2010s

Nocon et al. Health care use and spending for Medicaid enrollees in federally qualified health centers versus other primary care settings. AJPH. September 2016.
   This study examined Medicaid claims data across 13 states, comparing costs of care per patient between health center and non-health center providers. The authors found that health centers had 24% lower total costs of care per Medicaid patient. Additionally, health centers had lower spending on all categories of care studied such as other outpatient care (33% lower) and inpatient care (27% lower). Health centers had lower total spending per Medicaid patient compared to non-health center providers within each of the states studied as well.

   This study aimed to examine the impact of health center density on preventable hospital admissions among uninsured and Medicaid patients. This study calculated health center density within a five-mile radius of CA hospitals and analyzed 2010 CA inpatient administrative data to determine preventable hospitalization rates. The study found that preventable hospitalizations among Medicaid and uninsured patients decreased as health center density increased, with a greater impact observed for Medicaid patients compared to uninsured patients. The study findings provide evidence of health centers’ role in helping reduce preventable hospitalizations in the communities they serve.

   This study aimed to compare total annual costs of care for health center, private practice, and outpatient clinic patients receiving Medicare. The authors analyzed Part A and B Medicare claims data from 14 different US states for beneficiaries living in primary care service areas containing at least one health center. Authors examined total annual costs, total annual primary care costs, and total annual non-primary care costs for each patient group. Results revealed that health center Medicare patients had 10-30% lower total median annual costs compared to patients at private physician offices and outpatient clinics. This was due primarily to lower non-primary care costs at health centers.

This study examines the association between health center penetration and Medicare spending and quality of care in areas known as hospital referral regions. The authors used 2010 cross-sectional data from the Geographic Variation in Medicare Spending and Utilization database, the Uniformed Data System, and the American Community Survey. Higher health center penetration in a hospital referral region was associated with 10 percent lower Medicare spending fee-for-service program savings without compromising the quality of service. These results show that health centers may reduce Medicare spending while maintaining clinical quality.


This study compared the health care utilization and the receipt of preventive care services between health center patients and non-health center patients, with a focus on the uninsured. The authors used five panels from the 2004 to 2008 Medical Expenditure Panel Survey, selecting patients who were age 18 or older, had visited one clinic during the first panel year, and who lived within 20 miles of a health center. Health center patients had fewer office visits and hospitalizations and were three times as likely to receive breast cancer screening compared to non-health center patients. Uninsured health center patients had fewer out-patient visits and emergency room visits and were more likely to receive dietary advice and breast cancer screening than non-health center patients. This study suggests that health centers lower rates of utilization among disadvantaged groups and provide greater access to preventive care.


This case study analyzes Medi-Cal claims data from 135,000 adults enrolled in a managed care plan in California to differentiate between healthcare system utilization of Federally Qualified Health Center (FQHC) patients and non-FQHC patients. The study population consisted of high utilizers of the health system who were continuously enrolled in Medi-Cal for two years, not over the age of 65, and not in Medicare. Compared to non-FQHC patients, FQHC patients had 64% lower rates of multi-day hospital admission, 18% lower rates of emergency department (ED) visits, 4.9% lower 30-day readmission rates, and only one-fourth of total inpatient bed days. Total healthcare costs for FQHC patients were also 20% lower than those for non-FQHC patients. These results show that investments in FQHCs’ primary care bring value to the overall healthcare system through lower utilization of hospitals and EDs.

This study explored whether national cost savings are associated with the use of community health centers. Authors used the 2006 Medical Expenditure Panel Survey, a national sample survey of individuals covering use and reimbursement for health services by multiple demographics. They controlled for patient health status, age, education, income, location, and other demographic variables. After adjusting, patients receiving the majority of care from health centers averaged significantly lower total health care expenditures for the year compared with those receiving care elsewhere ($3500 vs $4594, or 24% lower total expenditures). Health center patients also had 25% lower expenditures for ambulatory care. These findings reinforce previous research demonstrating that health centers deliver effective care that returns significant health care savings, even as they serve patients with high health care needs.


The purpose of this study was to examine differences in patient socio-demographic makeup and performance on process measures across different care settings: health centers, physician offices, and out-patient departments. Authors used the 2006 National Ambulatory Medical Care Survey, the 2007 National Hospital Ambulatory Medical Care Survey, and the Uniform Data System. Health centers serve more minority, uninsured, and Medicaid/SCHIP-insured patients. Adjusted analysis demonstrated that health centers perform process of care measures with comparable or higher occurrence compared to physician offices. For example, health centers are 1.38 times more likely to prescribe medication during a visit, 1.68 times more likely to perform blood pressure checks during a visit, and 1.37 times more likely to order a laboratory test. Health centers experienced narrower racial/ethnic and insurance disparities compared to physician offices and out-patient departments, even after accounting for patient severity of illness and other factors. In some cases, disparities do not exist. For example, unlike physician offices and out-patient departments, there were no major disparities in the disease management offered to patients among different ethnic/racial and insurance groups at health centers.


This study conducted by the Colorado Department of Health Care Policy and Financing investigates the quality of health center care in Colorado by comparing the frequency of costly hospital-related services used by fee-for-service Medicaid patients seen by health centers and private providers in 2008. Twenty-one percent of the study population received care at health centers while 79% received care by a private provider. After
controlling for urban and rural status, disability status, sex, and age, a logistic regression analysis demonstrated that health center patients would use hospital-related services significantly less than other fee-for-service patients. Hospital readmission rates within ninety days of discharge and preventable hospital admissions were also significantly lower for health center patients. These outcomes show that routine health center care reduces the likelihood that a patient will need care in a more costly hospital setting.


Author presents a systematic review of health centers’ Health Disparities Collaboratives (HDCs), a nation-wide program that aims to decrease or delay complications of disease, decrease the economic burden for patients and communities, and improve access to high quality chronic disease care for underserved populations. To date, the vast majority of health centers (more than 900) have implemented at least one HDC. This review finds that the HDCs significantly improve clinical processes of care in just one to two years, and improve clinical outcomes in two to four years. Additionally, the HDCs are societal cost-effective.

2000s


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.


Health Center Cost Effectiveness Studies
For more information, email research@nachc.com.
Authors utilized data from 24 health centers, as well as Community Health Plan and Community Health Network of Washington to identify a $1.2 billion total impact on Washington’s economy by the community health center system within Washington State. A strong economic force, Washington’s community health center system combined direct and downstream effect creates approximately 8,500 jobs and generates a tax contribution of $176 million. This includes revenues, jobs and services that could not be easily replaced if funding was reduced or eliminated. The report details these impacts at both a state and county level. Additionally, the analyzes how the Washington Community Health Center System is a critical safety net for Washington residents – treating 10% of the State’s population, including one in three uninsured Washington residents, with quality, cost-effective care.


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.


This study examines the short-term financial impact of the Health Disparities Collaboratives (HDCs), a quality improvement (QI) program, on health centers. Researchers conducted both a survey of health center CEOs in the Midwest and West Central regions (N=74) and five health center case studies in order to gain insight into the cost consequences of QI programs. The majority of CEOs (72%) report that participation in the HDCs increased costs per patient and overall health center costs (73% reporting). As for the effect of the HDCs on overall finances, CEOs were divided when it came to worsened finances, no change, and improved finances (38% vs 48% vs 14%, respectively). Among the case study centers, HDC administrative costs during the first year ranged from $6 to $22 per patient. None of the five centers routinely and consistently collected adequate funding to cover the full cost of their HDC efforts, and neither reimbursement or payer mix related to HDC patients changed significantly.

This report examines the extent to which Community Health Centers (CHCs) reduce health care costs, and yield substantial benefits to the local economies. Drawing on data from the 2004 Medical Expenditure Panel Survey (2004), the study finds that per-patient medical expenditures are 41% lower ($1,810) among CHC patients compared to patients seen elsewhere. Health centers therefore produce annual savings of between $9.9 and $17.6 billion for the entire health care system. These savings are partially driven by lower ER use. On top of this, the authors calculated health centers’ total economic impact nationally, finding that health centers generate $12.6 billion and 143,000 jobs in some of the poorest communities.


Authors conducted a cost-effectiveness analysis on diabetes Health Disparities Collaboratives (HDC) at 17 Midwestern health centers. Between 1998 and 2002, multiple process measures of care improved, including glycosylated hemoglobin testing (71 to 92%), lipid testing (52 to 70%), and ACE inhibitor prescribing (33 to 55%). Mean cholesterol levels also improved, decreasing significantly (mean difference -13.5). The HDCs also reduced expected lifetime incidence of diabetes complications, reducing the lifetime incidence of blindness (17 to 15%), end-stage renal disease (18 to 15%), and coronary artery disease (28 to 24%). Average annual program cost per patient also declined over four years. Overall, the authors found that the HDC is cost effective, while reiterating that the costs of the HDCs are still borne by health centers. Authors stress that in order to sustain the HDCs’ health benefits and cost effectiveness, receipt of basic chronic care services as provided by health centers and covered by Medicaid should be sustained. Moreover, authors note that this analysis underestimates the true benefits of the HDCs because they are designed to improve care across multiple conditions.


Authors analyzed 2003-2004 Medicaid fee-for-service claims data in Michigan to compare the total costs of services provided to FQHC patients to those of Medicaid patients who do not use FQHCs. FQHCs patients incur lower total pre-member per-month Medicaid costs than non-FQHC users, even controlling for age and disability status. The study found that health centers save the State of Michigan $44.87 per member per month in Medicaid spending – totaling $17.8 million for the study period.


This study analyzed data on service use from 60 randomly selected and nationally representative US communities to determine whether differences in populations and...
health system factors account for variations in emergency department (ED) use across communities. The study found that communities with high ED use actually have fewer numbers of uninsured, Hispanic, and non-citizens compared to communities with low ED use. Longer waiting times for physician appointments and higher numbers of physician visits relative to the number community physicians actually increase ED use, especially among the poor. High ED use for non-urgent problems in some communities may be driven by preference and habit. In fact, people in high use communities receive a larger proportion of their outpatient care at the ER compared to those in low use communities, regardless of insurance, income, and race/ethnicity. The study shows that greater health center capacity reduces ED visits for the low-income, although it was associated with ED visits among higher-income people. This may be due to health centers providing a medical home for the low income, thereby “freeing up” ED capacity for the higher income. Improving access to primary care settings, as well as expanding the availability of health centers and HMOs for low income people are associated with less ED use, but the effects may be marginal.


The reported analyzed claims data from 1.6 million Medicaid beneficiaries in 4 states (Alabama, California, Georgia, and Pennsylvania) to assess the performance of their primary care providers by type of provider. Beneficiaries had a history of at least one ambulatory care-sensitive (ACS) condition and received at least 51% of their primary care from Community Health Centers, office-based physicians, and hospital-based practices. Researchers found when health center Medicaid beneficiaries had one third fewer ACS events compared to other providers (5.7 vs. 8.2 ACS hospitalizations and 26.1 vs. 37.7 ACS emergency department visits, respectively, per 100 persons). Medicaid beneficiaries relying on health centers for usual care were 19% less likely to use the emergency department for an ACS condition and 11% less likely to be hospitalized for an ACS condition than Medicaid beneficiaries using outpatient and office-based physicians for usual care, even after controlling for case mix and other factors. ACS admissions were more likely in the groups who had mixed use (25% or more of their care at multiple provider types) or low use (0 to 1 primary care visits). Health centers were found to be effective regular sources of care, and the authors recommended increasing both the number and capacity of health centers.


Using data from recent Community Tracking Study household surveys, the author examines how a sizable but reasonable decrease in Medicaid/SCHIP enrollment would affect utilization of the Emergency Department (ED). The author concludes that a substantial reduction in Medicaid/SCHIP enrollment would not lead to a significant
change in overall ED use among the low-income, but it would dramatically augment the proportion of those visits by the uninsured. In other words, EDs may not see any change in ED volume but a higher number of ED visits would be for uninsured patients. Those losing Medicaid/SCHIP coverage are likely to have more health needs than those who are currently uninsured, and losing access to primary care will make them dependent on EDs for care. Any cost savings related to reducing Medicaid/SCHIP enrollment will actually increase uncompensated care costs seen by all safety net providers, including health centers. In fact, reductions in health center capacity resulting from Medicaid/SCHIP revenue loss slightly increases the probability of ED visits for Medicaid/SCHIP adults and children. The author concludes that redirect avoidable ED visits to primary care will create a more efficient health care delivery system, an option that would likely achieve greater cost savings than enrollment reductions.


This article reviews relevant literature examining how health centers improve access to care for hard-to-reach and underserved populations, and how they provide high quality and cost effective care. Described in this study is how health centers generate significant savings and benefits for patients, communities, insurers, and governments. Moreover, the article documents recent studies in South Carolina that compare costs and utilization of diabetic patients treated by one large health center compared to those treated by private family physicians. Between 2000 and 2003, the health center produced significant savings for the state employee health plan by reducing costs for enrollees with diabetes. Over the same time period, Medicaid beneficiaries with diabetes treated by the health center cost the state $400 less per patient when compared to those treated by private family physicians, despite the fact that the health center had higher office visits and more co-morbid conditions per patient. Cost savings were driving by fewer emergency room visits and hospitalizations, as well as lower costs for specialists, lab, and other services.


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.


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.


A survey of 340B program entities found that health centers are overwhelmingly satisfied in the amount of savings the program produced, and are most likely to use a “significant portion” of the savings to offset the cost of prescription drugs for their patients. Just over half of 340B FQHC users are uninsured, significantly more than any other 340B entity type. FQHCs surveyed report a mean of 28% saved through the 340B program.


Authors conducted a review of literature concerning the benefits of having a medical home, and discuss the characteristics of a medical home. Finds that having a regular source of care is a greater predictor of receiving care than having insurance alone. Based on an extensive review of literature, the ability to identify a particular practitioner rather
than a particular place as a medical home is generally associated with better utilization and outcomes, including needs recognition, earlier and more accurate diagnoses, reduced emergency room use, fewer hospitalizations, lower costs, better prevention, fewer unmet needs, and increased patient satisfaction. Primary care is particularly important for narrowing disparities among low income and minority communities. Care provided by health centers is associated with better health outcomes when compared to low income communities not served by health centers.


Researchers studied total health care costs of adult patients in Belgium with and without family physician continuity over two years. They found that provider continuity was associated with lower total costs of care, even after controlling for morbidity. The authors describe their findings as relevant to the American health care debate.


Reviews the cost effectiveness of health centers through reducing high-cost specialty and hospital care. For these reasons, the authors find that states could save money by increasing their investment in health centers.


Upon surveying patients and physicians on avoidable hospitalization conditions among children in Boston, authors found that between 13 to 46% of all hospitalizations could have been avoided through better parent education on their child’s condition and appropriate primary or outpatient care. Three quarters of the study subjects were publicly insured and 16% were uninsured, and asthmatic children, adolescents, children from low income working families, and uninsured children were at much greater risks for unnecessary hospitalizations. Moreover, the study found that states could save $17 billion annually by preventing avoidable hospitalizations.

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 an 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.


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.


Estimates the amount of Medicaid savings generated by health centers and the potential savings for reducing avoidable hospitalizations by state.


Praised health centers for their “strong track record in chronic care management, electronic patient registries, and performance measurement…[that] contribute to providing care that is at least as good as, and in many cases superior to, the overall health
system in terms of better quality and lower costs,” and recommended them as models for delivery of primary health care.


Compared quality of care for uninsured patients with diabetes in private physician’s offices and community/migrant health centers (C/MHC) by conducting a cross sectional medical record review in a convenience sample of eight physician offices and three C/MHC sites in rural North Carolina. They found that the medical records of patients in C/MHCs demonstrated higher rates on four of six process measures of quality of care including measurement of HbA (1c), cholesterol, and urine protein.


Upon examining the socioeconomic status of adult community health center users and their use of screening services for secondary prevention, found that users of minority or lower socioeconomic status were not less likely to receive preventive screenings and the screenings conducted 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.


Finds that health center uninsured users tend to live in poverty-stricken areas, are poorly educated, and are African American or Hispanic; yet, uninsured users had more regular contact with a physician and a usual source of care whereas the overall uninsured did not.


Reviews literature showing that health centers improve access to preventive services, health outcomes, and have been successful in reducing or eliminating health disparities.

Preventable hospitalizations in communities served by health centers were lower than in other medically underserved communities not serviced by health centers. Patients in underserved areas served by these centers had 5.8 fewer preventable hospitalizations per 1,000 people over three years than those in underserved areas not served by a health center.


A study of Medicaid beneficiaries in 5 states in 2001 found that Medicaid beneficiaries who receive care at health centers were significantly less likely to be hospitalized or to visit hospital emergency rooms for ambulatory care sensitive conditions (ACSCs) than beneficiaries who receive care from other providers.


Evaluated the implementation of the Guidelines for Adolescent Preventive Services (GAPS) in Community and Migrant Health Centers and found that implementing GAPS increased the receipt of preventive services at the health centers. After guideline implementation, adolescents reported increases in having discussed prevention content with providers in 19 out of 31 content areas, including increased discussion of topics such as physical or sexual abuse (10% before to 22% after), sexual orientation (13% to 27%), fighting (6% to 21%), peer relations (37% to 52%), suicides (7% to 22%), eating disorders (11% to 28%), immunizations (19% to 48%), and others. The researchers conclude that GAPS implementation may help improve the quality of care for adolescents.


Assessed the quality of diabetes care in community health centers. In 55 Midwestern community health centers the charts of 2865 diabetic adults were reviewed to see if the American Diabetes Association’s measures of quality were met. Results found that on average, 70% of patients in Each CHC had elevated measurements of glycosylated hemoglobin (an average value of 8.6%), 26% had dilated eye examinations, 66% had diet intervention, and 51% received foot care. It was concluded that rates of adherence to process measures of quality of were relatively low among community health centers, compared with targets established by the American Diabetes Association.

Evaluated the results of medical records reviews assessing the quality of care at Community Health Centers (CHCs) for acute otitis media, diabetes, asthma, and hypertension. It was found that the CHCs meet or exceeded prevailing practices across other health care settings (though some variation existed among sites).

**1990s**


This study compares Medicaid beneficiaries who received 50% of their primary care from a community health center (CHC users), with other Medicaid beneficiaries who live in the same area and did not visit a health center (Non-CHC users). The analysis used 1992 Medicaid claims data from six states operating fee-for-service Medicaid programs and one, Arizona, with statewide Medicaid managed care. Among CHC-users there was a higher proportion of young children (under age 5) and race/ethnic minorities compared to non-users. In Arizona, per capita expenditures for CHC users were 19% lower than non-users, and this compares to 25% in fee-for-services states. In addition, CHC users in a managed care environment averaged 31% fewer impatient hospital days per 1,000, 12% fewer incidents of emergency room care and 21% fewer professional visits. Results indicate that health centers can reduce expenditures in a mature managed care environment.


Found that health center patients had hospitalization rates that were equal to patients who saw private physicians and lower than patients who attended hospital clinics.


Finds that incorporating principles of Total Quality Management (TQM) is easy to do in a community health center setting and can enhance the effectiveness of health care delivery to a community and its members.

In a review of Maryland Medicaid patient records, health centers scored highest among all providers for the proportion of their pediatric patients who had received preventive services, including immunizations.


After reviewing Medicaid claims data from 1990-1992, authors found that Colorado Medicaid beneficiaries have more Ambulatory Care Sensitive (ACS) hospitalizations than the privately insured. However, Medicaid beneficiaries assigned a primary care provider have lower ACS rates than those with no primary care provider. The lowest aggregated ACS rates were for patients of Federally-Qualified Health Centers, and the highest rates were among patients of hospital-based clinics. Health centers showed a substantial improvement in lowering ACS hospitalization rates during the course of the study. Researchers speculate that hospital-based clinics may have a higher ACS rate because patients come to them after delaying care, and my therefore be in need of hospitalization.


In a review of Maryland Medicaid patient records, health centers consistently scored at or near the highest in 21 separate measures of quality assessment, even though their costs of care were among the lowest of the various provider types reviewed. Patients in medium-cost community health centers had the lowest total costs, lowest cost per ambulatory visit, lowest incidence of hospital inpatient days and lowest inpatient care costs, when compared with Medicaid patients of 106 private physicians and 19 hospital outpatient departments. Authors concluded that utilization of lower cost providers – such as FQHCs – does not necessarily deteriorate quality care.


New York Medicaid FFS patients using health centers regularly in 1994 were 22% less costly than non-users and 26% less when excluding maternity and newborn patients, and had 41% lower total inpatient costs (58% less when excluding maternity and newborn patients); diabetics and asthmatics who were regular health center users had 62% and 44% lower inpatient costs, respectively. Cost savings are a function of lower admission rates, lower lengths of stay, and admissions for less costly DRGs. Savings offset the cost more primary care visits for regular FQHC users. Excluding the most expensive cases, including the medically needy and those with chronic conditions, still yields major
savings associated with regular FQHC use. Regular users are also associated with savings in ER use – about 50% less than non-users.


California Medicaid FFS patients using health centers regularly in 1993 were 33% less expensive overall (controlling for maternity services), and had 27% less total hospital costs. When including maternity in total costs, regular users were 14% less costly per AFDC case. Approximately half of the savings associated with FQHC regular use is achieved through reduced inpatient care, and the remainder through reduced payments for outpatient care and other services.


Health center Medicaid FFS patients in Washington State in 1992 were found to be 36% less expensive for all services than Medicaid FFS patients seen in the private/commercial sector. This comparison also found that health center Medicaid FFS patients used 31% fewer ER services, 34% fewer X-ray and lab tests, 44% fewer prescriptions, and 71% fewer hospital outpatient visits.


Health center Medicaid FFS patients in Maryland in 1993 had lowest total payments and ambulatory visit cost when compared to private, office-based physicians and hospital outpatient departments even after adjusting for patient mix. Health center Medicaid patients also had fewer incidence of inpatient days and lower inpatient day cost than outpatient departments, and similar incidence of inpatient days and inpatient day cost compared to office-based physicians, after adjusting for patient mix. Health center patients were one-third as likely as hospital outpatient unit patients to be admitted on an inpatient basis and were half as likely to have unstable chronic medical diagnoses as patients of other providers.


The per capita cost of care at all U.S. health centers in 1988 was $183, compared to $238 for all Americans below 200% of poverty.
1980s


Studied 36 communities served by health centers to examine the relationship between outpatient medical care obtained at federally funded rural community health centers and inpatient care. Health center patients and selected groups based on their age, sex, and insurance status (specifically Medicaid or Medicare) had statistically lower rates of hospital admissions and days. Researchers did not detect any differences in hospital use between health center community and comparison populations, thereby suggesting that treatment, and hospitalization incentives, of health centers may reduce hospitalization.


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.


Communities served by Health Centers have infant mortality rates that are 10% lower than communities not served by Health Centers, and have contributed to lowering the national infant mortality rate. Health Center services have produced improvements in the use of prenatal care and reductions in the incidence of low birth weight.


Compared hospitalization rates and emergency room use for patients of health centers in 5 cities at two points in time (1969 and 1975), and found that hospitalization rates declined 44% and ER visits 37% over the period.


Found that Medicaid patients of more than 20 health centers in 4 states (Colorado, Kentucky, Michigan and Minnesota) had 30% to 65% lower hospitalization rates, 33% fewer annual hospital days per patient, and 12% to 48% lower total Medicaid costs than a similar group of non-health-center Medicaid patients.


Okada and Wan found that patients of at least 11 CHCs in 5 cities (Boston, Charleston, Atlanta, Kansas City and Palo Alto) were hospitalized 34 % less often than users of private physicians or hospital clinics.

**1970s**


Use of health centers led to lower utilization of more costly emergency rooms and improved health outcomes.


Authors found that nationally:

- The cost of care at health centers in 1975 was $204, compared with $240 for other providers (principally private physicians);
- The cost of hospital care was $65 lower for health center patients than for those served by other providers; and
- Health centers had reduced hospital admission rates by anywhere from 22% to 67%, as well as the number of patients admitted and average lengths of stay, compared with patients of other providers.

The authors studied costs and benefits of community care for a patient needing chronic care at a neighborhood health center after eight years of hospitalization. Cost comparisons were made between the neighborhood center and a public hospital, the center and a day program of a community mental health center, and the center and the inpatient unit of a community mental health center. Cost of care in the neighborhood health center fell from $2110 in the first year to $640 in the third, while costs in the alternative settings increased substantially. The patient's clinical status was rated "much improved" in the community.


Use of health centers led to lower utilization of more costly emergency rooms and improved health outcomes.


Zwick found that the annual hospital use rate for patients of a CHC in Chicago was reduced from 1000 days/year to 750 days/year over 3 years.


Sparer and Anderson found that, for 6 health centers studied, the cost of care and cost per registrant was comparable to that for prepaid group practices.


Use of health centers led to lower utilization of more costly emergency rooms and improved health outcomes.


Found that pediatric patients of 4 health centers in Rochester, NY, had 38% lower hospitalization rates and fewer days than non-health-center-patients living in the same area.