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## **2000s**

Probst, J, et al. “Association between community health center and rural health clinic presence and county-level hospitalization rates for ambulatory care sensitive conditions: an analysis across eight US states.” *BMC Health Services Research*. July 2009; 9:134

The authors examined the extent to which the presence of community health centers (CHCs), rural health clinics (RHC), or both improves accessibility to primary health care, as measured by 2002 county-level rates of hospitalization for ambulatory care sensitive (ACS) conditions in 8 states (Colorado, Florida, Kentucky, Michigan, New York, North Carolina, South Carolina, and Washington). After adjusting for county characteristics, working adults exhibited significantly lower ACS rates in counties with a CHC as compared to counties with neither facility. Among older individuals, ACS rates were lower in counties with a CHC, an RHC, or both as compared to counties with neither. The authors suggested that CHCs and RHCS contribute to increased accessibility to primary health care, but that further research is necessary to clarify additional barriers to primary care, especially for vulnerable children and the uninsured.

National Association of Community Health Centers, The Robert Graham Center, The George Washington University School of Public Health and Health Services. “*Access Transformed: Building a Primary Care Workforce for the 21<sup>st</sup> Century*.” August 2008. [www.nachc.com/access-reports.cfm](http://www.nachc.com/access-reports.cfm).

This report examines current and future primary care workforce needs at Community Health Centers (CHCs). Authors studied current staffing patterns using provider-to-patient ratios calculated from 2006 Uniform Data System information. These ratios were compared to ideal standards based on staffing patterns in other health care systems. CHCs are currently short 1,843 primary care providers and 1,384 nurses. In order to meet the goal of serving 30 million patients by 2015, CHCs will require 15,585-19,428 additional primary care providers and 11,553-14,397 additional nurses. The authors present a multi-faceted strategy to meet health centers’ staffing needs and strengthen the primary care workforce nationally.

Shin, P, et al. “How Does Investment in CHCs Affect the Economy?” *RHCN Community Health Foundation*. February 2008; Research Brief #1.

Because Community Health Centers are located in regions severely affected by the economic downturn, researchers sought to determine the benefit of expanding their federal appropriations. By building off previous studies, they found that a \$250 million

increase in appropriations would allow health centers to serve 1.8 million additional patients (a 12% increase). It would also allow them to generate an extra \$750 million in revenue – a four-to-one return on investment. The economic gains to the low income communities health centers serve would reach nearly \$1 billion in direct benefits, more than \$1.1 billion in indirect benefits, and 24,000 jobs. The authors note that these gains justify expanded investment even and especially during economic hardship.

Rust George, et al. “Presence of a Community Health Center and Uninsured Emergency Department Visit Rates in Rural Counties.” *Journal of Rural Health* Winter 2009 25(1):8-16.

Access to primary care plays a vital role in reducing rates of avoidable and costly emergency department (ED) visits. Additionally, health centers remain an important source of care for the uninsured. Given this context, researchers compared uninsured ED visit rates across rural counties in Georgia between 2003 and 2005. They found that counties with a community health center site had 25% fewer uninsured ED visits per 10,000 uninsured population than those counties without a health center site. Health center counties also had fewer ED visits for ambulatory care sensitive visits – those visits that could have been avoided through timely treatment in a primary care setting. These findings remained statistically significant even after controlling for poverty, percent of African American population, and number of hospitals. Researchers found no significant differences for the insured population. They also note that simple primary care provider to population ratios do not affect uninsured ED visit rates, suggesting that expanding access to care for the uninsured requires adequate capacity to serve them.

Felland LE, Lauer J, Cunningham PJ. “Community Efforts to Expand Dental Services for Low-Income People.” July 2008. Center for Studying Health System Change. Issues Brief No. 122. [www.hschange.com/CONTENT/1000/](http://www.hschange.com/CONTENT/1000/).

This issue brief highlights how communities across the country are working to expand access to oral health care for low-income people. Through site visits to 12 nationally representative metropolitan communities across the country, researchers from the Center for Studying Health System Change note that Federally-Qualified Health Centers (FQHCs) provide comprehensive dental services, including preventative, restorative, and emergency services. By 2006, approximately three-quarters of FQHCs provided preventative dental care, and health centers or other clinics in half of the 12 communities reported opening new dental clinics, expanding clinic sessions, and hiring new dental staff. Researchers note that despite recent expansions, demand for oral health care exceeds available resources. They note that policymakers and the dental community must work together to improve access to dental care.

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.

Shi, L and Stevens, GD. "The Role of Community Health Centers in Delivering Primary Care to the Underserved." April-June 2007 *J Ambulatory Care Manage* 30(2):159-170.

Researchers analyzed survey data in order to compare the primary care experience of Community Health Center uninsured and Medicaid patients to similar patients nationally. Health center uninsured patients reported better primary care experiences in terms of access, having a regular source of care, and comprehensiveness than the uninsured nationally, and health center Medicaid patients reported better care than Medicaid patients nationally. Health center Medicaid and uninsured patients were more likely to receive preventive screening such as, papanicolaou test, breast examination, mammogram, and colonoscopy, than Medicaid and uninsured patients nationally. For example, health center Medicaid women aged 40 years and older were significantly more likely to have had a mammogram in the past 2 years than Medicaid women nationally (82% vs 56%). Furthermore, health centers were considerably higher than the Healthy People 2010 national goal for three of the four preventive screenings. Additionally, health center uninsured patients were much more likely to have had 4 or more visits to a general physician than uninsured patients (58% vs 40%). This is despite the fact that Community Health Center patients are significantly more likely to be below the federal poverty level and be in poorer health. New health center funding will increase capacity to serve more uninsured patients, but Medicaid cuts jeopardize these expansion efforts.

National Association of Community Health Centers, The Robert Graham Center. *Access Denied: A Look at America's Medically Disenfranchised*. March, 2007. [www.nachc.com/access-reports.cfm](http://www.nachc.com/access-reports.cfm).

This report calculates the number and the proportion of the U.S. population without access to primary care due to local shortages of such physicians. This report defines these individuals as "medically disenfranchised." At least 56 million Americans, or nearly one in five U.S. residents, were considered medically disenfranchised in 2005. Significantly, this number exceeds the number of uninsured. State-by-state analysis indicates that 21 states each have more than one million medically disenfranchised individuals. The authors describe how Community Health Centers are ideal providers to

reach the medically disenfranchised, and the millions of other who experience additional barriers to care. In order to expand their reach, policymakers must increase investment in the Health Center Program, expand insurance coverage, and strengthen the primary care workforce.

Shi L, Stevens G and Politzer R. "Access to Care for U.S. Health Center Patients and Patients Nationally - How Do the Most Vulnerable Populations Fare?" March 2007 *Medical Care* (45)3: 206-213.

Authors examined data the 2002 Community Health Center User Survey and the 2002 National Health Interview Survey (NHIS) to compare access to care for health center uninsured and Medicaid patients to uninsured and Medicaid-enrolled people nationally. This study found that health center patients tend to have poorer health than non-health center patients, yet access to care for health center uninsured and Medicaid-enrolled patients is as good as or better compared to their national counterparts, regardless of race/ethnicity, education level, and income level. Health center uninsured patients were 15.8 times more likely and health center Medicaid patients were 13.4 times more likely to have a regular source of care than their counterparts nationally. When looking specifically at health center populations by race, education level, and income, care was found to be better for these groups at health centers. For example, among African Americans, 94.5% of health center uninsured patients had a usual source of care compared with 62.7% of uninsured African Americans nationally. For Hispanics, 98.2% of health center uninsured versus 41.6% of uninsured nationally had a regular source of care. The study concludes that continued federal support for health centers and sustained Medicaid coverage are essential to ensure access to vulnerable populations.

Hurley, RE, Felland LE, Lauer J. "Community Health Centers Tackle Rising Demands and Expectations" December 2007. Center for Studying Health System Change. Issue Brief No. 116. [www.hschange.com/CONTENT/958/](http://www.hschange.com/CONTENT/958/).

This brief addresses the rising demand for health center care, such as medical, dental, and mental health services. In 2007, the Center for Studying Health System Change conducted over 500 interviews at community health centers (CHCs) in 12 nationally representative metropolitan communities. The interviews reveal that health centers are experiencing a number of market pressures, including rising patient numbers, recruiting and retaining health center staff, and cuts in state funded mental health services, and growing demand for dental and mental health care. In addition, they also face expectations for quality reporting and implementing electronic medical records. In spite of these challenges, over the past two years, CHCs have successfully met increasing demands for health care services among underserved and sought to address health care disparities.

Savageau JA, et al. "Characteristics of Frequent Attenders at a Community Health Center." 2006 *Journal of the American Board of Family Medicine* 19(3):265-275.

As health centers struggle with increasingly challenging patient health care needs, they are hard-pressed to find solutions to improve health outcomes for frequent attenders. This study analyzed the medical records for 382 established patients at an urban family practice community health center in Massachusetts over a 30-month time period, from August 1998 to February 2001, and found 79% to be frequent attenders. Frequent attenders are defined as patients who make 5-12 more visits per year, contributing anywhere from 15-30% of all visits to CHCs. Statistically significant sociodemographic factors attributing to increased visits include age, zip code of residence, and insurance status. In summation, patients aged 45-64, living outside city limits, or covered under Medicaid or Medicare were more likely to be frequent attenders. 89.9% of frequent attenders had at least one chronic medical condition. Authors recommend developing interventions such as customized social report cards, applying elements of the Chronic Care Model, and productive interactions between informed patients as solutions to improve outcomes for both patient and health center.

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.

Hadley J and Cunningham P. "Availability of Safety Net Providers and Access to Care of Uninsured Persons." October 2004 *Health Services Research* 39(5):1527-1546.

Analyzed access to safety net services in 60 randomly selected and nationally representative communities to determine whether proximity to a safety net provider affects access to care by uninsured individuals. The authors find that uninsured people living within close proximity to an FQHC are less likely to have an unmet medical need, less likely to have postponed or delayed seeking needed care, more likely to have had a general medical visit, significantly less likely to have had an emergency room visit, and less likely to have a hospital stay compared to other uninsured. Thus, expanding health center capacity would reduce unmet need and increase the percent of uninsured with a usual source of care. At the same time, expanding health centers could improve the efficiency of the entire health care delivery system due to their ability to provide timely care and lower hospital and emergency room use, thereby offsetting the costs expanding health center capacity. The study estimates that current efforts to expand the number of health centers could ensure access to care for up to 7.5 million additional uninsured persons – more than half of the uninsured currently without access to a safety net

provider. Certain challenges to the safety net, including ability to meet demand, provide specialty services, and staff shortages, likely indicates that a “much larger” safety net expansion than “what is currently being proposed” may be necessary. The authors conclude that significant access disparities would still exist between the publicly or privately insured and the uninsured, so that insurance is also essential for improving access to care.

National Association of Community Health Centers. *Nation's Health at Risk Part II: A Front Row Seat in a Changing Health Care System*. Special Topics Issue Brief #7. August 2004. [www.nachc.com](http://www.nachc.com)

This report is the second in a series of reports examining trends impacting access to affordable health care in America and straining the safety net. This report describes how health centers delivery high quality, cost effective care to 15 million patients nationally, and how both rising uninsured and limited resources have affected health centers. Specifically, the report reviews literature on how health centers produce significant savings to state Medicaid programs, and potential savings associated with redirecting non-urgent and ambulatory care sensitive emergency room visits to more appropriate settings nationally and for each state. In addition, the report reviews why the safety net is a crucial component of the nation's health care system that will always be needed.

Brown ER, et al. “Effects of Community Factors on Access to Ambulatory Care for Lower-Income Adults in Large Urban Communities. Spring 2004 *Inquiry* 41:39-56.

Authors examined the effects of community-level variables on access to ambulatory care for low income adults in 54 US urban metropolitan statistical areas. Low-income residents, regardless of their insurance status, are more likely to have visited a physician if living in a metropolitan area with a greater number of health centers per low-income resident. Furthermore, a 10% increase in the number of health centers per 10,000 population would lead to a 6% increase in the probability of visiting a physician.

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.



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.

Politzer RM, Schempf AH, Starfield B, and Shi L. "The Future Role of Health Centers in Improving National Health." 2003 *Journal of Public Health Policy* 24(3/4):296-306.

Discusses the importance of primary care in light of health disparities and poor health status among the nation's most vulnerable populations. Examines how community-based primary health care that includes access to other social services effectively improves health outcomes at an individual and community level, and concludes that while there is no single remedy, health centers are such an effective model of care. The authors make the case for continued expansion of the health centers program.

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 patients and their use of screening services for secondary prevention. Findings reveal that minority or lower socioeconomic status patients were not less likely to receive preventive screenings than other adult users, whereas nationally minority or lower socioeconomic status adults are less likely to receive preventive screenings than other adults. Screenings received by health center patients were most often at a health center. The study concludes that health centers are indeed providing preventive services to vulnerable populations that would otherwise not have access to certain services, and that health centers "appear to facilitate the use of timely screening services for minority and low socioeconomic status users."

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) patients with the uninsured nationwide. Analysis of whether CHC uninsured patients have greater access and satisfaction in health care is also conducted. Findings create a favorable picture of CHC and the importance of their work with the uninsured. 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.

### **1990s**

Regan J, Lefkowitz B, and Gaston MH. "Cancer Screening Among Community Health Center Women: Eliminating the Gaps." October 1999 *Journal of Ambulatory Care Management* 22(4):45-52.

Because health center women are at a higher risk for morbidity and mortality associated with breast and cervical cancers, the authors compared rates of Pap smear testing, mammography, and clinical breast examination between health center women patients and comparable women nationally. Found that a higher proportion of health center Hispanic and African-American women as well as women below poverty level are up to date on cancer screening than comparable women not using health centers. Moreover, the authors found that health centers in most cases meet or exceed the Healthy People objectives.

### **1980s**

Fleming G and Andersen R. "The Municipal Health Services Program: Improving Access to Primary Care without Increasing Expenditures." 1986 *Medical Care* 24(7): 65-579.



The Municipal Health Services Program (MHSP) was created by 5 cities as networks of primary care clinics for the underserved. The evaluation found that MHSPs did reach most of the targeted groups, and may have improved improper use of emergency room services. However, MHSP did not provide continuity of care nor high patient satisfaction. Per capita expenditures for medical care for MHSP users were no about the same as for others. However, for Medicare eligible MHSP users, expenditures by Medicare were significantly less.

Freeman HE, Kiecolt KJ, Allen HM 2nd. "Community Health Centers: Making Health Care Less Expensive and More Accessible." August 1982 *Public Aff Rep.* 23(4):7.