Access To Specialty Care And Medical Services In Community Health Centers

Lack of access to specialty services is a more important problem for CHCs than previously thought.

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ABSTRACT: Although community health centers (CHCs) provide primary health services to the medically underserved and poor, limited access to off-site specialty services may lead to poorer outcomes among underinsured CHC patients. This study evaluates access to specialty health services for patients receiving care in CHCs, using a survey of medical directors of all federally qualified CHCs in the United States in 2004. Respondents reported that uninsured patients had greater difficulty obtaining access to off-site specialty services, including referrals and diagnostic testing, than did patients with Medicaid, Medicare, or private insurance. [*Health Affairs* 26, no. 5 (2007): 1459–1468; 10.1377/hlthaff.26.5.1459]

Deficiencies in the quality of health care and disparities in quality according to patients' race and socioeconomic status are salient issues for community health centers (CHCs), which provide a safety net of support for underserved and uninsured Americans.[1] CHCs were first funded in 1965 and are required to provide a defined set of medical services for all residents of their service areas, regardless of their ability to pay.[2] More than 1,000 federally qualified CHCs nationwide at more than 5,000 sites collectively serve more than fifteen million people, many of whom are racial or ethnic minorities, low income, uninsured, or insured through Medicaid.[3] The Bush administration began an initiative in 2002 to expand CHC sites nationwide, to improve access to medical care for uninsured people.[4]

As CHCs assume responsibility for a greater proportion of the care of the unin-

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DOI 10.1377/hlthaff.26.5.1459 ©2007 *Project HOPE–The People-to-People Health Foundation, Inc.*

sured, many are concerned that the capacity of the nation's CHCs to care for them beyond primary services will be inadequate.[5] In particular, qualitative studies suggest that some CHC patients have difficulty accessing services that are not provided directly by the CHC, such as specialty care or diagnostic testing.[6] These data suggest that some specialty service providers refuse to provide services to uninsured or Medicaid patients or require up-front payment for their services.

Lack of access to specialty services among CHC patients might contribute to poorer outcomes among the uninsured.[7] However, few empirical data exist on access to specialty services for CHC patients.

We surveyed the medical directors of federally qualified health centers (FQHCs) in 2004, to better understand the challenges they face in obtaining access to off-site specialty services. We address two important questions: First, what is the relationship between perceived access to specialty medical and mental health services and patients' insurance status? Second, what other factors are associated with better or worse access to off-site specialty services for uninsured and Medicaid patients?

Study Data And Methods

■ **Survey sample and administration.** Using data supplied in 2002 to collaborators at the National Association of Community Health Centers (NACHC), we identified 814 FQHCs nationally.[8] Of these, eighty-nine centers were new grantees in 2002, established under President Bush's health center initiative, and 725 were previously established grantees. Surveys were mailed to the medical director, followed by reminder cards and a second copy of the survey. Nonresponders were then contacted by phone. Data collection took place during March–July 2004.

■ **Survey questionnaire.** The survey instrument elicited closed-ended responses on a series of topics related to access to specialty services. We adapted validated questions from a prior survey of CHCs associated with academic medical centers and created additional items based on discussions with key informants and a review of the literature.[9] We first requested information about the centers, such as whether or not the CHC participated in a referral network or had affiliations with a medical school or hospital. The survey then asked directors for responses according to three insurance status categories (no insurance, Medicaid, or private insurance/Medicare). For each category, we asked a series of questions about three dimensions of access to specialty care: the need for medically necessary referrals, access to specialty services, and barriers to referral. Medical directors were first asked the percentage of visits to the CHC that resulted in medically necessary referrals for specialty services not provided by the CHC for each insurance category. We then asked them to rate how often they were able to obtain the following seven major services for patients in each of the insurance categories: diagnostic tests, referrals to medical specialists, specialized services (for example, cancer care), nonemergency hospital admissions, high-technology services (for example, cardiac catheterization), mental

health services, and substance abuse services. Responses were collected on a five-point Likert scale that ranged from "never" to "always." We then asked directors to rate the extent to which the following six factors served as barriers to referral for patients in each insurance category: distance, wait times, poor quality of specialty providers, unwillingness of providers to accept patients of a certain insurance status, requirements that patients pay up front at specialty appointments, and insurance plan/CHC financial coverage of the needed services. Responses ranged across a five-point scale from "not at all" to "a great deal." Questions about access were grouped separately by insurance category to avoid leading the respondent to explicitly compare the different insurance status groups.

Finally, medical directors answered questions about themselves, including their age, race, sex, ethnicity, profession, years in current position, and hours spent providing patient care.

■ **Uniform Data System (UDS).** We obtained additional data on each CHC from the 2004 UDS, including size, region, location, racial/ethnic and insurance distribution of patients, and revenue sources. In addition, we ascertained whether mental health, diagnostic testing, and diagnostic x-ray services were provided on site.

■ **Analysis.** We compared respondents to nonrespondents using t-tests or chi-square tests as appropriate. Based on the pattern of responses, we dichotomized response items from the survey related to access and barriers to specialty services as difficult access (yes/no) and significant barrier (yes/no). Bivariate analyses were performed to determine the impact of CHC characteristics on the individual response items, stratified by insurance status. Additionally, we compared responses for new-start grantees with those of established CHCs.

We used factor analysis to group the seven access-to-specialty-service items into meaningful categories.[10] The factor analysis revealed two underlying dimensions: (1) specialty medical care and admissions (including referrals to medical specialists, hospital admissions, high-tech services, specialized services, and diagnostic tests) and (2) mental health and substance abuse services. Composite dependent variables for specialty medical services and specialty mental health services were defined as the sum of the items in each dimension. For analyses we dichotomized these composite variables by defining difficult access as the lower quartile of the summed responses.

We then estimated separate hierarchical logistic regression models for each composite outcome to determine the independent effect of insurance status on difficult access to specialty services, controlling for CHC characteristics.[11]

Study Results

■ **CHC characteristics.** We received completed surveys from 439 (54 percent) of the 814 directors surveyed, including 47 from new grantees. Respondent health centers were representative of CHCs nationally (Exhibit 1). About 75 percent of CHCs had on-site mental health services. Diagnostic testing services were available

EXHIBIT 1
Characteristics Of Study Community Health Centers (CHCs) Compared With All CHCs Nationally, 2004

Health center characteristic	Respondent CHCs (n = 439)[a]	All CHCs (n = 814)[b]	*p* value[c]
Center-level characteristics, mean N (SD)			
Service delivery sites	4.6 (4.8)	4.5 (4.6)	0.80
Total users	15,593 (15,624)	15,167 (15,233)	0.39
Patient-level characteristics[d], mean N (%)			
Black/African American	3,056 (19.6%)	3,374 (22.2%)	0.11
White	5,491 (35.2)	5,227 (34.5)	0.20
Hispanic or Latino	5,466 (35.1)	5,151 (34.0)	0.31
Best served in language other than English	4,767 (30.3)	4,418 (28.7)	0.19
Uninsured	6,217 (39.5)	6,119 (39.7)	0.65
Location, N (%)			
Urban	209 (47.6%)	401 (48.6%)	0.31
Rural	230 (52.4%)	413 (51.4)	0.31
Census region, N (%)			
Northeast	93 (21.2%)	175 (21.5%)	0.81
Southeast	145 (33.0)	284 (34.9)	0.23
Midwest	83 (18.9)	146 (17.9)	0.43
West	118 (26.9)	209 (25.7)	0.40
Funding sources, mean dollar amount (%)			
Funding from BPHC grants	1,670,294 (21.6%)	1,652,649 (15.5%)	0.70
Funding from Medicaid revenue	3,284,354 (24.2)	3,314,574 (31.0)	0.89
Funding from Medicare revenue	654,016 (6.4)	643,080 (6.0)	0.82
Funding from commercial insurance	902,791 (9.1)	864,124 (8.0)	0.73
Services available on site, N (%)			
Mental health	327 (75.3%)	582 (72.8%)	0.07
Substance abuse	221 (50.9)	388 (48.5)	0.14
Diagnostic testing	345 (79.5)	625 (78.1)	0.31
Diagnostic x-ray	206 (47.5)	371 (46.4)	0.50

SOURCE: Bureau of Primary Health Care Uniform Data System (UDS), 2004.
[a] N varies between 432 and 439 based upon the number of respondents to each individual UDS item.
[b] N represents the total number of federally qualified health centers (FQHCs) included in the sample. N varies between 800 and 814 based upon the number of respondents to each individual UDS item.
[c] All significance tests are for respondent versus nonrespondent health centers.
[d] Race and ethnicity categories as defined by the 2004 UDS.

on site at about 80 percent of CHCs, and diagnostic x-ray services were available at about half.

■ **Respondents' characteristics.** Most of the respondents were white, and 77 percent were male.[12] On average, medical directors had been in their positions for 6.3 years and practiced clinically 28 hours each week.

■ **Access to specialty care.** Medical directors reported that about 25 percent of visits to their CHC resulted in medically necessary referrals for services not provided by the center. This rate did not vary for uninsured patients compared to those with Medicare/private insurance ($p = 0.41$).

For Medicare or privately insured patients, respondents reported that they rarely had difficulty obtaining access to specialty medical services, ranging from 0 percent of the time (for diagnostic tests) to 10 percent of the time (for high-tech

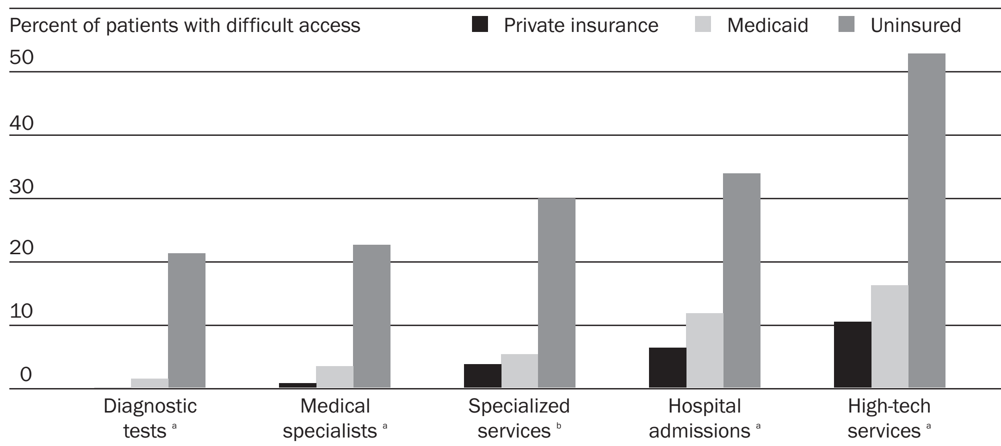
services) (Exhibit 2). In contrast, significantly higher proportions of respondents reported difficult access for Medicaid and uninsured patients.

These problems were more pronounced for access to specialty mental health and substance abuse services (Exhibit 3). In general, there were no differences in reported difficult access for new centers started in 2002 compared to established centers for both specialty medical services and specialty mental health services.[13]

In adjusted models, these findings remained unchanged (Exhibit 4). CHCs with medical school or hospital affiliation reported less difficult access to specialty medical services than nonaffiliated CHCs; similarly, CHCs with on-site mental health services reported less difficulty with access to specialty mental health services compared to CHCs without on-site mental health services. In light of federal policy increasing the number of access points and new CHCs beginning in 2002, we examined whether the availability of on-site diagnostic and mental health services changed between 2002 and 2004 using the UDS. Based on summary data, we found minimal changes in the overall percentage of centers that reported having diagnostic and mental health services on site.[14]

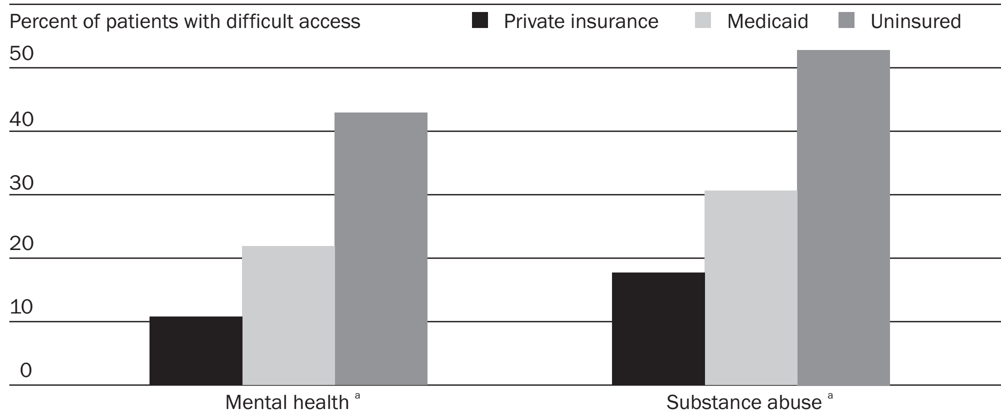
■ **Barriers to access.** The most frequent barriers that medical directors reported were that providers outside of the center were unwilling to take patients of certain insurance type; patients couldn't meet the requirement to pay up front for services; and patients lacked full coverage by the insurance plan or health center for needed services. The effects of these barriers varied significantly by insurance status (Exhibit 5).

EXHIBIT 2
Percentage Of Community Health Center (CHC) Directors Reporting Difficult Access To Specialty Medical Services, By Insurance Category, 2004



SOURCE: All information was derived from the authors' computations using survey response data.
NOTES: "Difficult access" means that patients were "never" or "rarely" able to obtain access.
[a] For private insurance compared with Medicaid, $p < 0.05$. For private insurance compared with uninsured and Medicaid compared with uninsured, $p < 0.001$.
[b] For private insurance compared with uninsured and for Medicaid compared with uninsured, $p < 0.001$.

EXHIBIT 3
Percentage Of Community Health Center (CHC) Directors Reporting Difficult Access To Specialty Mental Health Services, By Insurance Category, 2004



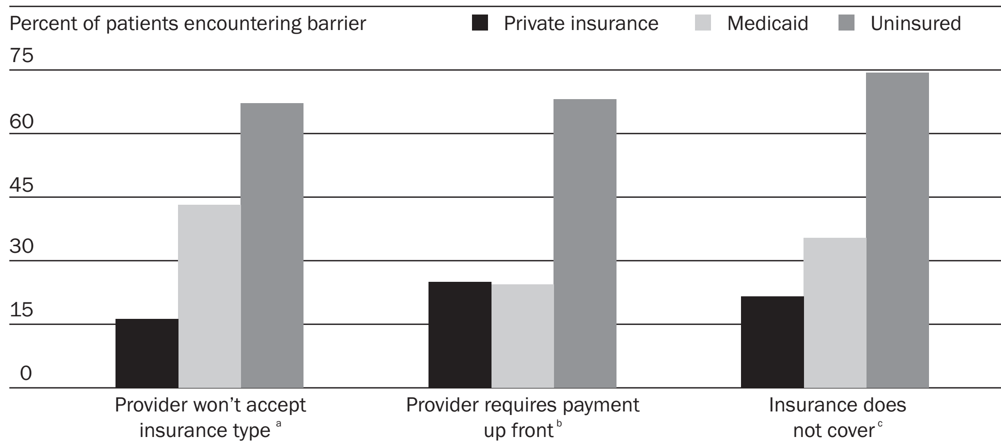
SOURCE: All information was derived from the authors' computations using survey response data.
NOTE: "Difficult access" means that patients were "never" or "rarely" able to obtain access.
[a] For private insurance compared with Medicaid, private insurance compared with uninsured, and Medicaid compared with uninsured, $p < 0.001$.

EXHIBIT 4
Adjusted Results Of Hierarchical Regression Model Predicting Difficult Access To Specialty Medical Services And Specialty Mental Health Services

CHC characteristic	Specialty medical services: odds ratio (95% CI)	Specialty mental health services: odds ratio (95% CI)
Insurance category		
Private/Medicare	1.00	1.00
Medicaid	2.83 (2.12, 3.77)	7.61 (5.10, 11.35)
Uninsured	109.88 (82.54, 146.26)	96.13 (62.04, 148.95)
Census region		
West	1.00	1.00
Midwest	0.83 (0.38, 1.85)	0.38 (0.12, 1.16)
Northeast	0.47 (0.22, 1.01)	0.13 (0.04, 0.40)
Southeast	0.66 (0.31, 1.42)	0.43 (0.15, 1.27)
Total users[a]	0.89 (0.72, 1.09)	1.27 (0.94, 1.71)
Local		
Rural	1.00	1.00
Urban	0.68 (0.37, 1.24)	1.02 (0.43, 2.41)
Affiliation with medical school or hospital	0.37 (0.20, 0.67)	0.91 (0.38, 2.18)
Services on site		
Diagnostic lab	1.27 (0.62, 2.59)	0.47 (0.17, 1.30)
Diagnostic tests	0.49 (0.27, 0.91)	1.47 (0.60, 3.61)
Case management	0.72 (0.38, 1.37)	0.46 (0.18, 1.19)
Mental health	1.51 (0.81, 2.83)	0.22 (0.09, 0.54)
Substance abuse	1.10 (0.65, 1.88)	1.09 (0.51, 2.36)

SOURCE: All information derived from authors' computations.
NOTES: Adjusted for region, rural or urban location, number of sites, number of users, affiliation with medical school or hospital, percentage of racial and ethnic minorities, percentage of non-English-speaking patients, percentage of health center funding from grants and clinical care revenue, and on-site secondary services. $p < 0.0001$ for overall model to predict the effect of insurance status as a predictor of access to specialty medical services and specialty mental health services.
[a] Per increase of 10,000 users.

EXHIBIT 5
Percentage Of Community Health Center (CHC) Directors Reporting Significant Access Barriers, By Insurance Category, 2004



SOURCE: All information was derived from the authors' computations using survey response data.
NOTE: "Significant barrier" limits ability to refer "a fair amount" or "a great deal."
[a] For private insurance compared with Medicaid, private insurance compared with uninsured, and Medicaid compared with uninsured, $p < 0.001$.
[b] For private insurance compared with uninsured and Medicaid compared with uninsured, $p < 0.001$.
[c] For private insurance compared with Medicaid, private insurance compared with uninsured, and Medicaid compared with uninsured, $p < 0.05$.

Discussion

Our findings suggest that lack of access to specialty services is a more important problem for CHCs than previously thought. Referrals to off-site specialty services are frequently needed, yet medical directors reported major problems obtaining access to specialized medical and mental health services for uninsured patients and those covered by Medicaid. Particularly for the uninsured, these reported problems are pervasive and affect sizable numbers of patients.

Given that federal policies expanding the number of CHC sites have not led to a substantial increase in the availability of many on-site specialty services, the problem of difficult access for services may increase if additional resources and planning are not devoted to assuring access to outside specialty services or bringing a greater array of services into CHCs.[15]

■ **Consistency with previous studies.** Our finding that CHC physicians report difficulty in access for uninsured and Medicaid patients at CHCs is consistent with prior reports in other health care settings.[16] For example, in an analysis of the patients from the Community Tracking Survey, uninsured adults were found to have significantly worse access to substance abuse and mental health services than Medicaid and privately insured patients.[17] Christopher Forrest and colleagues reported that payer status is a significant predictor of obtaining a referral from the primary care setting, with the uninsured having 0.58 times lower odds of referral than the privately insured.[18]

Our findings of frequent need for services off-site from the CHC are much

greater than previously reported figures for referrals outside of CHCs. For instance, studies using disposition surveys have reported referral rates of just over 5 percent among CHC patients.[19] Some possible explanations for this discrepancy suggest that our survey findings might be a better reflection of the actual need for referrals services at CHCs. First, the visit disposition surveys capture referrals actually completed, compared to services that are needed but not always obtained, as perceived by the medical directors of our study centers. Second, diagnostic services were included in the off-site referral rate in our survey, whereas visit disposition surveys accounted for such diagnostic services separately. Finally, because of difficulties accessing services, CHC physicians might choose to substitute less optimal services (for example, screening for colorectal cancer using fecal occult blood testing in place of colonoscopy) that can be obtained at the CHC, and such substitutions would also not be captured in disposition surveys.

Our findings relating to the need for specialty services are also consistent with prior research that suggests that visits to hospital outpatient departments are more commonly associated with additional services and referrals when compared to patients receiving care in community-based locations.[20] Although part of this difference might be explained by a lower threshold to use services that are offered on site, difficulties with access to specialty services in community-based settings because of insurance issues likely explain part of this discrepancy. Even among academic health centers, where hospital resources for ancillary and specialty services are available, providers report that access to specialty care can be very difficult for uninsured patients relative to privately insured patients.[21] This problem is likely to be worse for patients at centers without a hospital affiliation.

■ **Policy implications.** Our results suggest some potential strategies to improve access to specialty services. First, medical directors report that requirements for upfront payment are major access barriers for uninsured patients. Explicit underwriting of specialty services is one potential mechanism for addressing this barrier, but it will require additional resources. Earmarking additional funds for CHCs to use for such payments and contractually obligating a defined amount of specialty care for CHC patients are potential mechanisms by which this care could be underwritten.

Second, we found that CHCs affiliated with a medical school or hospital reported much greater access to specialty medical services, while CHCs with mental health services on site reported greater access to specialty mental health services. Policymakers should encourage these affiliations and expansion of on-site services while supporting future research to explore other aspects of CHCs associated with referral success. For example, exploring the feasibility of creating and improving locally integrated outpatient referral networks that include CHCs would be a step toward improving quality of care for the under- and uninsured.

■ **Study limitations.** Our study is subject to several limitations. Like all surveys, ours relies on self-reported data, and our survey respondents might not have had accurate knowledge about all of the issues covered in the survey. We did, however, tar-

get the most knowledgeable respondent at the health center regarding these issues. Some of the directors' tendency to report a rate of access lower for uninsured patients or higher for privately insured patients might be attributable to prevailing assumptions about the problems of the uninsured. However, medical directors of CHCs are more likely than anyone else to have firsthand knowledge of this situation, and in the survey design we grouped questions about access separately by insurance category to prevent respondents from directly comparing insurance groups. Lastly, our response rate to the survey was 54 percent, and we must be cautious in generalizing to all CHCs; however, this percentage is in keeping with average response rates of physician surveys, and the centers in our survey appear to be representative of CHCs nationally.[22]

Our findings suggest that if policymakers plan to extend access to primary care for the uninsured by increasing the number of CHCs and CHC clinic sites, they must also address the problem of access to secondary and tertiary levels of care. Furthermore, given that uninsured and Medicaid patients receiving care in CHCs are disproportionately minority and low-income, the improvements suggested here could have a strong impact on the persistent disparities in health outcomes across racial and socioeconomic groups in the United States today.[23]

Preliminary results from this study were previously presented at the Office of Minority Health National Leadership Summit on Eliminating Racial and Ethnic Disparities in Health in Washington, D.C., 9 January 2006. This project was supported by the Harvard Medical School Office for Diversity and Community Partnership Bridge Award. The authors acknowledge the Commonwealth Fund for educational and salary support for Nakela Cook during the conduct of this research. They thank Yang Xu for statistical programming, Rebecca Gregory for assistance with project management, Mary Ly and Lynn Huynh for research assistance, and the many directors at community health centers nationwide for their time in providing the data for this analysis. They also acknowledge Michelle Proser, Thomas Curtain, and Daniel Hawkins at the National Association of Community Health Centers for their collaboration on the survey design and key input on current issues affecting health centers.

NOTES

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8. In March 2004, when the survey was conducted, data from 2002 were the most current available to the National Association of Community Health Centers. There were 817 CHCs with active medical directors. Three CHCs subsequently reported that they no longer functioned as CHCs and were removed from the data set, leaving 814 health centers with medical directors as potential respondents.
9. Weissman et al., "Limits to the Safety Net."
10. The number of factors was determined by assessing how many eigenvalues of the reduced correlation matrix exceeded the mean eigenvalue (an adapted version of Guttman's criterion). L. Guttman, "Some Necessary Conditions for Common-Factor Analyses," *Psychometrika* 19 (1954): 149–161.
11. Each model included health center region; number of sites; number of users; location; percentage of black, Hispanic, and other minority patients; percentage of uninsured patients; percentage of non-English-speaking patients; percentage of revenue by payer; percentage of revenue from grants; presence of on-site secondary services; and affiliation with a hospital or medical school.
12. See Appendix Table 1, online at http://content.healthaffairs.org/cgi/content/full/26/5/1459/DC1.
13. See Appendix Table 2, ibid.
14. See Appendix Table 3, ibid.
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