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Characteristics of Primary Care Physicians in Patient-centered Medical Home Practices: United States, 2013

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Abstract

Objective—This report describes the characteristics of primary care physicians in patient-centered medical home (PCMH) practices and compares these characteristics with those of primary care physicians in non-PCMH practices.

Methods—The data presented in this report were collected during the induction interview for the 2013 National Ambulatory Medical Care Survey, a national probability sample survey of nonfederal physicians who see patients in office settings in the United States. Analyses exclude anesthesiologists, radiologists, pathologists, and physicians in community health centers. In this report, PCMH status is self-defined as having been certified by one of the following organizations: Accreditation Association for Ambulatory Health Care, The Joint Commission, National Committee for Quality Assurance, URAC, or other certifying bodies. Estimates exclude physicians missing information on PCMH status. Sample data are weighted to produce national estimates of physicians and characteristics of their practices.

Results—In 2013, 18.0% of office-based primary care physicians worked in practices certified as PCMHs. A higher percentage of primary care physicians in PCMH practices (68.8%) had at least one physician assistant, nurse practitioner, or certified nurse midwife on staff compared with non-PCMH practices (47.7%). A higher percentage of primary care physicians in PCMH practices reported electronic transmission (69.6%) as the primary method for receiving information on patients hospitalized or seen in emergency departments compared with non-PCMH practices (41.5%). The percentage of primary care physicians in practices reporting quality measures or quality indicators to payers or organizations monitoring health care quality was higher in PCMH practices (86.8%) compared with non-PCMH practices (70.2%).

Keywords: office-based physicians primary care • National Ambulatory Medical Care Survey

Introduction

The patient-centered medical home (PCMH) is an enhanced model of primary care service delivery that is comprehensive and coordinated and provides team-based care for all patients (1–4). According to the Joint Principles of the Patient-Centered Medical Home, PCMHs are identified by five core attributes: comprehensive care through a team of care providers, patient-centered care, coordinated care, accessible services, and care focused on quality and safety (4). The goals of PCMHs are to improve the patient experience, improve population health, and reduce the cost of care (1–5).

Interest in the PCMH model has increased as payers, including the federal government, have funded demonstrations and payment methods that support it (6–11). The Innovation Center at the Centers for Medicare & Medicaid Services (CMS) has sponsored several demonstrations supporting practices in their efforts to become PCMH certified (6,7). In addition, payers, including CMS, are moving toward higher payment for those who are either PCMH certified or who demonstrate the provision of functions associated with a PCMH (8,9). Some states have implemented statewide



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programs that pay more toward primary care for those in PCMHs (10). Medicare currently pays practitioners for non-face-to-face care coordination services for beneficiaries with multiple chronic conditions (11).

Previous studies on PCMH practices have been limited to physician organizations, family medicine practices, Veterans Administration clinics, and federally qualified health centers (12–15). Little is known about the prevalence of these practices nationwide. In 2013, questions were added to the induction interview for the National Ambulatory Medical Care Survey (NAMCS) to determine PCMH status and describe PCMH-related characteristics. This report presents national estimates of PCMH characteristics among primary care physicians in 2013. It also compares characteristics of primary care physicians by whether they work in a PCMH.

Methods

Data source

Data are from NAMCS, an annual, nationally representative survey of office-based physicians, conducted by the National Center for Health Statistics. NAMCS' target universe is physicians who provide direct patient care in office-based practices. Radiologists, anesthesiologists, and pathologists were excluded (16). Physicians in community health centers (CHCs) were excluded from this analysis due to the use of different sampling strategies and a different sample frame. In addition, the data are still in process.

The sampling frame for the 2013 NAMCS (not including CHC providers) comprises all of the physicians listed in the master files maintained by the American Medical Association (AMA) and the American Osteopathic Association (AOA) approximately 6 months prior to the start of the survey year and who met the following criteria:

- Office based, as defined by AMA and AOA
- Principally engaged in patient care activities
- Nonfederally employed
- Under age 85 at the time of survey

The 2013 NAMCS sample included 11,212 physicians (10,595 medical doctors and 617 doctors of osteopathy). Sample physicians were screened at the time of survey to ensure that they met the listed criteria. A total of 4,213 physicians did not meet all of the criteria and were therefore ineligible for the study. The most frequent reasons for being out of scope were that the physician did not see ambulatory patients, was retired, or was not office-based. Of the 6,999 eligible physicians, 4,096 responded to the physician induction interview for an unweighted response rate of 59% (59% weighted). Among these respondents, 1,345 were primary care physicians. Among the primary care physicians, 1,192 provided information on PCMH certification.

Analysis

This report analyzes characteristics of primary care physicians, defined as those in family or general practice, internal medicine, or pediatrics. Moreover, this report analyzes only primary care physicians, because the percentage of specialty physicians in PCMH-certified practices was too small to provide reliable estimates (2.5%).

This report presents selected characteristics of PCMHs, including practice size (i.e., the number of physicians at the office location where the sampled physician had the most visits); whether the office is located inside or outside a metropolitan statistical area (MSA); the presence of any non-physician clinician (NPC) in the practice, such as a physician assistant, nurse practitioner, or certified nurse midwife; the use of electronic health record (EHR) or electronic medical record (EMR) systems in the practice; the availability and access to patient medical records 24 hours a day; the electronic receipt of patient information when a patient is hospitalized or uses an emergency department; whether the practice reports quality measures or quality indicators to either payers or organizations that monitor health care quality; and whether the practice has a person responsible for assisting patients with transitions back to their communities within 72 hours of hospital or nursing home discharge. A

copy of the 2013 survey is available at: https://www.cdc.gov/nchs/ahcd/ahcd_survey_instruments.htm (17).

This study is subject to several limitations. First, the study's analysis excludes primary care physicians in CHCs due to different sampling strategies. Second, this report excludes specialty physicians in PCMHs. Finally, the definition of practice size used in this report (size at the location where the sampled physician had the most visits) may not accurately reflect the total practice size. Practice size in this report refers only to one location. If the practice had additional physicians at other locations, the practice size may be larger than what is reported here. This is a possibility for 11.7% of the physicians described in this study who work at a practice with two or more locations.

NAMCS estimates of physicians in practices with one or more NPCs on staff have been previously published (18). For comparability with previous estimates, the estimates presented in this report of physicians in practices with NPCs on staff exclude responses with missing information on NPCs (4.3%).

Missing data for other PCMH characteristics were included in the denominator, because missing data were infrequent except for the item on whether the practice had someone assisting institutionalized patients with transitions back to their communities (9.4%). However, when estimates that excluded the missing data from the denominator were recalculated, the findings remained consistent.

Differences by selected physician characteristics were examined using *t* tests for differences in percentages at the $p = 0.05$ level. A weighted least-squares regression analysis was used to determine the significance of trends by practice size. For the weighted least-squares test, the null hypothesis is that the slope, β , of the regression line does not significantly differ from zero (i.e., $H_0: \beta = 0$ and $H_A: \beta \neq 0$). In this modified least-squares regression, each estimate is weighted by the inverse of the standard error (19).

Results

Organization certifying practice as PCMH

- In 2013, 18.0% of primary care physicians were in PCMH-certified practices (Figure 1).
- Among primary care physicians in PCMH-certified practices, the National Committee for Quality Assurance (NCQA) was the predominant certifying body (41.7% of those certified or 7.5% of all primary care physicians).
- The percentage of physicians in PCMH practices certified by any of the remaining organizations (i.e., the Accreditation Association for Ambulatory Health Care, The Joint Commission, URAC, or others) was 31.1% of those certified or 5.6% of all primary care physicians.
- Estimates of the percentage of physicians in practices certified as PCMH by organizations other than NCQA are unstable due to small sample sizes.
- For 27.2% of physicians in PCMH practices (or 4.9% of all primary care physicians), the organization granting PCMH certification was unknown.

- The percentage of primary care physicians in PCMH practices was higher in offices located in urban MSAs (18.7%) compared with offices located outside of MSAs (11.9%) (Figure 2).

Availability of NPCs in PCMH and non-PCMH practices

- NPCs include physician assistants, nurse practitioners, and certified nurse midwives. In 2013, the

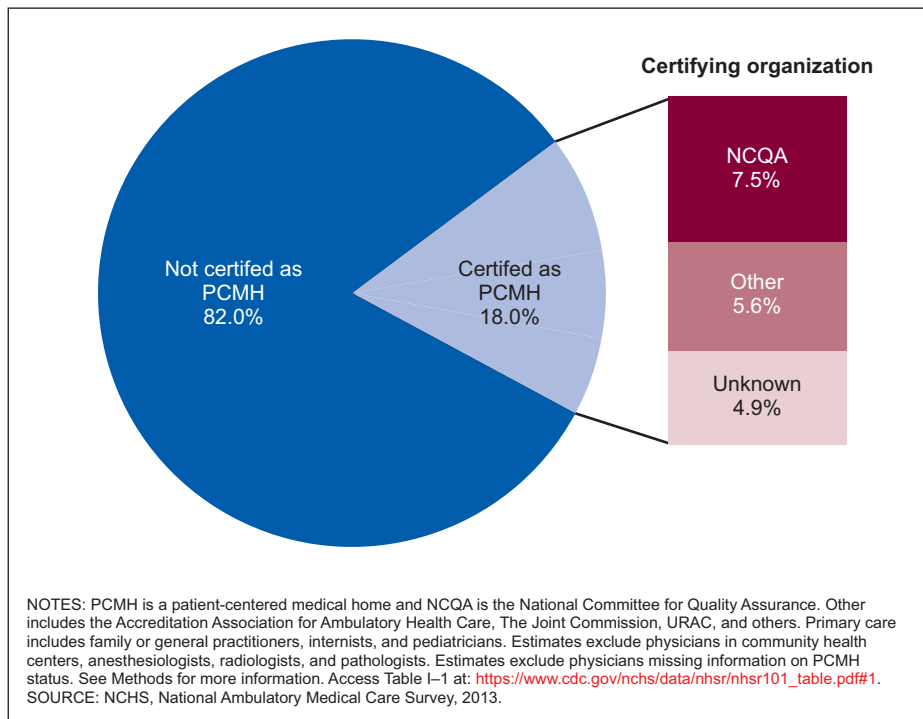


Figure 1. Percentage of primary care physicians, by patient-centered medical home status and certifying organization: United States, 2013

Practice size and urban location of physicians in PCMH practices

- In 2013, the percentage of primary care physicians in PCMH practices increased as practice size increased, from 6.2% in solo practices to 21.3% in practices with 2–10 physicians and to 41.6% in practices with 11 or more physicians (Figure 2). On average, physicians in PCMH practices worked in larger practices (8.1 physicians per practice) compared with physicians in non-PCMH practices (4.3 physicians).
- In this report, practice size is the number of physicians at the office location where the sampled physician had the most visits. If the practice had additional physicians at other locations, the practice size may be larger than what is reported here.

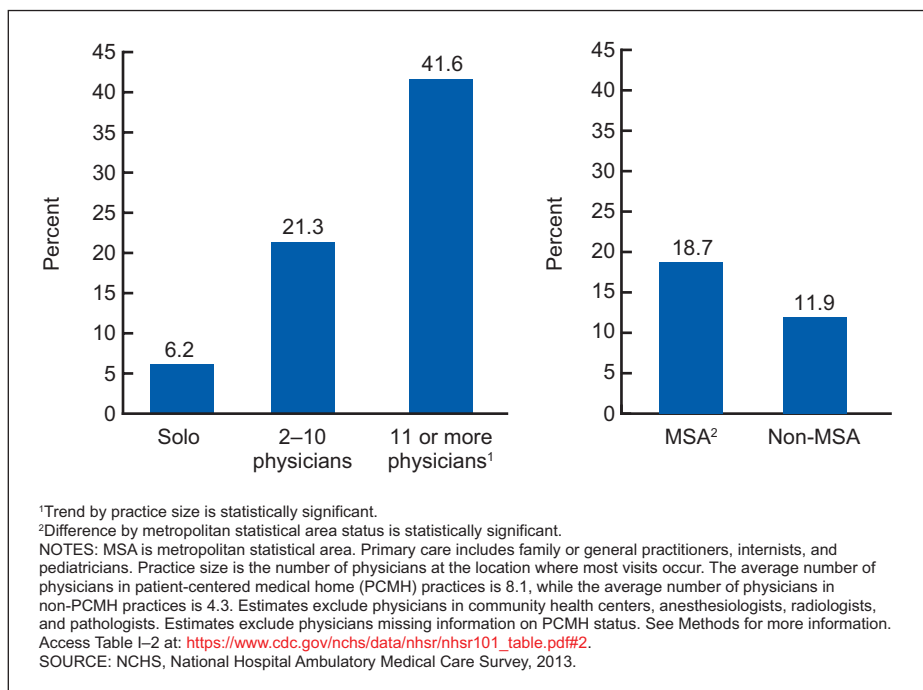


Figure 2. Percentage of primary care physicians in patient-centered medical home practices, by practice size and metropolitan statistical area status: United States, 2013

percentage of primary care physicians in PCMH practices (68.8%) with one or more NPCs on staff was higher compared with the percentage in non-PCMH practices (47.7%) (Figure 3).

- The percentage of primary care physicians in PCMH practices (31.3%) with physician assistants on staff was higher than the percentage for primary care physicians in non-PCMH practices (19.9%).
- The percentage of primary care physicians in PCMH practices (45.8%) with nurse practitioners on staff was also higher than the percentage for physicians in non-PCMH practices (27.7%).

Practice capabilities of PCMH and non-PCMH practices

- In 2013, 94.2% of primary care physicians in PCMH practices reported that an EHR or EMR system was used compared with 74.3% in non-PCMH practices (Figure 4). Higher percentages of physicians in solo PCMH practices and PCMH practices with 2–10 physicians used EHR or EMR systems compared with non-PCMH practices of the same sizes.
- A higher percentage of primary care physicians in PCMH practices (91.5%) had 24-hour-per-day access to their patients’ medical records compared with those in non-PCMH practices (74.1%). Round-the-clock access to patients’ medical records was greater in PCMH practices with two or more physicians compared with non-PCMH practices of the same size (Figure 5).
- A higher percentage of primary care physicians in PCMH practices (86.8%) reported quality measures or quality indicators to either payers or organizations that monitor health care quality compared with primary care physicians in non-PCMH practices (70.2%). Higher percentages of physicians in solo PCMH practices and in PCMH practices with 2–10 physicians reported quality measures compared with non-PCMH practices of the same sizes (Figure 6).

- Seven out of 10 primary care physicians in PCMH practices (69.6%) reported receiving information on patients’ hospitalization or emergency department visits electronically (i.e., EHR or EMR systems)

compared with 4 out of 10 primary care physicians in non-PCMH practices (41.5%). The percentage of physicians who primarily received information through electronic transmission on patients hospitalized or seen in emergency departments

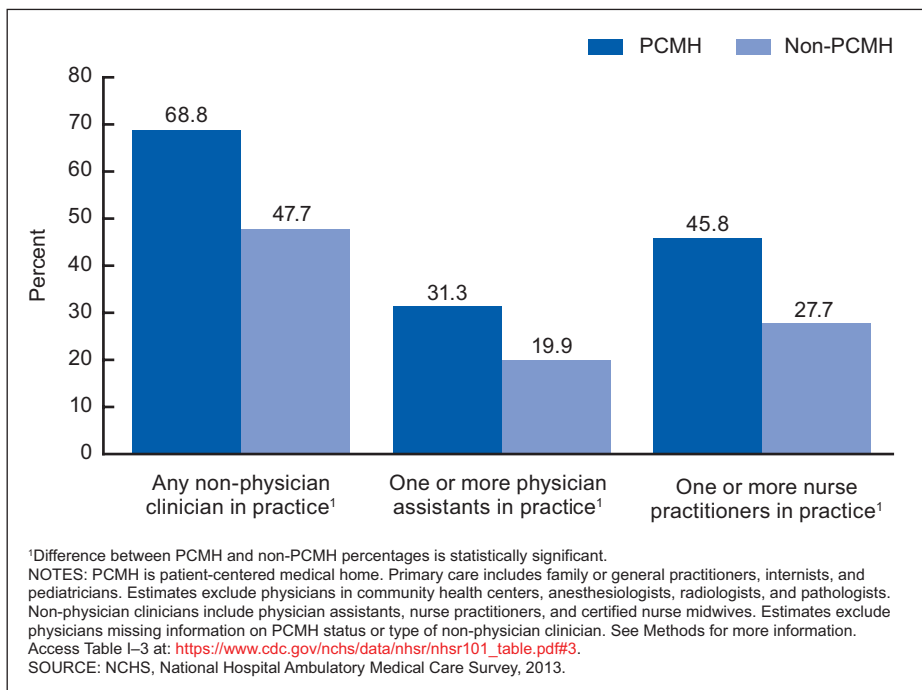


Figure 3. Percentage of primary care physicians in practices with non-physician clinicians on staff, by patient-centered medical home status: United States, 2013

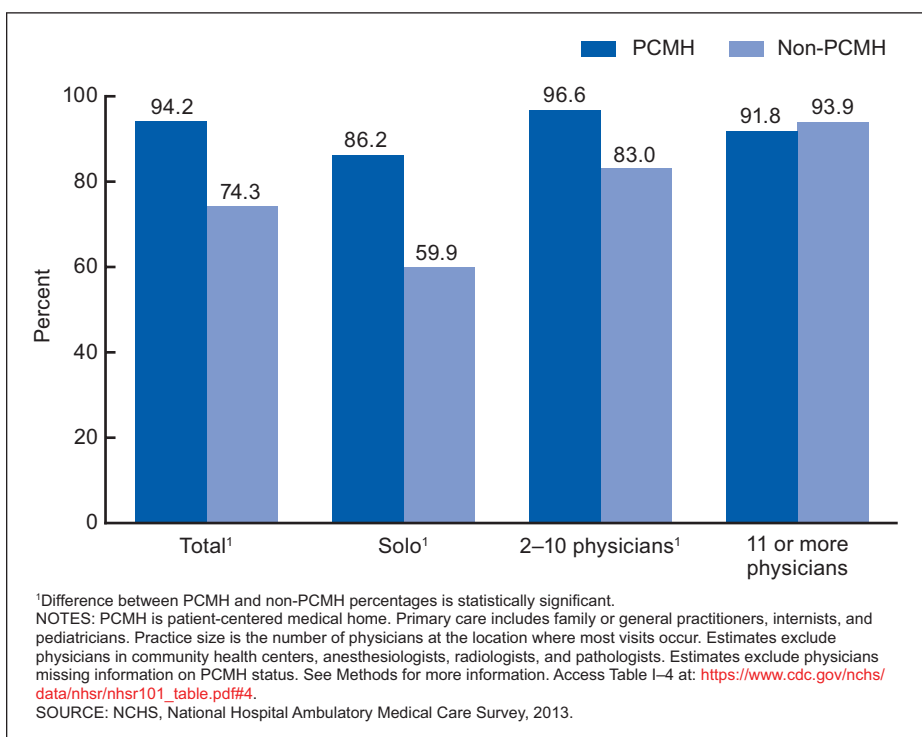


Figure 4. Percentage of primary care physicians in practices using electronic health record or electronic medical record systems, by practice size: United States, 2013

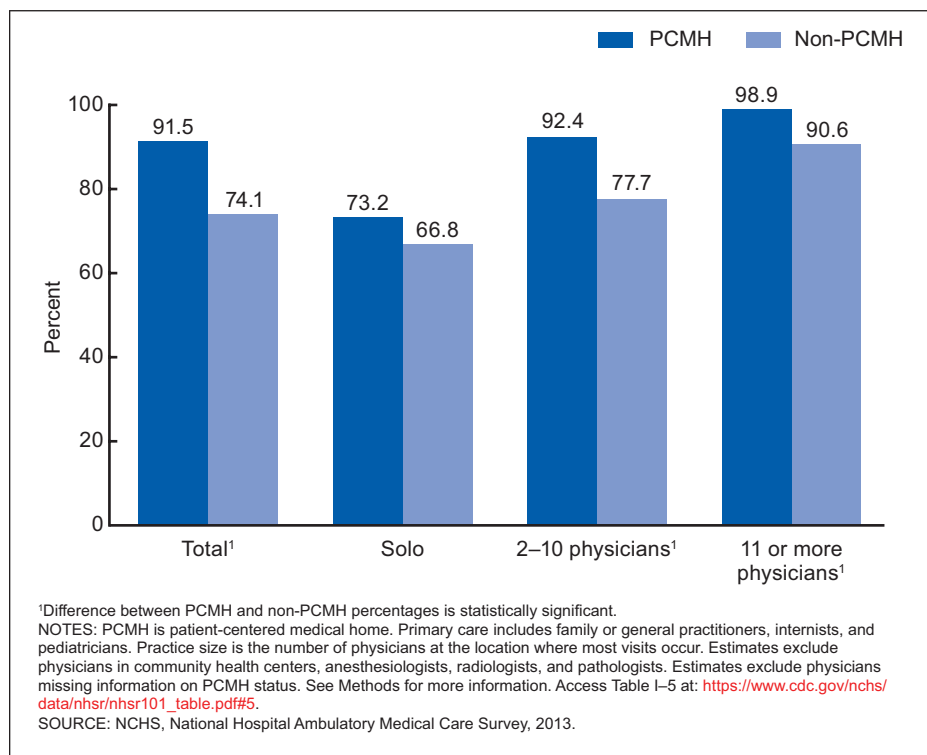


Figure 5. Percentage of primary care physicians in practices with access to patient medical records 24 hours a day, by practice size: United States, 2013

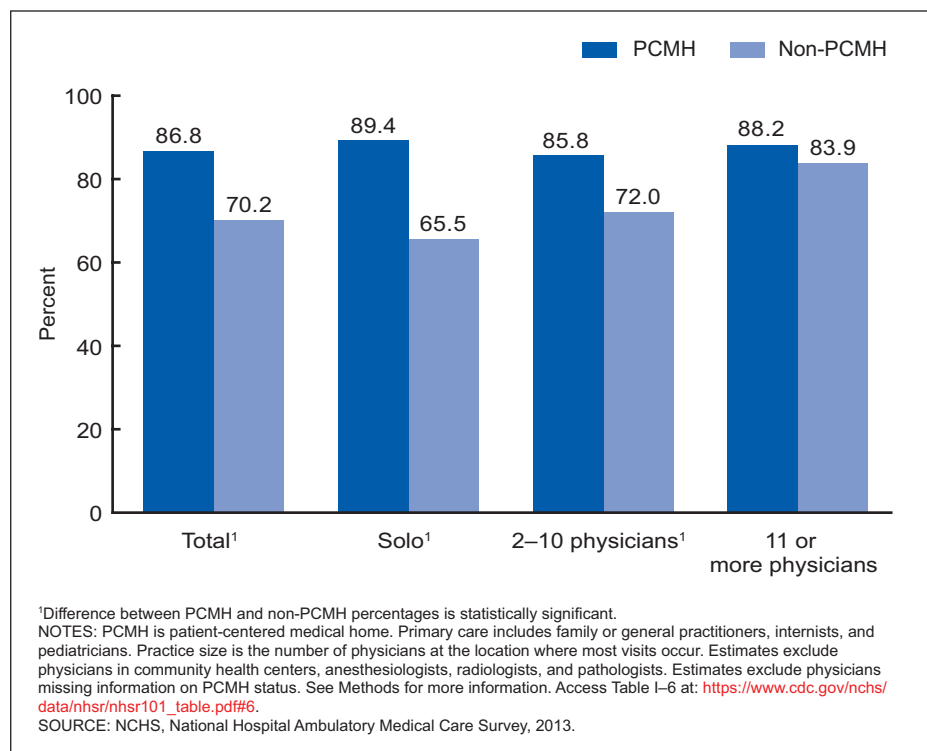


Figure 6. Percentage of primary care physicians in practices reporting quality measures or quality indicators to either payers or organizations that monitor health care quality, by practice size: United States, 2013

was higher among those in practices with 2–10 physicians (73.8%) compared with those in similarly sized non-PCMH practices (47.9%) (Figure 7). The same pattern was observed among physicians in solo PCMH practices, but the difference was smaller and not statistically significant.

- NPCs were more likely to be on staff in PCMH practices compared with non-PCMH practices, both overall (68.8% compared with 47.7%) and among practices with one physician on staff (52.0% compared with 29.5%). Greater availability of NPCs in PCMH practices followed the same pattern in the larger practice size categories (2–10 and 11 or more physicians), although the differences were smaller and not statistically significant (Figure 8).
- A higher percentage of primary care physicians in PCMH practices (52.6%) reported that someone in the practice was responsible for assisting patients with transitions back to their communities within 72 hours of hospital or nursing home discharge compared with non-PCMH practices (37.5%). A higher percentage of physicians in PCMH practices with 2–10 physicians had a person responsible for transitioning patients back to their communities compared with non-PCMH practices of the same size (Figure 9). The same pattern was observed for solo practices and practices with 11 or more physicians, but the differences were not statistically significant.
- The observed difference was not statistically significant in the receipt of information on patients' hospitalizations or emergency department visits by fax between primary care physicians in non-PCMH practices compared with those in PCMH practices (Figure 10).

Discussion

The PCMH model is designed to improve health care in America by transforming how primary care is organized and delivered (3). According to the Joint Principles of the Patient-Centered Medical Home, five

core attributes of PCMHs include: comprehensive care through a team of care providers, patient-centered care, coordinated care, accessible services, and care focused on quality and safety (4).

This report presents national estimates on the characteristics of primary care physicians in PCMH-certified practices.

Although multiple organizations certified practices as PCMHs, most

physicians working in PCMH practices identified NCQA as the certifying body (41.7% of those certified or 7.5% of all primary care physicians). Although NCQA was the most frequent PCMH-certifying organization, the various PCMH recognition programs vary in the amount of required documentation, application costs, and overall efforts. This report, however, did not address these issues.

This report found that primary care physicians were more likely to be in PCMH practices as practice size increased. PCMH practices may be larger because PCMH certification requires infrastructure investment (including health information technology, such as an EHR system) in order to provide the extra services provided by PCMHs (20). Previous studies have found that physician use of EHR systems increases with practice size (21). In addition, funding of primary care services typically does not cover the extra services provided by PCMHs (20). Most PCMH demonstrations included additional payments to PCMHs to compensate for this funding gap (6–10). Finally, the higher presence of primary care physicians in PCMH practices located in urban areas reflects the high concentration of primary care physicians in urban areas (22).

This report found that a higher percentage of primary care physicians in PCMH practices (68.8%) had NPCs on staff, such as physician assistants and nurse practitioners, compared with non-PCMH practices (47.7%). NPCs may serve as primary care providers and fulfill other roles on PCMH teams (23–24).

Furthermore, this report's findings indicate that primary care physicians in PCMH practices had a greater capacity to provide around-the-clock access to patients' medical records, perform care coordination, and participate in quality improvements. Compared with primary care physicians in non-PCMH practices, primary care physicians in PCMH practices used EHR or EMR systems (94.2%) more frequently, had greater access to patient medical records 24 hours per day (91.5%), worked in practices that reported quality measures or quality indicators (86.8%), received information primarily through electronic

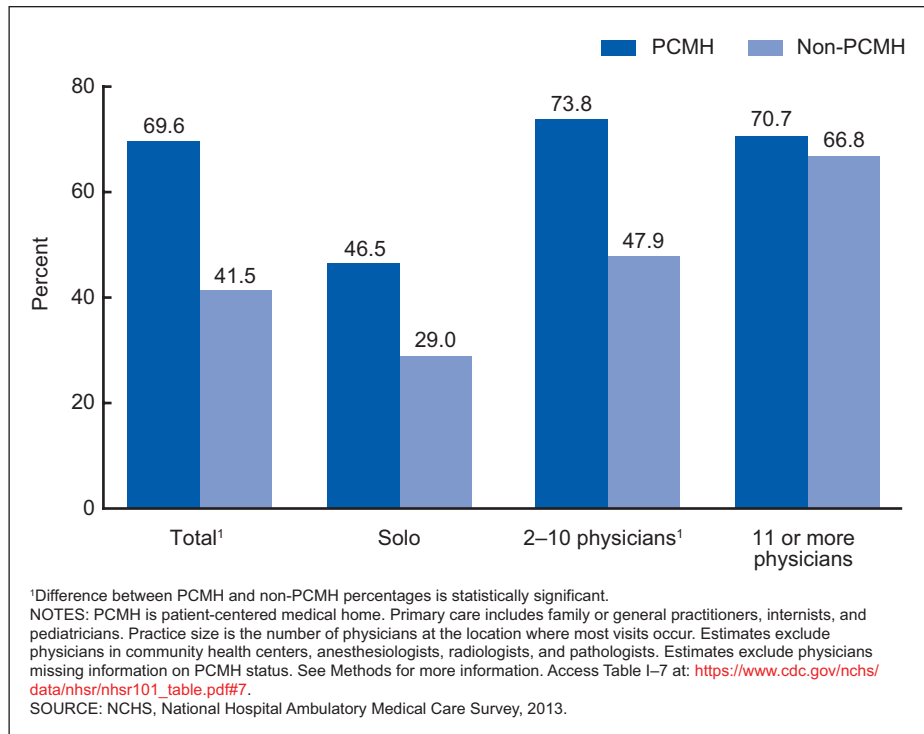


Figure 7. Percentage of primary care physicians in practices primarily receiving information by electronic transmission on patients hospitalized or seen in emergency departments, by practice size: United States, 2013

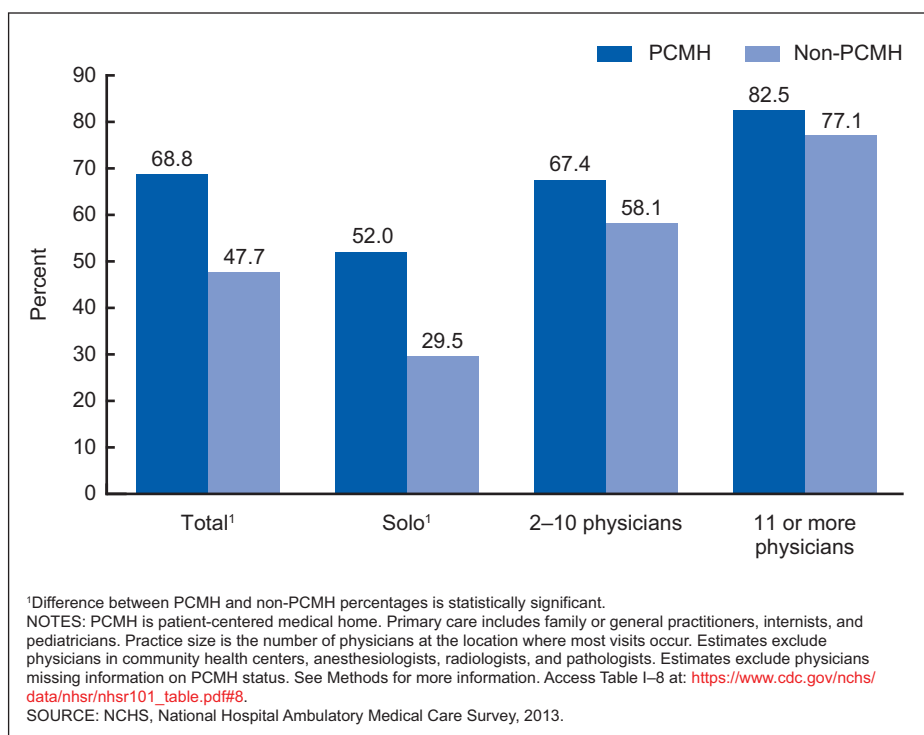


Figure 8. Percentage of primary care physicians in practices with one or more non-physician clinicians, by practice size: United States, 2013

transmission on patients hospitalized or seen in an emergency department (69.6%), and had someone in the practice responsible for assisting patients with

transitions back to their communities within 72 hours of hospital or nursing home discharge (52.6%). Regardless of the practice size category, a general

pattern of higher performance or availability of PCMH-related functions was observed among physicians in PCMH practices compared with physicians in non-PCMH practices, although some differences were smaller and not statistically significant.

While this report describes functions available to primary care physicians in PCMH practices relative to those available to primary care physicians in non-PCMH practices, it does not compare outcomes for patients seen by physicians in PCMH practices with those seen by physicians in non-PCMH practices.

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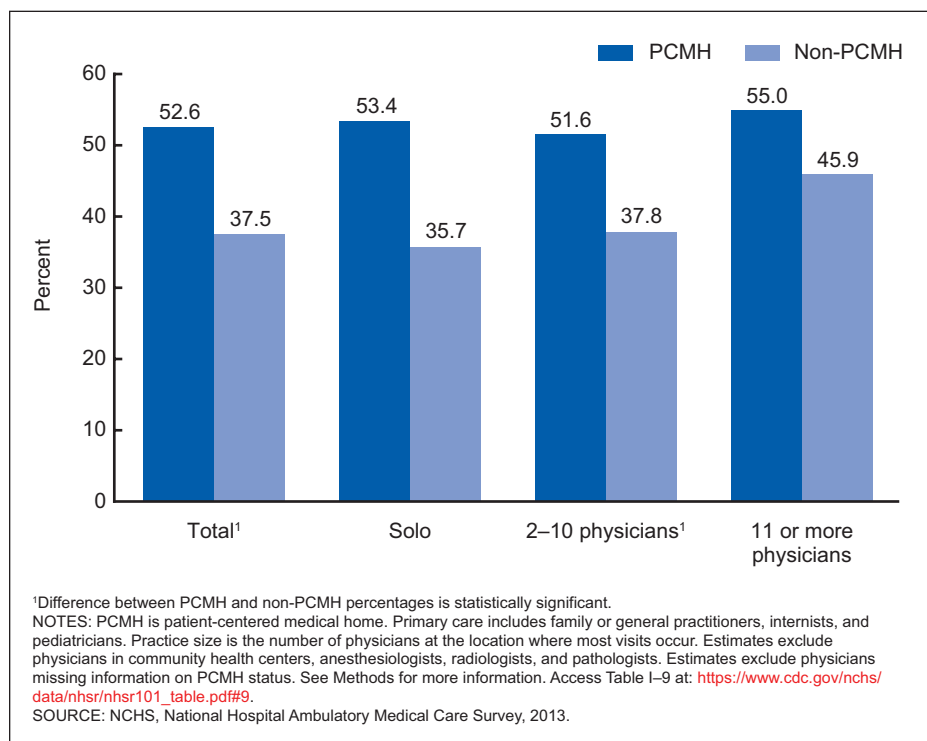


Figure 9. Percentage of primary care physicians in practices with person responsible for transitioning patients back to their communities within 72 hours of being discharged from hospital or nursing home, by practice size: United States, 2013

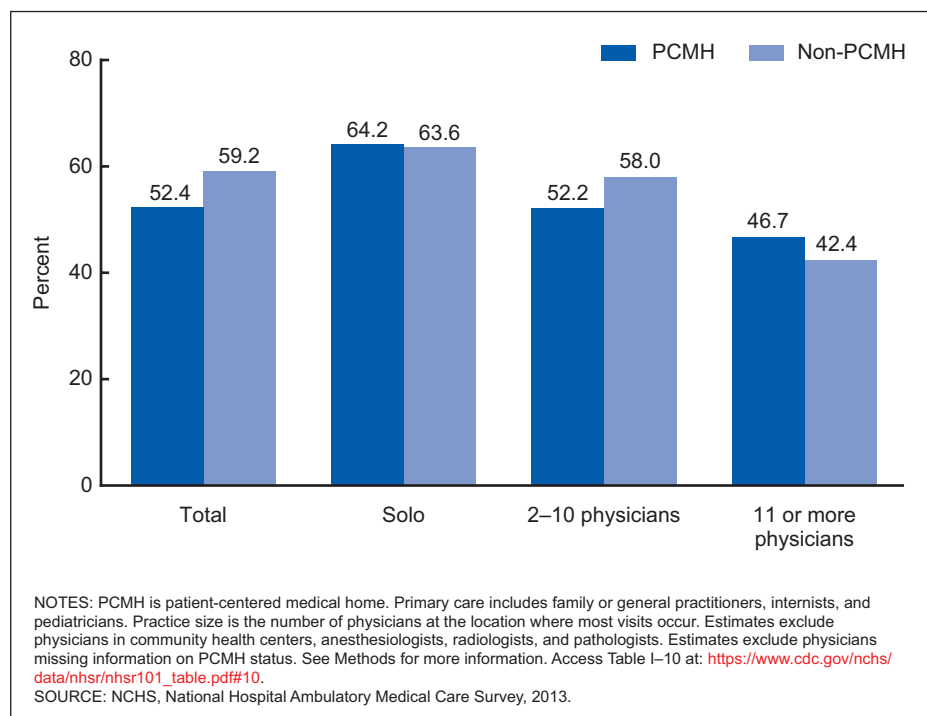


Figure 10. Percentage of primary care physicians in practices primarily receiving information on patients hospitalized or seen in emergency departments by fax, by practice size: United States, 2013

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