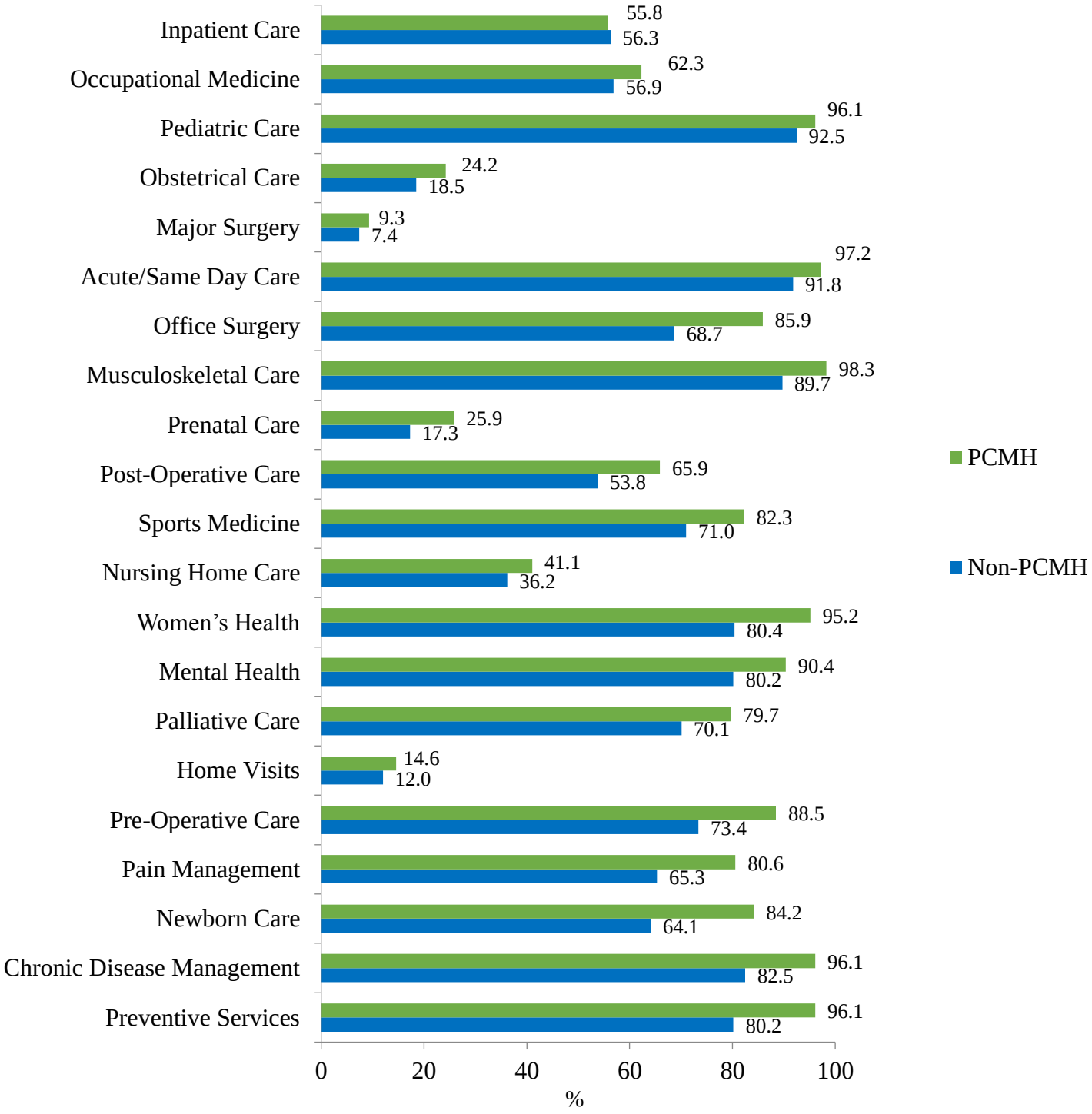
Within large rural areas, we found that having a PCMH was associated with providing a wider scope of clinical services (see Figure 1). For example, 93.6% of physicians in PCMH practices and 86.7% of physicians in non-PCMH practices in large rural areas provided pediatric care. All differences in scope of clinical services provided between family physicians in PCMH and non-PCMH practices were significant ($P < .05$) except for obstetrical, prenatal care, major surgery, inpatient care, and nursing home care.

Figure 1. Scope of Clinical Services in PCMH/non-PCMH in Large Rural Areas



Within small rural areas, we also found that having a PCMH was associated with providing a wider scope of clinical services (see Figure 2). All differences between physicians in PCMH and non-PCMH practices were significant ($P < .05$) except for major surgery, inpatient care, nursing home care, and home visits.

Figure 2. Scope of Clinical Services in PCMH/non-PCMH in Small Rural Areas



Within frontier areas (see Figure 3), no differences between physicians practicing in PCMH and non-PCMH practices were significant ($P < .05$) except for chronic disease management and preventive services.

Figure 3. Scope of Clinical Services in PCMH/non-PCMH in Frontier Areas

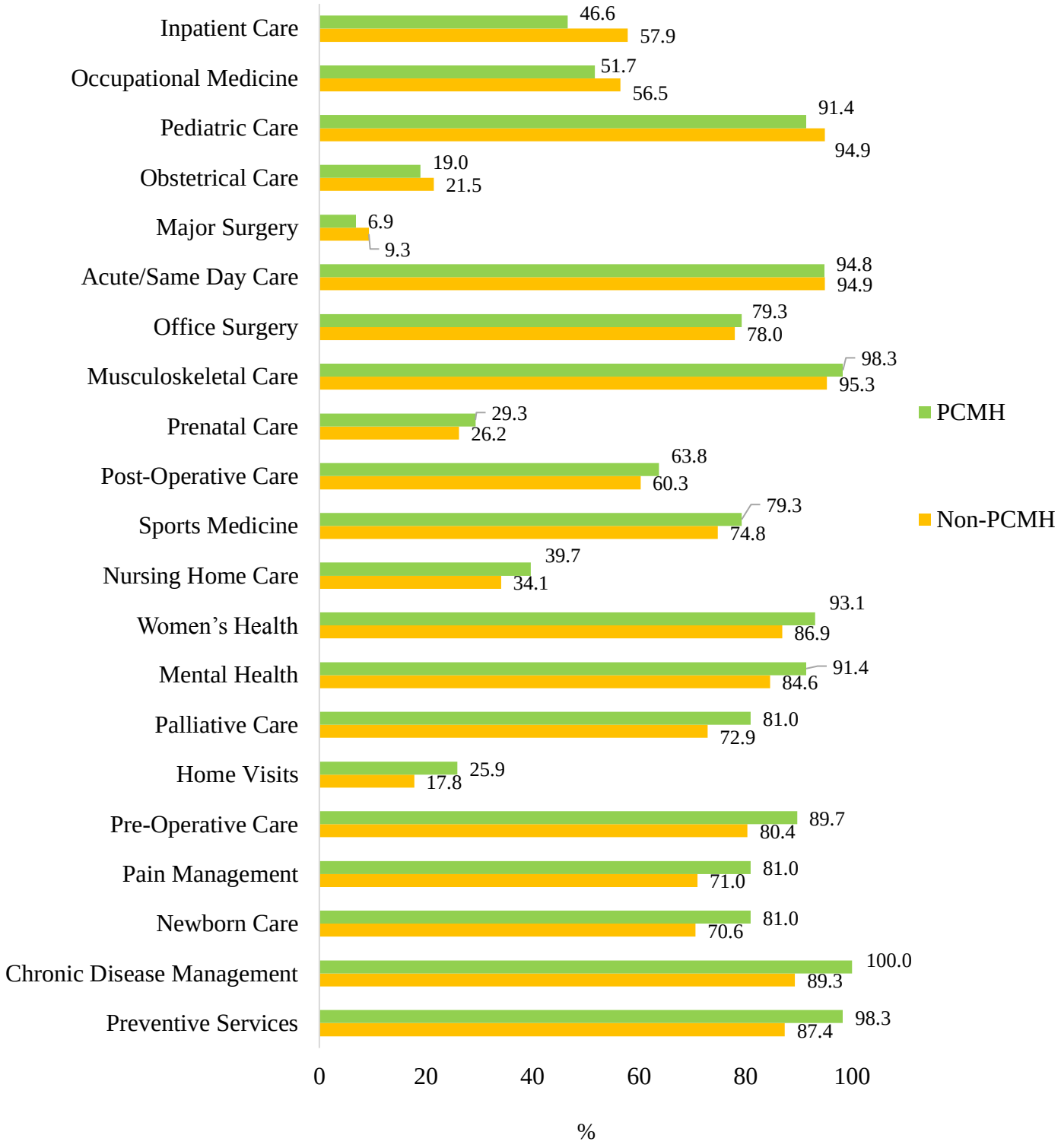
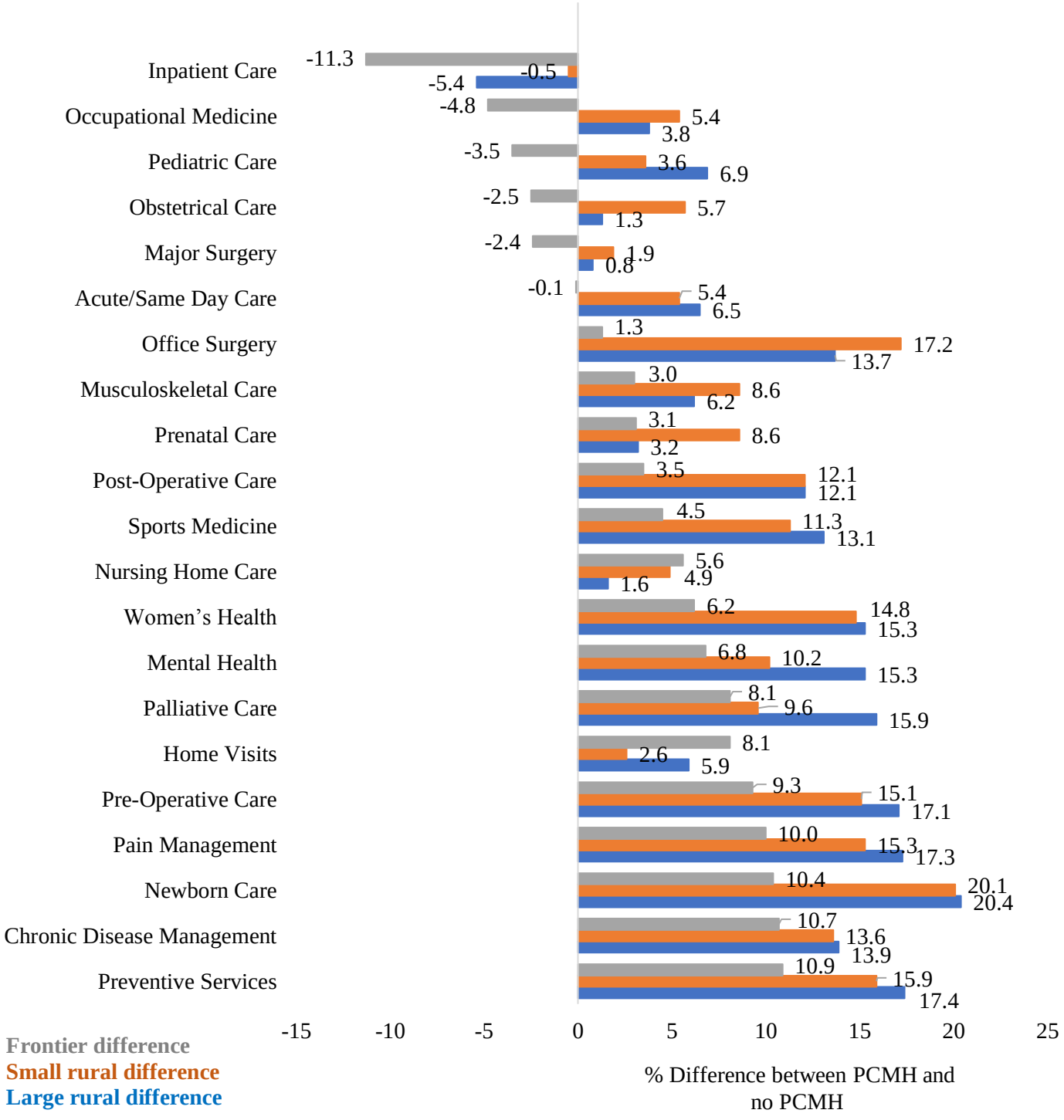


Figure 4 illustrates differences in the percentages of physicians providing each clinical service between those working in PCMH and non-PCMH practices. The largest differences were generally in large and small rural areas. Services associated with preventive care (chronic disease management, preventive care) were each at least 10% more commonly provided by family physicians in all rural PCMH practices than those in rural non-PCMH practices. Women's health and newborn care were also more likely to be provided by family physicians in rural PCMH practices. Services indicating coordination of care with surgeons (pre- and post-op care) were more commonly performed by family physicians in rural PCMH practices.

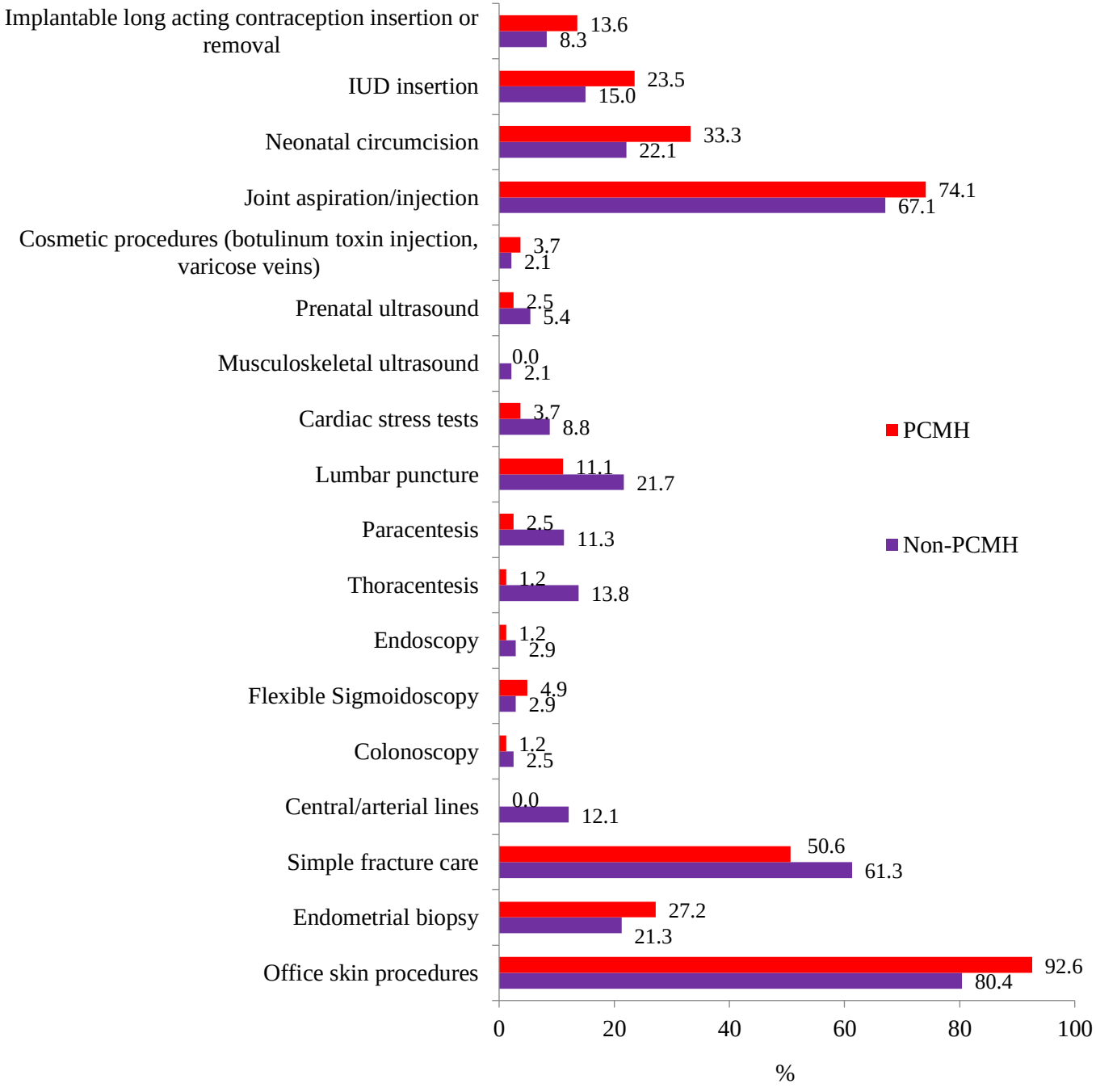
Figure 4. % Differences between PCMH/non-PCMH



Scope of Procedures Provided by Physicians in PCMH and non-PCMH Practices, by Rurality

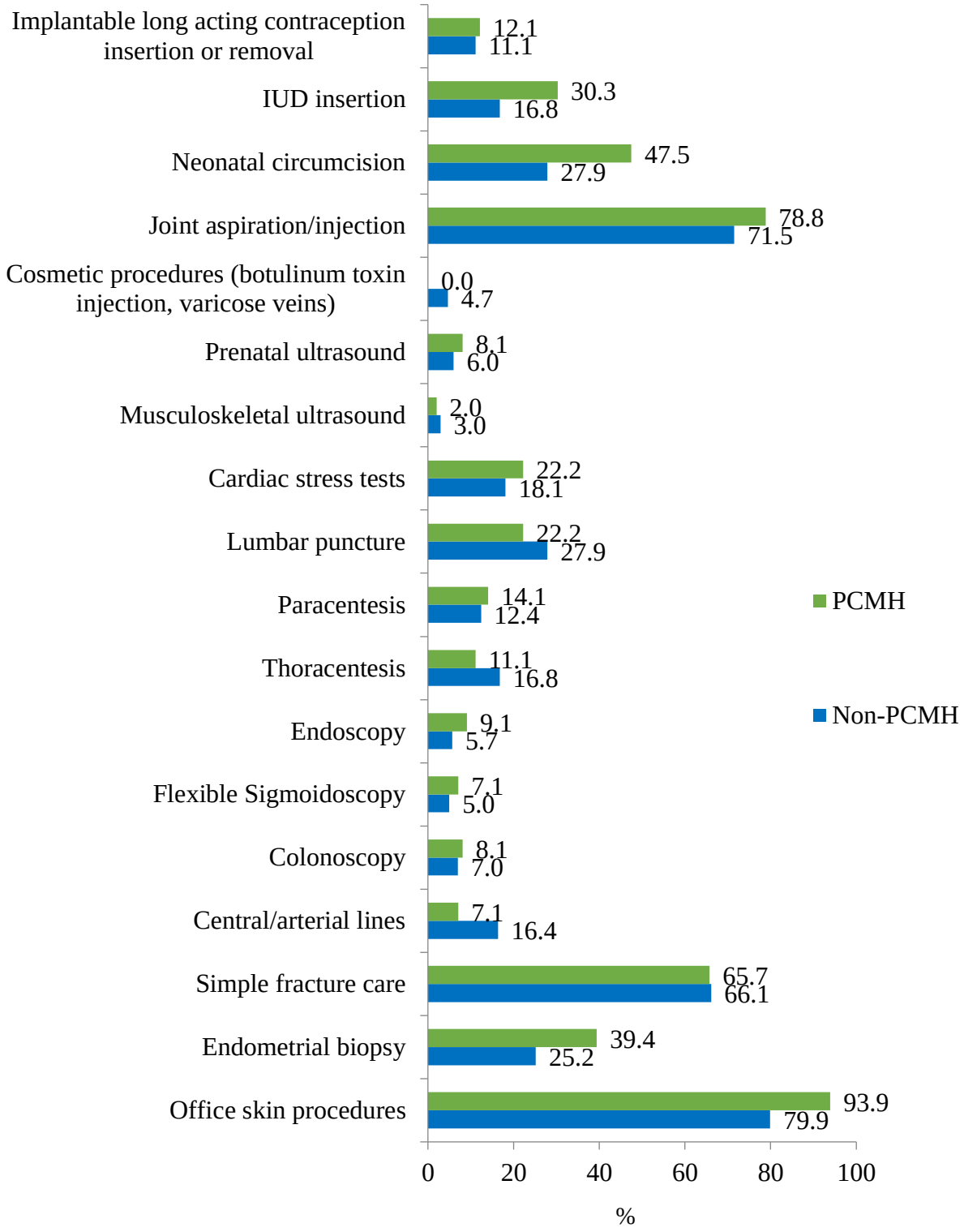
Within large rural areas, we found that family physicians in PCMH practices had higher rates for 8 of 18 procedural care services than family physicians in non-PCMH practices (see Figure 5). Differences were significant ($P < .05$) for office skin procedures, central lines, thoracentesis, paracentesis, lumbar punctures, and circumcisions. Consistent with family physicians in rural PCMHs being less likely to provide inpatient care, they were also less likely to provide hospital-based procedures such as lumbar punctures and thora- and paracenteses, than family physicians in rural non-PCMHS.

Figure 5. Scope of Procedures in PCMH/non-PCMH in Large Rural Areas



Within small rural areas, we found that family physicians practicing in PCMH practices had higher rates for 12 of 18 procedural services than family physicians in non-PCMH practices (see Figure 6). Differences between PCMH and non-PCMH practices were significant ($P < .05$) for office skin procedures, endometrial biopsies, central lines, cosmetic procedures, circumcisions, and intrauterine device insertion.

Figure 6. Scope of Procedures in PCMH/non-PCMH in Small Rural Areas



Within frontier areas, family physicians in PCMH practices had higher rates for only 1 of 18 procedural services (see Figure 7). Differences were significant ($P < .05$) for thoracentesis and lumbar puncture only.

Figure 7. Scope of Procedures in PCMH/non-PCMH in Frontier Areas

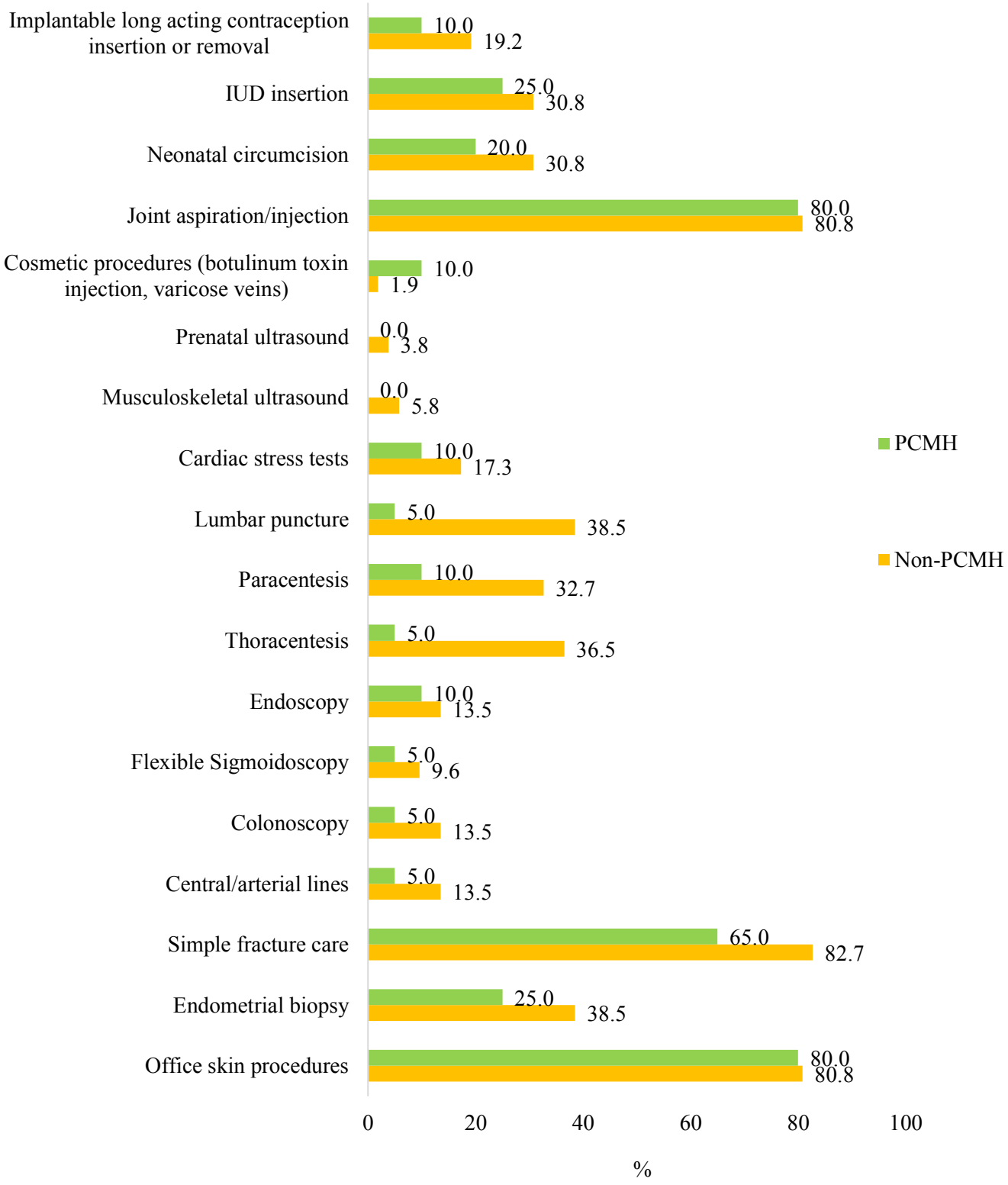


Figure 8. % Differences between PCMH/non-PCMH

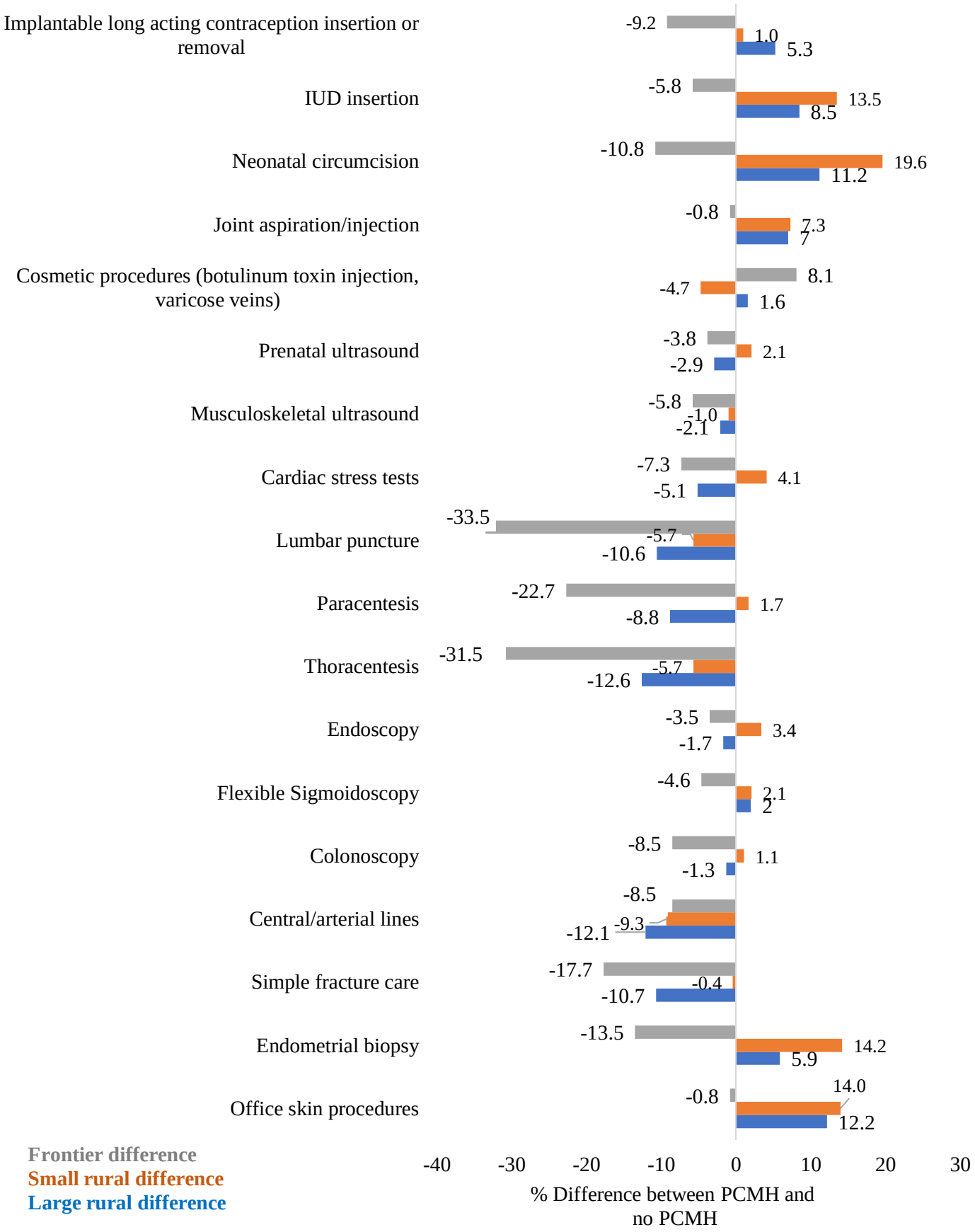


Figure 8 summarizes differences in rates of procedural services between PCMH and non-PCMH practices within large rural, small rural, and frontier areas. Family physicians practicing in PCMHs in small rural areas reported over 10% higher rates of providing IUD insertion, endometrial biopsies, neonatal circumcision, and office skin procedures than those practicing in non-PCMHs. Within frontier areas, family physicians practicing in PCMHs reported over 10% lower rates of providing endometrial biopsies, neonatal circumcision, simple fracture care, and inpatient-related procedures (lumbar punctures, thora- and paracenteses) than those practicing in non-PCMHs.

Conclusions and Potential Policy Implications

Using data from over 3,000 rural family physicians nationally, we found evidence that the PCMH model is, in general, associated with rural family physicians providing a higher number of clinical services and procedures. The main diverging finding was that rural, and especially frontier, family physicians practicing in PCMHs reported lower rates of providing inpatient care and inpatient-related procedures.

The PCMH model is supposed to provide patients with more accessible, comprehensive, and coordinated health care. Our findings suggest that this model is largely meeting these goals in the practices of rural family physicians. Prior research has shown declines in the numbers of family physicians providing pediatric, mental health, and women's health care,[6-8] but we found that rural PCMH practices were providing these services at high levels, consistent with comprehensive care.

The lower rates of inpatient care and corresponding procedures by family physicians working in rural PCMHs may be explained by contractual care arrangements with hospitalists, but hospitalists are less common in small hospitals.[9] Deferring inpatient care to hospitalists may boost ambulatory productivity,[10] and adding hospitalist services is one way for rural hospitals to recruit other physicians.[11]

In summary, the PCMH model appears to be associated with an increased scope of health care services available to rural patients. Potential policy implications emerging from the findings of this research report include:

1) Policies and programs that support rural practices seeking to transform to the PCMH model may need to be investigated.

2) Financial payments that encourage family physicians to provide a broader scope of practice within a PCMH may be beneficial.

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