

2000s

Hing E, Hooker R, and Ashman J. Primary Health Care in Community Health Centers and Comparison with Office-Based Practice. *J Comm Health* 2010 Nov; Epub ahead of print.

This study gathered information regarding clinicians and care provided in CHCs and office-based practices from the 2006-2007 National Ambulatory Medical Care Survey (NAMCS). Compared with office-based practices, CHCs were more likely to accept new patients, charity or no charge patients, Medicaid recipients, and Medicare recipients while CHC physicians were more likely to have evening or weekend hours than office-based physicians. CHCs also serve a more diverse population: only 39.4% of CHC patients were non-Hispanic white compared to 70.9% of office-based patients, while 45.3% of CHC patients were Medicaid/SCHIP recipients compared to 15.6% at office-based practices. These results highlight how CHCs can help reduce racial/ethnic and socioeconomic disparities.

Shi L, Tsai J, Higgins PC, Lebrun La. Racial/ethnic and socioeconomic disparities in access to care and quality of care for US health center patients compared with non-health center patients. *J Ambul Care Manage* 2009 Oct-Dec; 32(4): 342 – 50.

This article compares data on health center and non-health center patients to highlight existing health disparities amongst racial/ethnic and socioeconomic groups. Data from the 2003 National Healthcare Disparities Report (NHDR) along with the 2002 Community Health Center User Survey were analyzed according to race, ethnicity, income, and education. A total of 70 health centers were randomly selected and studied for various access and quality measures. Even though CHCs had fewer patients with health insurance than non-CHCs (59% vs 83%), they reported higher utilization rates of various health services. For example, more female CHC patients had received a Pap smear in the past three years compared with non-CHC females (85% vs 81%), more CHC patients 65 years and older had received an influenza vaccination in the past year compared with non-CHC patients of the same age range (70% vs 65%), and more CHC patients had received outpatient mental health services than non-CHC patients (22% vs 11%). In addition to higher utilization rates, CHCs also had no racial/ethnic disparities on several access and quality indicators while having lower education and income disparities compared to non-CHCs. Overall, CHCs were shown to significantly reduce health disparities related to access to care and quality of care.

Dor, A, et al. “Uninsured and Medicaid Patients’ Access to Preventive Care: Comparison of Health Centers and Other Primary Care Providers.” *RHCN Community Health Foundation*. August 2008; Research Brief #4.

This study compares Community Health Centers to other primary care providers in their provision of preventive health care to Medicaid and uninsured patients. By analyzing the 2002-2005 pooled Medical Expenditure Panel Survey (MEPS) national data set, authors find that Medicaid and uninsured patients seen by health centers tend to be significantly poorer, in much worse health, and in the case of uninsured patients, more likely to be members of racial and ethnic minority groups than Medicaid and uninsured patients of other providers. However, health centers achieve considerably higher levels of preventive health care for these patient populations. Differences of up to 22% are seen in screenings for diabetes, hypertension, and breast and cervical cancer. The study explains that because health centers serve populations at elevated risk of poverty, poor health, and low health literacy, they exhibit a continuous need for federal subsidization for their services to remain economically feasible.

Candib, L, et al. “Creating Open Access to Exercise for Low-Income Patients Through a Community Collaboration for Quality Improvement: If You Build it, They Will Come.” 2008 *J Ambulatory Care Management* 31(2): 142-150.

This article examines social determinants to health outcomes through a pilot exercise program collaborative between a community health center and a local YWCA in Massachusetts. As previous studies have indicated, lack of access to safe, available, and affordable settings for exercise are crucial reasons why patients do not exercise. The study found that when one community health center eliminated these obstacles, minority and low-income patients increased their utilization of exercise facilities. After two years of implementing the program, more than 1,000 health center patients had become the most frequent users of the YWCA. 74% of patients with diabetes who attended the program at least 3 times and adhered to their medical treatments experienced improved HbA_{1c} outcomes. This study also illustrates the feasibility of community partnerships between healthcare and fitness organizations to address greater health goals for minority and low-income populations.

Chin MH, et al. “Improving and Sustaining Diabetes Care in Community Health Centers with the Health Disparities Collaboratives.” December 2007 *Med Care* 45(12).

The article presents findings from the longest-running evaluation to date of the Health Disparities Collaborative, a continuous quality improvement program in community health centers. Researchers conducted chart reviews of over 2,000 randomly selected health center patients with diabetes from 34 health centers in 17 states. Data were collected on patient demographic, process of care measures, and outcomes in 1998, 2000, and 2002. Researchers also randomized study centers to determine if more intensive quality improvement efforts - including additional staff learning sessions, training on patient-provider communication and behavioral health, and patient empowerment

resources - further improve care. Between 1998 and 2002, researchers found “statistically and clinically significant” improvement in 11 diabetes process of care measures as well as a reduction in hemoglobin A1c and low-density lipoprotein (LDL) cholesterol levels. High intensity intervention health centers had greater use of some process measures but lower use of life style counseling measures compared to standard intensity health centers. However, researchers caution that lifestyle counseling may be more “prone to documentation variation across health centers compared to laboratory outcomes.” Health centers experience improvements in diabetes processes of care and LDL cholesterol level in two years, and that these improvements as well as improvements in hemoglobin A1c occurred over four years. Authors conclude that improving outcomes for complex conditions may require enduring commitment to quality improvement efforts and their evaluation.

Haq, S. *A Report on New Jersey’s Federally Qualified Health Centers (FQHCs) Performance in Prenatal Care*. Aug. 2007 New Jersey Primary Care Association. <http://www.njpca.org/>

This study compares birth outcomes of New Jersey prenatal care patients by provider type. Babies born under the care of health center providers had lower incidences of very low and low birth weights compared to other providers (1.3% vs 1.6% and 5% vs 7% in 2005). Additionally, health center performance fares better than other health care organizations, with remarkable results towards the birth weight goals set in the Healthy New Jersey 2010 program. The health center rate of low birth weight among births by FQHC provider care is 5.06% compared to 6% and 1.28% versus 1.0% for very low weight. This high performance, combined with a review of national studies, indicate that health centers may be able to address racial/ethnic disparities in perinatal care and birth outcomes.

Lewin, M and Baxter, R. “America’s Health Care Safety Net: Revisiting the 2000 IOM Report.” Sept-Oct 2007 *Health Affairs* 26(5): 1490-1494.

In 2006, the committee which authored the 2000 Institute of Medicine report, *America’s Health Care Safety Net: Intact but Endangered*, reconvened to discuss the ability of the safety net to meet increased demands and challenges. The committee focused on four major issues: (1) financial burdens to the safety net; (2) impact of Medicaid managed care; (3) challenges in operating in an increasingly competitive technologically sophisticated, and performance-oriented environment; and (4) the capacity of the federal government to monitor the safety net. Most safety net providers remain financially strained with smaller health centers especially facing funding challenges. Points of agreement include the challenges in activating HIT, delivering mental health services, a lack of urgently needed capital investment, concerns over new Medicaid flexibility granted to states under the Deficit Reduction Act, challenges recruiting health professionals, increasing collaborations among providers, and the need for the federal government to track and monitor the safety net’s ability to meet the needs of medically vulnerable populations.

Coleman, K, Reiter, K, and Fulwiler, D. “The Impact of Pay-for-Performance on Diabetes Care in a Large Network of Community Health Centers.” Nov. 2007 *Journal of Health Care for the Poor and Underserved* 18: 966-983.

This study examines the effect of pay-for-performance programs as a means to increase health care quality for the underserved. Authors evaluate a pay-for-performance program at the largest health center network in Chicago, using multiple indicators for diabetes care. Access Community Health Network (ACCESS), a network of FQHCs in Chicago, implemented this program for their providers as an effort to improve productivity and quality of care. As a result of the program, diabetic patients have significantly more physician visits and screening tests conducted. While these results illustrate a potential for pay-for-performance programs to improve outcomes, they also suggest that more needs to be done to effect health outcomes. The authors recommend evaluating other factors such as staff, infrastructure, and IT support as additional avenues to improved care and process outcomes.

Hadley J, Cunningham P, and Hargraves JL. “Would Safety-Net Expansions Offset Reduced Access Resulting from Lost Insurance Coverage? Race/Ethnicity Differences.” November/December 2006 *Health Affairs* 25(6):1679-1687.

This article simulated increased funding under the Bush Administration’s initiative to expand health centers as well as reductions in uninsurance to determine the effect on racial/ethnic disparities in access to care among the low income. Authors used survey data and health center grant revenues reported in the Uniform Data System, and adjusted data for intrinsic links between insurance coverage, health center capacity, and access to care. Authors found that people living in areas with greater health center capacity are more likely to have a usual source of care and an ambulatory care visit compared to those who living in other areas. Authors also found that both increasing insurance rates and health center capacity improve access to care and narrow access disparities. Findings were especially pronounced in the case of minorities. Moreover, health center expansion may offset much of the adverse impact rising uninsurance has on access. Expansions in both insurance and health center capacity most effectively improve access and narrow disparities.

Hicks LS, et al. “The Quality of Chronic Disease Care in US Community Health Centers.” November/December 2006 *Health Affairs* 25(6):1713-1723.

Authors examined medical records of a nationally representative sample of health center patients with chronic illness, as well as patient and health center characteristics associated with health outcomes, between 1999 and 2000. Using nationally recognized quality of care indicators, authors found that health center quality of care was comparable to or better than care delivered elsewhere, as measured by reduced hospitalizations and emergency department visits, higher vaccination rates, and higher cancer screening rates. Moreover, racial and ethnic disparities in quality of care were eliminated after adjusting for insurance. Although health centers experience limitations

in providing care to the uninsured as measured by outcomes slightly behind those of insured patients, findings are similar to national trends. However, authors note that as health centers serve more uninsured patients, these patients will likely experience improved health outcomes. Authors also find that health centers with computerized decision support tended to provide better care than those without, and health centers may require additional resources to meet the needs of their uninsured patients.

O'Malley AS, et al. "Health Center Trends, 1994-2001: What Do They Portend for the Federal Growth Initiative?" March/April 2005 *Health Affairs* 24(2):465-472.

Authors reviewed health center patient records from nationally representative samples of community health centers in 1994 and 2001. Over this time, health centers provided more preventive services and treated more chronically ill, near-elderly, and uninsured patients while improving quality and continuity of care. Authors found no disparities by race/ethnicity or insurance status in delivery of preventive services. The authors conclude that these findings suggest that the Federal Health Center Growth Initiative through 2006 will greatly improve access to quality care for underserved populations, while likely reducing national disparities for racial/ethnic minorities and the uninsured. However, health center expansion should coincide with expansions in insurance coverage and the primary care workforce.

Shi, L., et al. (2004). America's health centers: Reducing racial and ethnic disparities in perinatal care and birth outcomes. *Health Services Research*, 39(6), Part I, 1881-1901

Health centers are important providers of prenatal care for low-income women, accounting for 17.2% of all low-socioeconomic status (SES, defined here as births to mothers with less than 12 years of education) births nationally, including 25.4% of all low-SES Asian births, 20.6% of all low-SES black births, and 18.9% of all low-SES Hispanic births. Low-SES women seeking care at health centers experience lower rates of LBW compared to all low-SES mothers (7.5% vs. 8.2%). This trend holds for each racial/ethnic group, which is particularly noteworthy for African American women who are especially at higher risk for adverse pregnancy outcomes. Nationally, 14.9% of all low-SES black infants are born at LBW compared to 9.1% of low-SES white infants, a disparity of 5.8%. Comparatively, this black-white disparity is narrower at health centers, where 10.7% of health center black infants are born at LBW compared to 7.4% of health center white infants, a difference of 3.3%. If the LBW black-white disparity seen at health centers could be achieved nationally, there would be 17,100 fewer LBW black infants annually.

Shin P, Jones K, and Rosenbaum S. *Reducing Racial and Ethnic Health Disparities: Estimating the Impact of High Health Center Penetration in Low-Income Communities*. Prepared for the National Association of Community Health Centers, September 2003.
http://www.gwumc.edu/sphhs/healthpolicy/chsrp/downloads/GWU_Disparities_Report.pdf.

Found that as the proportion of a state's low income population served by health centers grows, the black/white and Hispanic/white health gap narrows (i.e., declines) in such key areas as infant mortality, prenatal care, tuberculosis case rates, and age-adjusted death rates. The study also concluded that Medicaid alone has little direct impact on health disparities, but Medicaid coverage for low income patients is key to health centers' ability to serve more of the low income in states, and in so doing reducing disparities. As evidence of this the GW researchers found that health center penetration (defined as the proportion of state low income served by health centers) had its lowest impact in reducing disparities for heart disease and diabetes related death rates. These diseases disproportionately affect older low income and working-age minority adults, who are the least likely to have Medicaid coverage. Hence, it is the combination of customized, supported health care with comprehensive health insurance that may most effectively reduce health disparities.

Garg A, Probst JC, Sease T, Samuels ME. "Potentially Preventable Care: Ambulatory Care-Sensitive Pediatric Hospitalizations in South Carolina in 1998." September 2003 *Southern Medical Journal* 96(9):850-8.

Authors examined 1998 South Carolina hospital inpatient data in order to determine personal and community factors that influence ambulatory care-sensitive (ACS) hospitalizations among children under the age of 18. Those most likely to have a ACS hospitalization included children that were younger, male, non-white, Medicaid insured, and those living in counties that were rural, poor, and had a health professional shortage area designation. Counties with a health center had 55% fewer pediatric ACS hospitalizations, demonstrating the importance of health centers. In noting that poverty and the lack of a provider increases rates of ACS conditions, the authors support the President's call to increase the number of health centers to prevent ACS hospitalizations and related costs.

Schempf, A, Politzer RM, and Wulu J. "Immunization Coverage of Vulnerable Children: A Comparison of Health Center and National Rates" *Med Care Res Rev.* 2003 Mar; 60(1):85-100.

This study evaluates community health center (CHC) effectiveness in mitigating immunization disparities for kids. The authors compare national health center data from the 1995 User Survey, representing 1468 patients in 50 health centers, to the 1995 National Health Interview Survey. Although significant racial/ethnic disparities in childhood immunization rates exist nationally, these disparities are mitigated by or do not exist at CHCs. In addition, rates of vaccination among children reporting a usual source of care at a health center were uniformly higher than those of children with other another usual source.

General Accounting Office (GAO). *Health Care: Approaches to Address Racial and Ethnic Disparities.* GAO-03-862R. July 8, 2003.

Recognized the Health Disparities Collaboratives as a promising federal program targeting health disparities that should be expanded.

Institute of Medicine (IOM). *Unequal Treatment: Confronting Racial and Ethnic disparities in Healthcare*. National Academy of Sciences Press, March 2003.

Specifically recognized the importance of community health centers, stating that “the community health center model has proven effective not only in increasing access to care, but also in improving health outcomes for the often higher-risk populations they serve.”

Schempf, A, Politzer RM, and Wulu J. “Immunization Coverage of Vulnerable Children: A Comparison of Health Center and National Rates” *Med Care Res Rev*. 2003 Mar;60(1):85-100.

This study evaluates health center effectiveness in mitigating immunization disparities for kids. The authors compare national health center data from the 1995 User Survey, representing 1468 patients in 50 health centers, to the 1995 National Health Interview Survey. Although racial/ethnic, income, and insurance disparities in receiving childhood immunizations exist nationally, disparities were mitigated at Community Health Centers. There were no consistent disparity rates by insurance coverage in community health centers, although black and Medicaid children served by health centers were less likely to be vaccinated for polio and measles, respectively. Hispanic children served by health centers exhibited higher rates of immunization than did other ethnicities. Rates of vaccination among children reporting a usual source of care at a health center were uniformly higher than those of children with other another usual source, and significantly so for Hib and hepatitis B.

Shi, L., Starfield, B., Politzer, R., Regan, J. “Primary Care, Self-Rated Health, and Reductions in Social Disparities in Health.” June 2002 *Health Services Research* 37(3):529-50.

Concluded that having a good primary care experience, as characterized by enhanced accessibility and continuity, is associated with improved self-reported health status as well as income disparities in ratings of overall health status.

Frick, KD and Regan J. “Whether and Where Community Health Centers Users Obtain Screening Services.” November 2001 *Journal of Healthcare for the Poor and Underserved* 12(4): 429-45.

Authors examine the socioeconomic status of adult community health center users and their use of screening services for secondary prevention. Findings reveal that users of minority or lower socioeconomic status were not less likely to receive preventive screenings than other adult users, and the screenings conducted were most often at a

CHC. The study concludes that health centers are indeed providing preventive services to vulnerable populations that would otherwise not have access to certain services. Health centers improve access to timely screening and preventive services for low income and minority patients who would not otherwise have access to certain services, eliminating disparities among patients for these services.

Carlson, BL et al, "Primary Care of Patients without Health Insurance by Community Health Centers." April 2001 *Journal of Ambulatory Care Management* 24(2):47-59.

Carlson et al., compares uninsured Community Health Centers (CHCs) users with the uninsured nationwide. Even though health center uninsured patients are more likely to live in poverty-stricken areas, be poorly educated, and be members of a minority group than the uninsured nationally, they are much more likely to have a usual source of care than the uninsured nationally (98% vs. 75%). In addition, they are significantly more likely to receive health promotion counseling on smoking, drugs, alcohol, and sexually transmitted diseases than the uninsured nationally.

Politzer R, Yoon J, Shi L, Hughes R, Regan J, and Gaston M. "Inequality in America: The Contribution of Health Centers in Reducing and Eliminating Disparities in Access to Care." 2001 *Medical Care Research and Review* 58(2):234-248.

Reviews literature showing that health centers improve access to preventive services, health outcomes, and have been successful in reducing or eliminating health disparities. Health center prenatal patients are less likely to give birth to low birth weight babies compared to their counterparts nationally. When compared to uninsured patients who do not receive care at health centers, health center uninsured patients are much less likely to delay seeking care because of costs, go without needed care, or fail to fill prescriptions for needed medicine. Health center Hispanic and African-American women, as well as women patients who are low income, uninsured, and have Medicaid, are more likely to receive mammograms, clinical breast exams, and pap smears than comparable women not using health centers.

Shi, L., J. Regan, R. Politzer, and J. Luo. "Community Health Centers and Racial/Ethnic Disparities in Healthy Life." 2001. *International Journal of Health Services* 31(3):567-582.

Examines the disparity in health *status* among health center patients of different racial and ethnic groups and compares those findings to non-health center patients. The study compares self-reported healthy life indicators from the 1994 Health Center User Survey and the 1994 National Health Interview Survey, including in the later survey set only those identifying a usual source of care other than a health center. The study finds that while there are significant racial and ethnic health disparities in healthy life among the general population even after controlling for socio-demographic factors, these disparities do not exist among health center users. Non-white Hispanic health center users

experience healthier life than both African American and white users, and no significant differences were found between white and African American users. Conversely, among non-health center users, whites experience significantly healthier life than both African Americans and Hispanics. The study concludes that the absence of disparities at health centers may be related to their culturally competent practices and community involvement, features that are often lacking at other primary care settings.

Forrest CB, Whelan EM. "Primary Care Safety-Net Delivery Sites in the United States: A Comparison of Community Health Centers, Hospital Outpatient Departments, and Physicians' Offices." October 2000 *JAMA* 284(16):2077-2083.

Researchers looked at trends in primary care use by Americans in 1994 and 1998. In 1994, about 44% of the overall outpatient visits in the US were for primary care, averaging about 1.3 visits per person. Community health centers (CHCs) made up 4% of total primary care visits and 20% of all visits by Medicaid and uninsured minorities. Patients living in rural areas made up almost 50% of CHC primary care visits. Established CHC patients were twice as likely to present new health problems than established patients of hospital outpatient departments, and were also significantly more likely to do so than established patients of physicians offices – indicating that continuity of care is better at CHCs. The study also showed large disparities in the number of primary care visits by race/ethnicity. Hispanics made 20% fewer visits and Blacks made 33% fewer visits per person compared to whites. The authors noted that doubling the health center program from its size in the mid-1990's while maintaining the overall patient composition would decrease the Hispanic/white disparity by 50% and the Black disparity by 24%.