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Community Health Centers and Private Practice Performance on Ambulatory Care Measures

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Abstract

Background—The 2010 Affordable Care Act relies on Federally Qualified Health Centers (FQHC) and FQHC look-alikes (look-alikes) to provide care for newly insured patients, but ties increased funding to demonstrated quality and efficiency.

Purpose—To compare FQHC and look-alike physician performance with private practice primary care physicians (PCPs) on ambulatory care quality measures.

Methods—The study was a cross-sectional analysis of visits in the 2006–2008 National Ambulatory Medical Care Survey. Performance of FQHCs and Look-alikes on 18 quality measures was compared with private practice PCPs. Data analysis was completed in 2011.

Results—Compared to private practice PCPs, FQHCs and look-alikes performed better on 6 measures ($p<0.05$), worse on diet counseling in at-risk adolescents (26 % vs. 36%, $p=0.05$), and no differently on 11 measures. Higher performance occurred in: ACE inhibitors use for congestive heart failure (51% vs. 37%, $p=0.004$); aspirin use in coronary artery disease (CAD) (57% vs. 44%, $p=0.004$); beta blocker use for CAD (59% vs. 47%, $p=0.01$); no use of benzodiazepines in depression (91% vs. 84%, $p=0.008$); blood pressure screening (90% vs. 86%, $p<0.001$); and screening electrocardiogram (EKG) avoidance in low-risk patients (99% vs. 93%, $p<0.001$). Adjusting for patient characteristics yielded similar results except private practice PCPs no longer performed better on any measures.

Conclusions—FQHCs and look-alikes demonstrated equal or better performance than private practice primary care physicians on select quality measures despite serving patients with more chronic disease and socioeconomic complexity. These findings can provide policymakers with some reassurance as to the quality of chronic disease and preventive care at Federally Qualified Health Centers and Federally Qualified Health Center look-alikes, as they plan to use these health centers to serve 20 million newly insured individuals.

Introduction

The 2010 Patient Protection and Affordable Care Act aims to extend health insurance coverage by 2019 to 32 million currently uninsured persons[1]. Access to primary care for the newly insured is a major concern due to primary care shortages, particularly for Medicaid recipients.[2, 3] The federal government allocated $11 billion dollars to expand operating capacity and capital projects at designated community health centers that receive enhanced

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Medicare and Medicaid reimbursement under Section 330 of the Public Health Services Act: these include Federally Qualified Health Centers (FQHC) and look-alikes (health centers that function similarly to FQHCs, but without federal designation and eligibility for Section 330 grant support)[4, 5]. These FQHC and look-alikes currently provide comprehensive care to more than 20 million patients in 38 states, 85% of whom are uninsured or Medicaid recipients[6]. Under the Federal Social Security Act of 1989 and 1991, these FQHC and look-alikes receive Medicare and Medicaid reimbursement on a per visit basis based on cost.[5]

Studies demonstrate that FQHCs reduce inpatient and emergency department utilization for Medicaid patients[7–9] and increase health education for uninsured patients, appropriate care for diabetes, and access to cancer, blood pressure, and cholesterol screening.[10–13] There is little recent data comparing the effectiveness of FQHC and look-alikes with other providers regarding the quality and efficiency of ambulatory chronic disease care and preventive care.[14, 15] Comparisons of providers that serve varieties of patient groups may be prone to undervalue the quality of care at facilities that serve medically and socially complex patients, given the additional challenges those patients and providers face. Comparing processes of care, such as whether an at-risk patient receives appropriate medications, should obviate the need to adjust for the severity of illness, i.e., “risk-adjustment,” as these interventions reflect care that is indicated for all eligible patients. However, when time is limited, as is often the case in the outpatient setting, patients and providers frequently face competing demands. Adherence to recommended chronic disease and preventive care measured in performance assessments can therefore be more challenging in patients with multiple comorbidities. These challenges are further heightened in FQHC and look-alikes where patients frequently have limited health literacy, housing instability, and food insecurity.[16–18] Addressing the call from the Institute of Medicine to directly compare effectiveness across health care systems and designs,[19] this study aims to assess how the quality of chronic disease and preventive care provided by physicians at FQHC and look-alikes compared with private practice primary care physicians. The study compares the quality performance of physicians at FQHC and look-alikes with that of private practice primary care physicians through the use of established outpatient measures of healthcare quality[20, 21] in a national sample of patient visits. Based on prior literature demonstrating the greater complexity of patients served at FQHCs, the authors hypothesized a priori that FQHC and look-alikes might have lower performance on quality measures that could be accounted for by patient social and medical complexity.

Methods

Dataset

The 2006–2008 National Ambulatory Medical Care Survey (NAMCS), conducted by the National Center for Health Statistics[22], collects information on ambulatory medical care provided by FQHC and look-alikes and non-federal, office-based, direct-care physicians. Starting in 2006, the NAMCS sampled visits from FQHCs, look-alikes, and Urban Indian FQHCs based on information from the Health Resources Services Administration’s Bureau of Primary Health Care Uniform Data System and the Indian Health Service[23]. These data are widely used in government and academic research to describe trends in outpatient care and were designed for this purpose.

Patient visits were sampled using a multistage probability design, involving geographic primary sampling units, then physician practices within primary sampling units, and patient visits within physician practices. Sampled physicians were selected from the masterfiles of the American Medical Association and the American Osteopathic Association. Additionally, starting in 2006, NAMCS sampled patient visits from 104 FQHC and look-alikes within primary sampling units. FQHC and look-alikes were oversampled to obtain reliable national

estimates. The sampling rate varies from a 100 percent sample of visits during a randomly selected week for very small practices to a 20 percent sample for very large practices as determined in a pre-survey interview. Physicians were instructed to keep a daily listing of all patient visits during the assigned reporting week. This list was the sampling frame to indicate the visits for which data was recorded.

The sample of patient visits with FQHC and FQHC Look-Alike physicians was included in the NAMCS public use file and used for this analysis. A total of 29,392 patient record forms were received from the physicians participating in the NAMCS in 2006, a total of 32,778 in 2007, and 28,741 in 2008. Of these, the response rates were lower for private practice primary care physicians (64%) than FQHC and FQHC Look-Alike physicians (86.2%). For each patient visit, sampling weights were assigned and used to produce national estimates that describe the utilization of ambulatory medical care services in the United States.

The National Center for Health Statistics Research Ethics Review Board approves the NAMCS annually and has waived informed consent requirements and authorization for medical record release[24]. This study was conducted under an exemption from the University of California San Francisco Committee on Human Subjects.

Survey Data Elements

Physicians and their staff completed paper surveys for each visit including information on the reason for the patient's visit, diagnoses, new and continued medications, and demographic data for a random sample of visits during a one week period. Trained medical coders coded the survey responses. The survey also provides statistics on the demographic characteristics of patients and services provided, including information on diagnostic procedures, patient management, and planned future treatment. Diagnostic information is coded according to the *International Classification of Diseases, 9th Revision*, CM (ICD-9). The NAMCS uses the *Lexicon Plus*® (Cerner Multum, Denver CO) to classify medications.

Non-response rates for most questions pertinent to this study were below 5%. For records lacking age and sex data, National Center for Health Statistics assigned values based on multiple imputation using physician specialty, geographic region, and 3-digit ICD- 9-CM codes for primary diagnosis. NCHS quality control for medical and drug coding involved an independent verification procedure for 10% of records in each survey year. For records with coding discrepancies, records were reviewed and adjudicated. Coding error rates ranged between 0.2% and 1.4% for various survey items. However, race/ethnicity had up to 20% missing data requiring imputation, and therefore race/ethnicity was not included in our main analysis.

Sample

All visits to physicians at FQHC and look-alikes or private practice offices eligible for measurement of a given quality measure were included in the sample.

Type of Provider

FQHCs, look-alikes, which are organizations that meet the eligibility requirements of FQHCs and cost-based reimbursement but do not receive the PHS Section 330 grant funding, and Urban Indian FQHCs, which are a subset of non-profit community health center in the Urban Indian Health Program that received FQHC designation with all its benefits, were included in the FQHC category. Private practice primary care offices included solo and group practice setting.

Quality Measures

This analysis evaluates quality of care using 18 previously established quality measures.[20, 21] These measures were developed using visit-based information available in the NAMCS public use files, and have been updated to reflect changes in clinical guidelines. Performance on each measure was defined as the proportion of eligible patients receiving guideline-congruent care, with a higher proportion representing greater concordance with care guidelines. The measures fit 4 categories: 1) pharmacological management of common chronic diseases, including atrial fibrillation, heart failure, coronary artery disease, asthma, and depression (9 measures); 2) preventive counseling regarding smoking cessation, diet, and exercise for individuals at high risk of coronary artery disease by age, sex, and comorbidities (5 measures); 3) appropriate use of screening tests for blood pressure, electrocardiogram, and urinalysis (3 measures); and 4) appropriate prescribing in elderly patients (1 measure). The measures exclude those patients with co-morbidities that would complicate guideline adherence (e.g., adults with gastrointestinal bleeding, alcoholism, or cerebral hemorrhage in assessing anti-thrombotic use in atrial fibrillation). In some instances, care was considered adherent to the quality measure if a similar therapy was provided (e.g., warfarin rather than aspirin in coronary artery disease). This methodology relies on chart documentation to capture comorbidities. Contraindications may be underestimated as they may not always be documented in medical records. Two measures from the initial list of 20 published in the literature, appropriate antibiotic selection for urinary tract infection (N = 45 at FQHC and look-alikes) and otitis media (N = 18 at FQHC and look-alikes), were excluded due limited sample sizes at the FQHC and look-alikes.

Statistical Methods

Descriptive statistics of the study population were performed by provider type and by quality measure. All analyses were completed using SAS 9.2 in December 2011. Bivariate associations between provider type and percent compliance across quality measures were described using chi-squared tests and survey weights (Proc Surveyfreq). Finally, multivariate logistic regression models (Proc Surveylogistic), were fit with the unit of analysis being the patient visit, and taking account the complex nature of the survey design. This included accounting for the multi-staged clustering of the data, assignment of unequal probabilities of selection of sample unit, stratification, and use of survey weights adjusted for pre-specified patient or population characteristics that were associated with performance in the univariate comparisons ($p < 0.20$) and contributed to visit complexity; these were age, sex, patient education level, and number of patient comorbidities. In addition, adjustments were made for year and geographic region. Comparisons were limited to quality measures with > 50 visits at both FQHC and look-alikes and private practice offices to calculate reliable national estimates (a pre-specified threshold).

A sensitivity analysis was performed in which the sample included patient visits to all physicians in private practice and at the CHCs (including surgical and medical specialties, and obstetricians) as some patients see these physicians for chronic disease and receive preventive care from them as well. We also performed a sensitivity analysis where we adjusted for patient race-ethnicity as race-ethnicity has been associated with receipt of quality of care. Of note, up to 20% of the race-ethnicity data was imputed, limiting the strength of the conclusions that can be made from this data.

Results

The sample consisted of 31,133 visits (9,606 from 2006, 10,645 from 2007, and 10,882 from 2008), 22,691 of which were to private practice primary care physicians and the remaining 8,442 visits were to physicians at FQHC and look-alikes. Patients seen at FQHC and look-

alikes were more often Medicaid-insured, more likely to be obese or depressed, and live in ZIP codes with a higher percent poverty and lower median household income.

Overall, performance on the 18 quality measures was variable across U.S. primary care physicians (Table 3). Adherence ranged from 19% to 99%. The adherence to guidelines for 7 of 18 (39%) quality measures was less than 50% for both FQHC and look-alikes and private practice primary care physicians, with the lowest adherence for preventive counseling measures and the greatest adherence for statin use in coronary artery disease. Compared with private practice primary care physicians, without adjusting for patient characteristics, FQHC and look-alikes performed statistically significantly higher on 6 measures ($p < 0.05$), statistically significantly lower on 1 measure ($p < 0.05$), and no differently on 11 measures. FQHC and look-alikes demonstrated higher performance in 2 performance categories (pharmacological management of common chronic diseases and appropriate use of screening tests). Private practice primary care physicians performed better on one measure (diet counseling in at-risk adolescents, $p < 0.05$), but this was no longer significant after adjustment.

When including visits to all private practice physician offices in our sensitivity analysis, the findings were similar (Table 4). In the unadjusted analysis, FQHC and look-alikes performed better on 5 measures ($p < 0.05$), and no differently on 13 measures. In the adjusted analysis, FQHCs and look-alikes demonstrated higher performance on 3 additional measures for chronic disease and lower performance on diet counseling for at-risk adolescents ($p < 0.05$). In the sensitivity analysis comparing FQHC and look-alikes and private practice primary care physicians additionally adjusting for race-ethnicity did not change the direction or the significance of our findings (data not shown).

Discussion

This study is the first national study to compare ambulatory care performance in chronic disease and preventive care at FQHC and look-alikes versus private practice primary care offices. While overall adherence to guidelines varied and was lowest for preventive counseling, physicians working at FQHC and look-alikes demonstrated greater adherence to guidelines than primary care physicians at private practices on 6 of 18 quality measures and, except for diet counseling in at-risk adolescents, similar adherence on the remaining measures despite providing care to patients with limited or no insurance and a higher burden of comorbidities.

Overall, adherence was greatest for many of the chronic disease care measures, likely in part, due to the strength of the evidence supporting these measures. Alternatively, physicians demonstrated lower adherence to the provision of exercise counseling to adults and adolescence at high risk of coronary artery disease. This may be due, in part, to there being insufficient evidence supporting the impact of exercise counseling on patient health outcomes[25].

Additionally, documentation practices may differ across measures accounting for differences in performance between measures of chronic disease and preventive care. Our study was not able to address whether documentation completeness differed between FQHC and look-alikes and private practice physicians. The importance of thorough physician documentation will increase as fiscal incentives tied to performance expand.

Our data do not specifically identify mechanisms by which the FQHC and look-alikes achieved higher performance, yet understanding potential mechanisms would help policymakers focus interventions. FQHC and look-alikes differ in many respects from private practice offices. For one, patients at FQHC and look-alikes are much more likely to

be insured by Medicaid or uninsured, groups that traditionally have less access to subspecialty care[2], and therefore, chronic diseases such as coronary artery disease, congestive heart failure, and diabetes, are more likely to be managed in primary care. Clinics that receive FQHC and FQHC Look-Alike designation[4] have access to resources such as enhanced Medicare and Medicaid reimbursement, price-reduced medications for outpatients, and FQHCs have access to PHS Section 330 grants (Section 330 of the Public Health Service Act defines federal grant funding opportunities for organizations to provide care to underserved populations)[26]. The authors hypothesize that federal grants to develop stable, viable, locally-recruited workforces, and required participation in quality improvement and performance measurement may contribute to our findings[6]. The regulations and guidelines for community health centers that receive Federal 330 FQHC designation include parameters on the frequency and type of quality improvement activities, which may have an influence on the quality of care. Since 2008, the federal government required FQHCs to collect a set of core quality and health outcome data that included diabetes and blood pressure control.[27] Many FQHCs undergo performance reporting to Medicaid managed care organizations for HEDIS measures that align with many of the quality measures in this analysis.[28] Studies have also demonstrated that quality improvement efforts and demonstration projects have improved chronic disease care management at FQHCs.[29, 30] However, our study does not evaluate the extent that these interventions are occurring at FQHC and look-alikes or whether the independent or cumulative interventions are robust enough to account for the differences we've found. Alternatively, FQHC and look-alike practice sizes tend to be larger, a factor associated with higher performance[31]. Future work should monitor the effect of new innovations and patient system redesign on patient outcomes at FQHC and look-alikes and test whether it is certain practice characteristics such as larger practice sizes or performance improvement and provider incentive programs that drive our results.[20]

The number of FQHCs is expanding,[32] albeit at a slower rate of growth in the past year.[33] The Affordable Care Act intends to augment this expansion to help FQHC and look-alikes absorb 20 million of the 32 million anticipated newly insured Medicaid recipients.[34] Part of this expansion will be increased scrutiny, more robust performance assessments, and greater attention to cost effectiveness analyses. Our findings reflect care at FQHC and look-alikes prior to the initiation of the Affordable Care Act and can add to the growing body of literature recognizing the value of FQHC and look-alikes.[7]

This study has several limitations. The NAMCS response rates for private physician offices were lower than the FQHC and look-alikes. Respondent quality may differ from non-respondents. The higher response rate at FQHC and look-alikes may represent a difference in engagement by FQHC and look-alike physicians with research and evaluation. However, it is unclear how this difference in response rate affects our findings. Physicians were told in advance the week when the NAMCS would visit to review records. This awareness may have affected physician behavior, however it is unlikely to differentially affect physicians at FQHC and look-alikes compared to those in private practice. The quality measures were developed for use in the National Ambulatory Medical Care Survey, and thus are based on single patient visits. Commonly used quality measures such as cancer screening which rely on adherence within a given time frame (e.g. annual fecal occult blood tests for colon cancer screening) cannot be assessed. While this survey oversampled FQHC and look-alikes nationally, many of the specific measures had small sample sizes that may have limited our statistical power to detect differences in performance. This study focuses on those community health centers designated as FQHCs and look-alikes. While these clinics provide care to many patients with Medicaid or no insurance, future work should evaluate whether our findings are also true in community health centers that do not receive FQHC or Look-Alike designations and how the performance of these community health centers compare to

other care settings such a retail clinics, urgent care centers, tribal clinics, rural health centers, and hospital-based outpatient centers. This study only assessed the performance of physicians given the public availability of these data. Physician assistants, nurse practitioners, and nurse midwives provide an increasing share of primary care services, especially in low-resource settings[35]. We did not stratify our analyses by whether a community health center was an FQHC, FQHC Look-Alike, or Urban Indian FQHC as these distinctions were not available in the public version of the NAMCS.

In the setting of health care reform, FQHC and look-alikes may need to accommodate many newly enrolled Medicaid recipients under the Medicaid expansion. The study suggests that in the clinical areas evaluated, FQHC and look-alikes mostly have no different or higher performance on average than private practice primary care physicians. Future work will need to monitor these and other measures to assess whether appropriated funds will adequately meet the needs of FQHC and look-alikes to continue to provide quality care, and how new reimbursement models will impact the comparative effectiveness of these clinics.

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Table 1

Patient Characteristics

Patient Characteristic	FQHC* % (N visits=8442)	PCP %§ (N visits=22691)
Age		
<2	10%	10%
2–18	18%	23%
18–65	60%	47%
>65	12%	21%
Sex		
Female	60%	56%
Male	40%	44%
Insurance		
Private	16%	60%
Medicare	12%	18%
Medicaid	45%	15%
Other¥ (missing= 1321)	21%	13%
Total # Chronic Conditions		
0	44%	48%
1 to 2	40%	36%
3 to 4	13%	13%
5+	3%	3%
% Poverty in Zip Code		
< 5%	6%	25%
5–9.9%	17%	32%
10.0–19.9%	40%	30%
>20%	37%	13%
% with Bachelor's Degree		
<12.8%	37%	23%
12.8–19.7%	26%	25%
19.7–31.7%	23%	27%
>31.7%	14%	25%

*FQHC = Federally Qualified Health Centers, Federally Qualified Health Center look-alikes, or Urban Indian Federally Qualified Health Centers

§PCP = private practice primary care providers

¥Other includes patient payment, no charge, and other.

Table 2

Visits by Provider Characteristics

Provider Characteristic	FQHC* %(N visits=8442)	PCP§ %(N visits=22691)
Physician Specialty		
General medicine & family practice	58%	52%
Internal medicine	22%	21%
Pediatrics	20%	27%
Region		
Northeast	26%	19%
Midwest	20%	27%
South	24%	36%
West	29%	18%
Payment Mix		
Medicare	12%	18%
Medicaid	45%	15%
Private Insurance	16%	60%
Other¥	27%	7%
Metropolitan Status		
Urban	92%	84%
Rural	8%	16%
Year		
2006	35%	29%
2007	33%	34%
2008	32%	36%

*FQHC = Federally Qualified Health Centers, Federally Qualified Health Center Look-Alikes, or Urban Indian Federally Qualified Health Centers

§PCP = private practice primary care providers

¥Other includes patient payment, no charge, other

Table 3

Federally Qualified Health Center (FQHC)[¥] vs. private practice primary care provider (PCP) performance, unadjusted and adjusted ORs

Quality Measure	# patient visits (N)		FQHC[¥] %[§]	PCP %[§]	FQHC[¥] vs. PCP unadjusted	FQHC[¥] vs. PCP adjusted[‖]
	FQHC	PCP				
Antithrombotic Use in Atrial Fibrillation	30	156	60%	61%	1.06 (0.50, 2.24)	2.04 (0.33, 12.7)
Ace Inhibitor Use in Congestive Heart Failure	130	446	51%	37%	1.96 (1.24, 3.07)*	2.95 (1.65, 5.27)*
Aspirin Use in Coronary Artery Disease (CAD)	134	466	57%	44%	2.87 (1.39, 5.93)*	5.08 (1.98, 13.1)*
Beta Blocker Use in CAD	123	440	59%	47%	2.01 (1.18, 3.42)*	3.11 (1.58, 6.16)*
Statin Use in CAD	1108	3624	48%	46%	1.11 (0.81, 1.51)	1.25(0.90, 1.75)
Inhaled Corticosteroids in Asthma in Adults	378	703	61%	54%	1.28 (0.86, 1.92)	1.05 (0.65, 1.71)
Inhaled Corticosteroids in Asthma in Children	196	595	66%	64%	1.08 (0.66, 1.76)	0.98 (0.53, 1.81)
Depression Treatment	969	1872	48%	43%	1.06 (0.83, 1.35)	0.80 (0.60, 1.06)
No Use of Benzodiazepines in Depression	830	1578	91%	84%	1.77 (1.16, 2.69)*	2.35 (1.38, 3.99)*
Smoking Cessation Counseling	245	338	29%	31%	0.84 (0.40, 1.79)	1.29 (0.58, 2.89)
Diet Counseling in At Risk Adults	560	1332	31%	26%	0.96 (0.57, 1.62)	0.96 (0.54, 1.70)
Exercise Counseling in At Risk Adults	560	1332	20%	19%	0.69 (0.40, 1.19)	0.82 (0.44, 1.50)
Diet Counseling in At Risk Adolescents	168	448	26%	36%	0.50 (0.25, 0.99)*	0.45 (0.20, 1.03)
Exercise Counseling in At Risk Adolescents	168	448	20%	29%	0.55 (0.29, 1.02)	0.52 (0.21, 1.31)
Blood Pressure Screening	1772	4210	90%	86%	1.61 (1.09, 2.37)*	2.16 (1.50, 3.11)*
No Screening EKG in Low Risk Patients	763	1680	99%	93%	31.2 (8.69, 112)*	9.50 (2.62, 34.4)*
No Screening Urinalysis in Low Risk Patients	1054	2575	87%	85%	1.87 (0.91, 3.84)	1.55 (0.73, 3.29)
Appropriate Medications in Elderly	928	4158	88%	88%	0.80 (0.49, 1.30)	0.76 (0.46, 1.25)

[¥] FQHC = Federally Qualified Health Centers, Federally Qualified Health Center look-alikes, or Urban Indian Federally Qualified Health Centers

[‖] Adjusted for age, sex, % of patients with a high school diploma in patient's zip code, number of chronic conditions, region, and year.

[§] Performance was defined as the percentage of applicable visits receiving recommended care.

* Statistically significant at $p < 0.05$

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Table 4

Sensitivity Analysis. Federally Qualified Health Center (FQHC)[¥] vs. private practice (all providers)[x], unadjusted and adjusted ORs

Quality Measure	# patient visits (N)		FQHC[¥] %[§]	private practice %[§]	FQHC[¥] vs. private practice unadjusted	FQHC[¥] vs. private practice adjusted[‖]
	FQHC	Private Practice				
Antithrombotic Use in Atrial Fibrillation	32	654	63%	72%	1.13 (0.41, 3.16)	1.55 (0.48, 5.01)
Ace Inhibitor Use in Congestive Heart Failure	140	1369	49%	41%	1.87 (1.11, 3.15)*	2.47 (1.47, 4.15)*
Aspirin Use in Coronary Artery Disease (CAD)	142	2120	58%	65%	1.63 (0.87, 3.04)	2.45 (1.18, 5.06)*
Beta Blocker Use in CAD	130	2040	59%	56%	1.71 (0.92, 3.19)	2.32 (1.23, 4.38)*
Statin Use in CAD	1158	7810	48%	44%	1.23 (0.91, 1.66)	1.54 (1.13, 2.11)*
Inhaled Corticosteroids in Asthma in Adults	401	1900	59%	39%	1.79 (1.16, 2.76)*	1.89 (1.19, 2.99)*
Inhaled Corticosteroids in Asthma in Children	196	734	66%	58%	1.18 (0.73, 1.90)	1.11 (0.60, 2.06)
Depression Treatment	1054	5794	48%	39%	1.10 (0.88, 1.39)	0.96 (0.73, 1.27)
No Use of Benzodiazepines in Depression	903	4699	90%	84%	1.60 (1.10, 2.33)*	1.74 (1.11, 2.71)*
Smoking Cessation Counseling	288	809	29%	22%	1.37 (0.63, 2.99)	1.90 (0.89, 4.04)
Diet Counseling in At Risk Adults	591	2764	30%	20%	1.20 (0.69, 2.08)	1.11 (0.63, 1.95)
Exercise Counseling in At Risk Adults	591	2764	20%	14%	0.89 (0.51, 1.54)	0.91 (0.52, 1.60)
Diet Counseling in At Risk Adolescents	193	635	22%	29%	0.53 (0.26, 1.07)	0.45 (0.20, 0.99)*
Exercise Counseling in At Risk in Adolescents	193	635	17%	22%	0.60 (0.32, 1.11)	0.53 (0.22, 1.28)
Blood Pressure Screening	2074	10182	89%	73%	2.64 (1.94, 3.59)*	2.45 (1.71, 3.52)*
No Screening EKG in Low Risk Patients	989	6148	99%	97%	11.8 (4.63, 30.3)*	4.30 (1.40, 13.2)*
No Screening Urinalysis in Low Risk Patients	1188	6715	86%	89%	1.25 (0.72, 2.17)	0.98 (0.52, 1.87)
Appropriate Medications in Elderly	956	14043	88%	90%	0.72 (0.45, 1.15)	0.76 (0.48, 1.21)

[¥] FQHC = Federally Qualified Health Centers, Federally Qualified Health Center look-alikes, or Urban Indian Federally Qualified Health Centers

[‖] Adjusted for age, sex, % of patients with a high school diploma in patient's zip code, number of chronic conditions, region, and year.

[§] Performance was defined as the percentage of applicable visits receiving recommended care.

[x] All providers includes subspecialty physicians such as general surgery, obstetrics and gynecology, orthopedic surgery, cardiovascular disease, dermatology, urology, psychiatry, neurology, ophthalmology.

* Statistically significant at $p < 0.05$