ARTICLE IN PRESS

Contents lists available at ScienceDirect

Healthcare

journal homepage: www.elsevier.com/locate/hjdsi

Primary care physician assistant and advance practice nurses roles: Patient healthcare utilization, unmet need, and satisfaction ☆

Christine M. Everett [a,*], Perri Morgan [a], George L. Jackson [b]

[a] Physician Assistant Program, Department of Community and Family Medicine, Duke University School of Medicine, 800 South Duke Street, Durham, NC 27701, United States
[b] Center for Health Services Research in Primary Care, Durham Veterans Affairs Medical Center and Division of General Internal Medicine, Duke University School of Medicine, United States

ARTICLE INFO

Article history:
Received 1 September 2015
Received in revised form
26 February 2016
Accepted 8 March 2016

Keywords:
Physician assistant
Advanced practice nurse
Primary care
Role

ABSTRACT

Purpose: Team-based care involving physician assistants (PAs) and advance practice nurses (APNs) is one strategy for improving access and quality of care. PA/APNs perform a variety of roles on primary care teams. However, limited research describes the relationship between PA/APN role and patient outcomes. We examined multiple outcomes associated with primary care PA/APN roles.
Methods: In this cross-sectional survey analysis, we studied adult respondents to the 2010 Health Tracking Household Survey. Outcomes included primary care and emergency department visits, hospitalizations, unmet need, and satisfaction. PA/APN role was categorized as physician only (no PA/APN visits; reference), usual provider (PA/APN provide majority of primary care visits) or supplemental provider (physician as usual provider, PA/APN provide a subset of visits). Multivariable logistic and multinomial logistic regressions were performed.
Results: Compared to people with physician only care, patients with PA/APNs as usual providers [5–9 visits RRR=2.4 (CI 1.8–3.4), 10+ visits RRR=3.0 (CI 2.0–4.5): reference 2–4 visits] and supplemental providers had increased risk of having 5 or more primary care visits [5–9 visits RRR=1.3 (CI 1.0–1.6)]. Patients reporting PA/APN as supplemental providers had increased risk of emergency department utilization [2+ visits: RRR 1.8 (CI 1.3, 2.5)], and lower satisfaction [very dissatisfied: RRR 1.8 (CI 1.03–3.0)]. No differences were seen for hospitalizations or unmet need.
Conclusions: Healthcare utilization patterns and satisfaction varied between adults with PA/APN in different roles, but reported unmet need did not. These findings suggest a wide range of outcomes should be considered when identifying the best PA/APN role on primary care teams.
© 2016 Elsevier Inc. All rights reserved.

1. Introduction

The implementation of the Affordable Care Act (ACA) has heightened concerns over the capacity of the United States (U.S.) primary care workforce to meet patient needs.[1,2] An estimated 35 million people will gain insurance through the ACA by 2019, resulting in an anticipated increase of an additional 15–24 million primary care visits annually,[3–5] and potentially leading to a shortage of approximately 45,000 primary care providers.[6] Shortages of this magnitude could reduce access and quality of care.[7–9] Team-based care involving physician assistants (PAs) and advance practice nurses (APNs) is one strategy for improving access and quality of care despite the mismatch between primary care demand and physician supply.[10–12] The challenge for primary care practices is identifying the optimum patient-centered PA/APN role.

PA and APN roles can vary within and between settings because roles are individually negotiated with collaborating physicians.[13–15] The clinical role of primary care PAs/APNs can be defined by the division of responsibilities between the PA/APN and physician and historically has been classified into two categories reflecting the level of PA/APN involvement: usual provider and supplemental provider of care.[14,16–18] In the usual provider role, PA/APNs assume the responsibility for all functions of primary care. In supplemental roles, PA/APNs focus on a subset of primary care services, such as acute same day visits or chronic disease management.[14,16]

Largely due to limitations in existing datasets, very little research describes the relationship between PA/APN roles and patient outcomes.[19] Existing literature suggests that PAs and APNs improve access by disproportionately practicing in underserved areas and providing visits to underserved populations such as the uninsured, women, rural, and younger patients, while physicians

☆Prior Presentations: 10th Annual AAMC Health Workforce Research Conference; May 1, 2014; Washington, DC.

* Corresponding author.
E-mail addresses: christine.everett@duke.edu (C.M. Everett), perri.morgan@duke.edu (P. Morgan), george.l.jackson@duke.edu (G.L. Jackson).

http://dx.doi.org/10.1016/j.hjdsi.2016.03.005
2213-0764/© 2016 Elsevier Inc. All rights reserved.

serve patients with more complex problems and PAs provide a higher percentage of visits for acute conditions than physicians.[20–22] Studies also show that quality of care provided by PA/APNs is similar or better than care delivered by physicians.[15,20,21,23–27] However, most previous work does not address PA/APN role. Recent research conducted on Medicare patients with diabetes receiving primary care at an academic medical center indicates that patient outcomes such as the number of emergency department visits and hospitalizations may differ by PA/APN role.[16,28] However, these studies do not include a population representative of the full range of adults receiving primary care in the U.S., nor do they address satisfaction or primary care utilization as outcomes.

The objective of this study is to identify outcomes associated with different PA/APN roles, including utilization of healthcare services, reported unmet need, and satisfaction. This is the first study of its kind in a nationally representative sample in the U.S. (N=16,671).

2. Methods

2.1. Sample

This study presents findings from the 2010 Health Tracking Household Survey public use file (see Appendix for details). This survey is conducted by the Center for Studying Health System Change and samples U.S. families. It uses a complex sampling approach to produce a nationally representative, cross-sectional estimate of health insurance coverage, access to care, perceptions of care delivery and quality of care, and use of health services. Response rates were 45.6% for families with landlines and 29.2% for families with cell phones.[29–31]

Analyses were limited to adult respondents who had at least one visit at their usual place of care, a usual provider who was a primary care physician, PA or nurse, and responses to all questions required in the analytic model (N= 6864- see technical Appendix for full details). This study was declared exempt by the Duke University Medical Center Institutional Review Board.

2.2. Measurements

All measurements are based on previously validated or cognitively tested survey items.[29] The variable indicating PA/APN role was determined by the response to two questions: "When you go to your usual place of care, do you usually see a doctor, a nurse, or some other type of health professional?" and "Not counting doctor visits, have you seen a nurse practitioner, physician assistant or midwife during the last 12 months?" Using these two questions, a three-category variable was constructed. Respondents who reported they usually saw a doctor and had zero visits with a PA or APN (nurse practitioner or midwife), were categorized as ***physician-only*** care. Respondents who reported they usually saw a doctor and had at least one visit with a PA or APN were categorized as having a ***PA/APN in a supplemental role***. Respondents who identified a PA or APN as a usual provider were categorized as having a ***PA/APN in a usual provider role***.

Primary outcomes of interest included healthcare utilization, satisfaction with healthcare, and unmet need. Healthcare utilization was assessed with a series of questions that inquired about the number of ED visits, unplanned hospitalizations, and visits to the usual place of care. Emergency department visits were categorized as 0, 1 and 2+ visits and included a count of only those visits that did not result in hospitalizations. Emergency hospitalizations were categorized as 0 or 1+ and included only those hospitalizations that occurred through the emergency department, excluding elective procedures and deliveries. Number of visits at usual place of care (i.e., primary care visits) were categorized in the survey as 1, 2–4, 5–9, and 10+. We utilized the 2–4 visit category as the reference for two reasons. The most recent statistics on ambulatory care physician office visits give an expected value of 1.8 physician primary care visits per adult per year.[32] Since we are also including PA and APN visits, the expected number of primary care visits is estimated to fall within the 2–4 visit category. Unmet need was assessed with the question "During the past 12 months, was there any time when you didn't get the medical care you needed?" and was categorized as "yes" and "no". Satisfaction with care was assessed with a single categorical response determined by the family informant's answer to the question "All things considered, are you satisfied or dissatisfied with the health care you and your family received during the past 12 months? " (see Appendix for details).

Covariates represent predisposing, enabling and need factors related to healthcare utilization.[33] Binary variables include sex, health insurance, usually see same provider at usual place of care, and put off needed medical care in past 12 months. Categorical variables include age, race/ethnicity, educational attainment, metropolitan/nonmetropolitan county, two variables regarding attitudes toward utilization, and self-rated health (categories displayed in Table 1; additional details in Appendix).

2.3. Statistical analysis

All statistical analyses used STATA SE version 13.[34] To examine the association between PA/APN role and outcomes, a series of regression analyses were conducted with PA/APN role (physician-only care, supplemental PA/APN, and PA/APN usual provider) as the primary predictor variable, adjusted to all covariates. Multivariable logistic regressions were conducted for the binary outcome variables of hospitalizations and unmet need in the last 12 months. Two-stage modeling was performed for emergency department visits due to the approach to the survey's approach to data categorization. (see Appendix for full details). Multinomial logistic regression was performed for the final model for emergency department visits, primary care visits, and patient satisfaction. Multinomial logistic regression has several advantages over multiple logistic regression such as (1) ensuring that all regressions are run on the same sample; (2) preventing loss of information from collapsing information into binary categories (ex: allowing for 3 categories for ED visits); (3) and eliminating the assumptions of linearity and homogeneity of variance.[35] National estimates were calculated in all analyses through the use of person-level weights. Standard errors accounted for the complex sampling design.[29]

3. Results

The majority of the population represented by our sample is estimated to be non-Hispanic Whites (75%) living in large metropolitan areas (74%) with at least a high school education (89%). Most (93%) are estimated to have insurance and 90% usually received care from the same usual provider, but 23% reported putting off needed medical care in the past 12 months. Eighty percent reported good or better health (Table 1).

Approximately 30% of the sample reported at least one visit with a PA/APN within the year in either role (usual provider PA/APN=11%; supplemental PA/APN=20%) The proportion of adults reporting each patient characteristic is reported by PA/APN role in Table 1.

Estimates for healthcare utilization, unmet need and patient satisfaction are reported in Table 2. Approximately 78% of adults had at least 2 visits in the previous 12 months, 21% had at least one

Download English Version:

https://daneshyari.com/en/article/4966290

Download Persian Version:

https://daneshyari.com/article/4966290

Daneshyari.com