



# **An Evaluation of the Cost Effectiveness of Federally Qualified Health Centers (FQHCs) Operating in Michigan**

A report by the Institute for Health Care Studies (IHCS)  
at Michigan State University (MSU)  
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## **Background**

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The Michigan Primary Care Association (MPCA) contracted with the Institute for Health Care Studies (IHCS) to conduct a claims-based evaluation of the cost effectiveness of Federally Qualified Health Centers (FQHCs) serving Michigan's Medicaid population.

The IHCS was asked to use Medicaid claims to compare the total costs of services provided to FQHC patients to those of Medicaid beneficiaries who do not utilize FQHCs for office visits. The cost effectiveness of FQHCs is a question that is often discussed because FQHCs receive higher Medicaid reimbursement than privately operated physician offices or clinics due to requirements found in federal statute (see Attachment A, What is an FQHC). FQHC supporters believe that FQHCs are cost effective when the total costs of services received by their patients are compared to the total costs of services received by non-FQHC patients. That belief was tested using claims data from the Michigan Medicaid program.

MPCA represents the organizational providers and affiliates of community health centers throughout Michigan. A description of MPCA can be found at <http://www.mpca.net>. A complete listing of MPCA's membership can be found at <http://www.mpca.net/members.htm>.

## **Evaluation Methodology**

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IHCS has access to Medicaid claims data through a Business Associate Agreement with the Michigan Department of Community Health (MDCH). MDCH approved the use of de-identified claims data for this evaluation (the data presented in this evaluation will be aggregated and will not identify any specific Medicaid beneficiary or provider). Medicaid claims data for calendar years 2003 and 2004 serve as the source for all data presented in this evaluation. These years were selected because the claims for those periods are almost 100% percent complete [claims must be submitted to Medicaid within one year of the date of service (180 days for pharmacy claims) and generally only claims in dispute would be still outstanding from these time periods]. The entire universe of claims that meet the evaluation design will be used in this analysis rather than a random sample of claims.

In the first step of the evaluation two categories of Medicaid beneficiaries were identified—FQHC users and non-FQHC users. The definition of an FQHC user is a Medicaid beneficiary who used the services of an FQHC for a preventive or routine office visit within the study period. A non-FQHC

user is a Medicaid beneficiary who did not use an FQHC service in the two-year period under review.

Three sets of Medicaid beneficiaries were excluded from the evaluation—beneficiaries who were dually eligible for Medicaid and Medicare, beneficiaries enrolled in a Medicaid HMO during any month in the study period, and beneficiaries who did not have a physician office visit during the study period.

The first two exclusions were made due to limitations in the data available. Claims for dually eligible beneficiaries are usually incomplete due to the fact that Medicare payment rates often exceed Medicaid rates, which provides little incentive for providers to bill Medicaid for these services since no payment would be made—Medicaid does not pay the provider if the Medicare payment is equal to or exceeds what Medicaid would have paid for the claim.

HMOs report encounters to the Medicaid program rather than claims. The encounters often do not include payment data and may not identify if the provider was part of an FQHC. These limitations led to the decision to exclude these two groups of Medicaid beneficiaries from the evaluation. Medicaid policy directs which beneficiaries are required to join an HMO with most eligibility categories requiring mandatory enrollment.

Persons without any office visits were excluded because they did not meet the definition of an FQHC or a non-FQHC user.

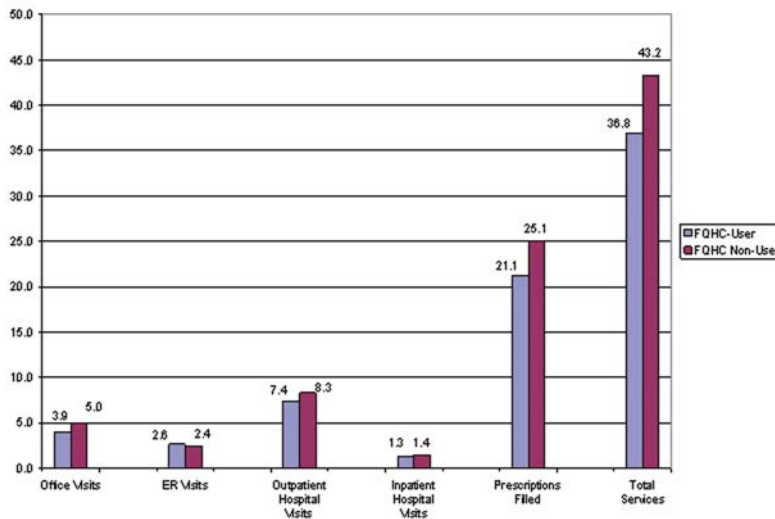
Once the two sets of Medicaid beneficiaries were identified, their claims for services were pulled for two calendar years—2003 and 2004. The claims were then used to develop per-member-per-month (PMPM) costs for each category of beneficiary. Using PMPM costs allowed for a straightforward comparison of the two groups and overcame problems related to the size differences between the groups.

**Using per-member-per-month (PMPM) costs  
allowed for a straightforward comparison  
of FQHC users and non-FQHC users  
and overcame problems related to the  
size differences between the groups.**

## Claims Analysis

In the initial analysis of claims data, all FQHC users were compared to all non-FQHC users. Utilization of key services for each group is shown in Chart 1. The data represent 393,753 member-months of utilization for the FQHC users and 3,174,385 member-months for the non-FQHC users. The FQHC users averaged 15.3 months of eligibility in the 24-month study period and the non-FQHC users averaged 16.3 months of eligibility.

**Chart 1. Average Utilization by Service  
Medicaid FFS Beneficiaries  
Calendar Years 2003 and 2004**



It is interesting to note that, with the exception of emergency room (ER) visits, FQHC patients have fewer visits for each of the services analyzed. Fewer services used translates into lower costs for the FQHC group. Their per-member-per-month (PMPM) costs for the study period were \$387.71<sup>1</sup> as compared to the non-FQHC user group's PMPM of \$432.58. While this crude indicator suggests FQHCs are cost effective, it also raises a number of additional questions. For example, are the populations served in each group similar in age? Is the representation of disabled persons similar between the

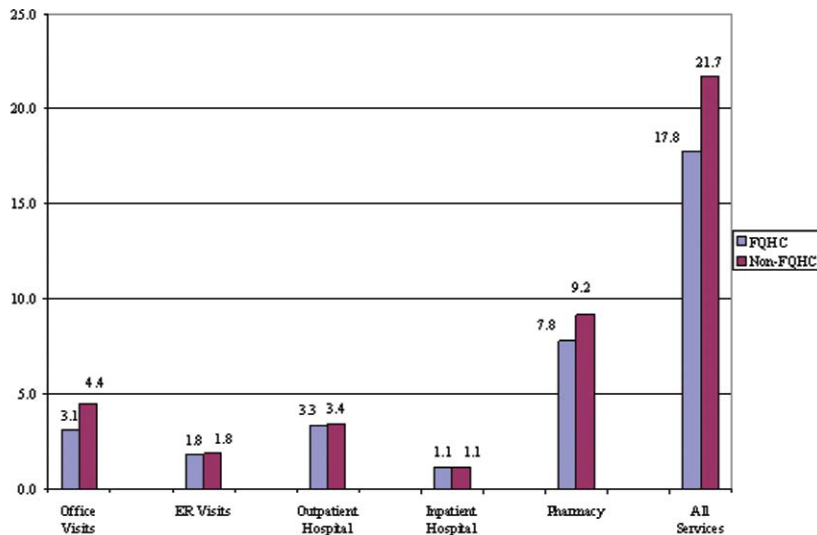
<sup>1</sup> The PMPM calculation for the FQHC user group includes the effects of the higher reimbursement paid to FQHCs by using a weighted average rate of \$117.80 for each FQHC encounter.

two groups? This second question is particularly important; the Medicaid program as a whole serves a disproportionate number of disabled persons since disability is a factor in determining Medicaid eligibility. In addition, the length of time each group has been in the Medicaid program might also be important since new enrollees tend to use more services due to pent up demand.

In an attempt to control for age and disability status, each group was broken down into four subgroups: persons under 18 who were not disabled, persons under 18 who were disabled, persons aged 18-64 who were not disabled, persons aged 18-64 who were disabled. A PMPM was calculated for each subgroup. Disabled persons were defined as beneficiaries whose Medicaid eligibility is in an SSI-related eligibility group. People under age 65 who are on an SSI-related category are, by definition, disabled or else they would not meet the eligibility criteria for the Medicaid category. Non-disabled beneficiaries were defined as beneficiaries whose Medicaid eligibility is in a TANF-related eligibility group.<sup>2</sup> If FQHCs are actually cost effective as the preliminary analysis appears to show, then the FQHC user group's costs for each of the four subgroups should also be lower.

Chart 2 presents utilization data for the first group analyzed—non-disabled Medicaid beneficiaries under 18. The FQHC user group consisted of 8,003

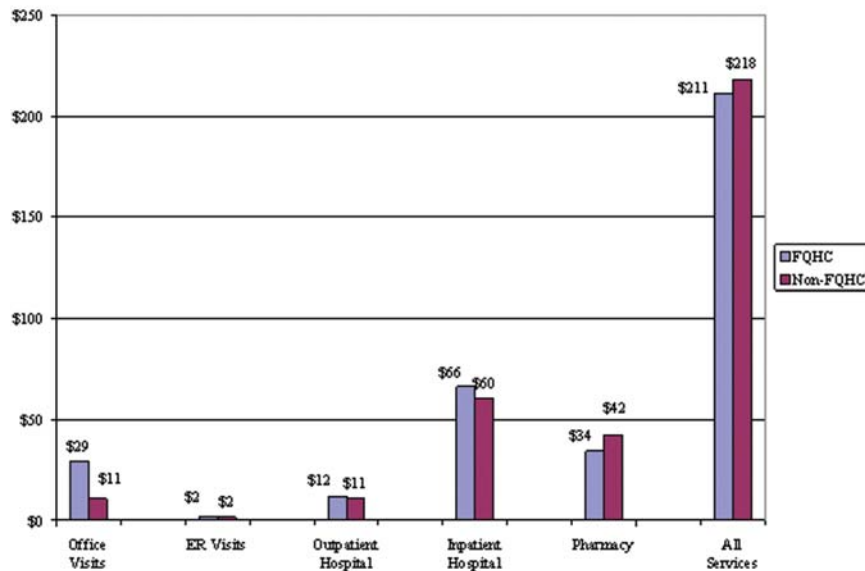
**Chart 2. Non-Disabled Medicaid Beneficiaries Under 18  
Average Utilization of Services per Beneficiary  
Calendar Years 2003 and 2004**



<sup>2</sup> TANF groups may include persons with significant chronic health problems or conditions if they meet the criteria for the eligibility group. However, there is no reason to believe that this would occur more frequently in either the FQHC user or non-FQHC user group since it is a factor of Medicaid eligibility as determined by the Michigan Department of Human Services rather than a factor in the choice of medical providers.

individuals with 100,254 member-months of eligibility. The non-FQHC user group included 58,208 beneficiaries with 836,992 member-months of eligibility. The utilization of services for beneficiaries under 18 who are not disabled is relatively consistent between the two groups. Office visits and pharmacy as well as total services are somewhat lower for the group that had visited an FQHC. Chart 3 shows PMPM costs for each of the service categories shown in Chart 2.

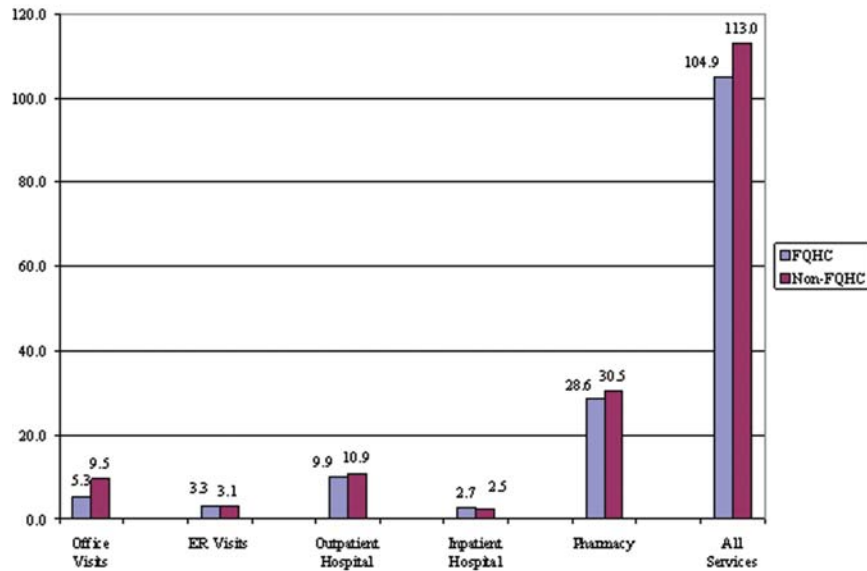
**Chart 3. Non-Disabled Medicaid Beneficiaries Under 18  
Average Utilization of Services per Beneficiary  
Calendar Years 2003 and 2004**



As one would expect given the similarity in utilization, the PMPM costs for the two groups are also very similar. The PMPM cost for FQHC users is \$211 compared to \$218 for the non-FQHC users. The difference in total Medicaid costs for these beneficiaries comes from the cost of services provided in addition to the five services that have a specific PMPM costs calculated. The higher office visit cost for the FQHC user group reflects the higher reimbursement that FQHCs receive from the Medicaid program.

Chart 4 presents utilization data for disabled persons under 18. As expected, utilization and costs for this group are higher than for the non-disabled group of the same age. The FQHC group consists of 368 children with 8,618 member-months of eligibility. The non-FQHC group includes 4,069 children with 94,226 member-months of eligibility.

**Chart 4. Disabled Medicaid Beneficiaries Under 18  
Average Utilization of Services per Beneficiary  
Calendar Years 2003 and 2004**

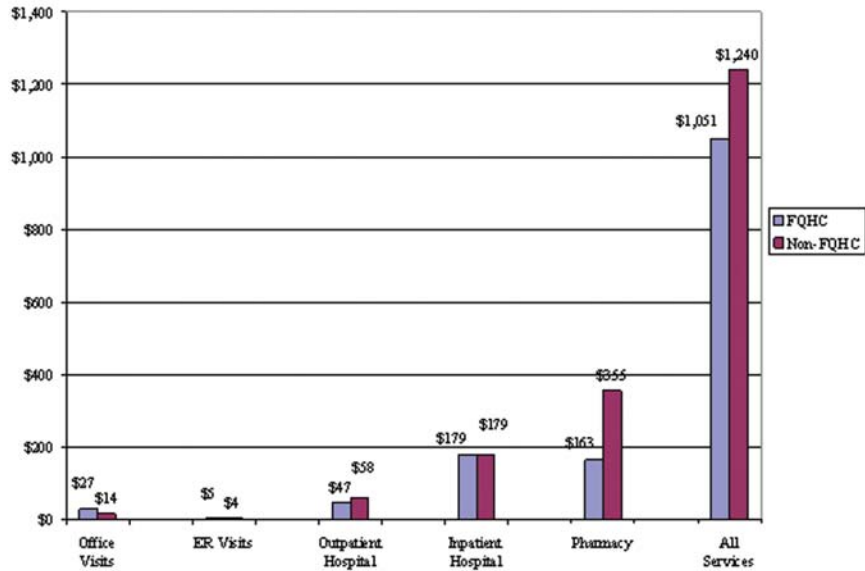


As in the utilization of the non-disabled children, utilization between FQHC users and non-users is similar in the disabled population. FQHC users, on average, used four fewer office visits, one less outpatient hospital service, two fewer prescriptions, and eight fewer overall services than non-FQHC users.

**For disabled Medicaid beneficiaries under 18, FQHC users, on average, used four fewer office visits, one less outpatient hospital service, two fewer prescriptions, and eight fewer overall services than non-FQHC users.**

Chart 5 displays the PMPM costs for disabled children. The cost difference between FQHC users and non-users is significant at \$189 per-member-per-month (a 15.2% reduction). Pharmacy costs for the FQHC users are less than half those for non-FQHC users (\$163 PMPM compared to \$355 PMPM) and account for the difference in total costs. Outpatient hospital costs are also lower for the FQHC group while office visit costs are higher and inpatient hospital costs are the same for both groups.

**Chart 5. Disabled Medicaid Beneficiaries Under 18  
Cost of Services (PMPM)  
Calendar Years 2003 and 2004**

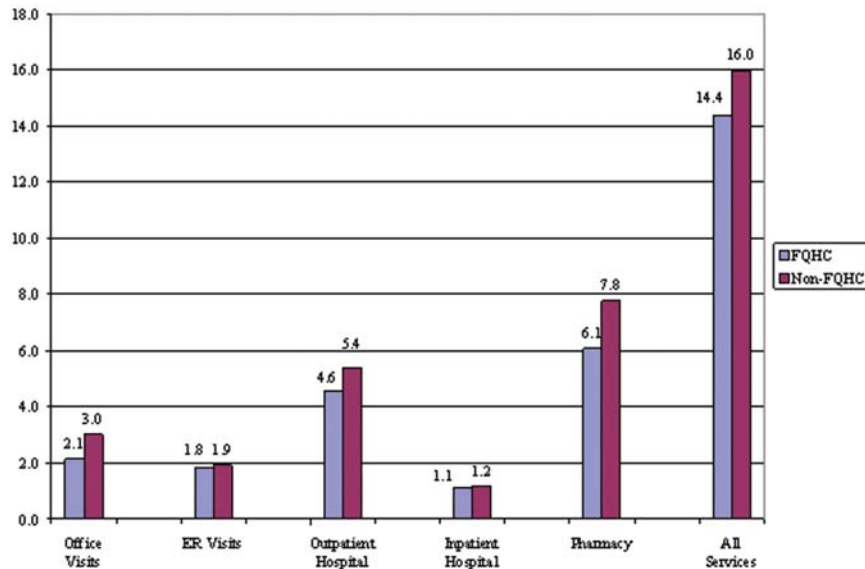


The large difference in pharmacy costs between the two groups of disabled children was explored further to determine if the claims data could shed any light on the reason for the large difference. It was determined that the non-FQHC user group included a small number of children with hemophilia that had extremely high drug costs during the study period—one child's pharmacy costs were approximately \$8 million. The FQHC user group did not include any children who were receiving pharmaceuticals for the treatment of this disease. If the children with hemophilia are excluded from consideration, the pharmacy costs for the non-FQHC user group are reduced to \$183 PMPM. This is still higher than the \$163 PMPM cost of the FQHC user group.

Chart 6 shows the average utilization for Medicaid FFS beneficiaries aged 18-64 and who are in one of Medicaid's TANF-related eligibility categories. There are 4,713 beneficiaries in the FQHC user group with 46,663 member-months of eligibility. The non-FQHC user group consists of 33,388 beneficiaries with 328,778 member-months of eligibility.

In all five of the settings for which average utilization was calculated, the FQHC user group has lower utilization than the non-FQHC user group—albeit only marginally lower for emergency room use and inpatient hospital use. Total utilization of all Medicaid services is 10 percent lower for the FQHC user group.

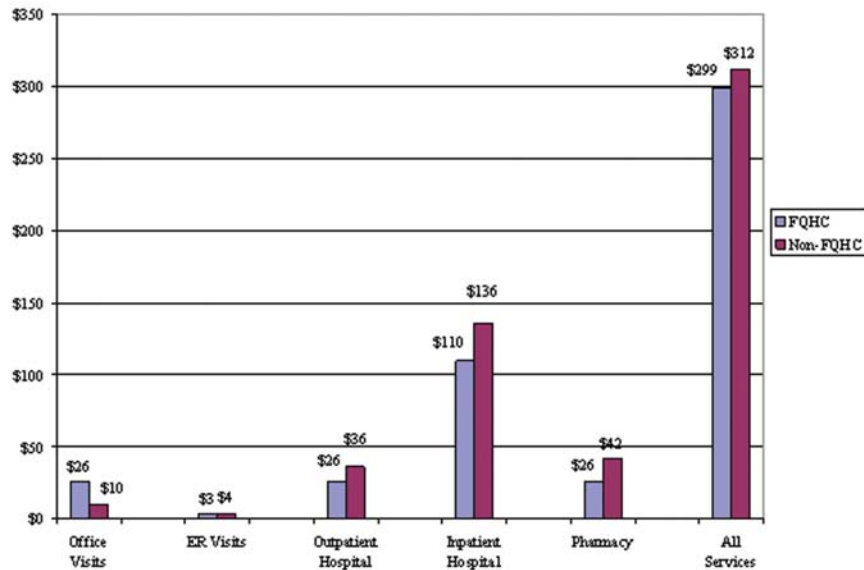
**Chart 6. Non-Disabled Medicaid Beneficiaries 18 through 64  
Average Utilization of Services per Beneficiary  
Calendar Years 2003 and 2004**



PMPM costs for non-disabled adult beneficiaries are shown in Chart 7. FQHC user PMPM costs were 2.6 times higher for office visits, even though office visit utilization was, on average, .9 visits less for the this group because of the higher reimbursement accorded FQHCs.

Somewhat surprisingly, inpatient hospital costs were \$26 PMPM higher for the non-FQHC user group (23.6%) even though their utilization was only 9.1% higher than the FQHC user group (1.1 admissions for FQHC users and 1.2 admissions for the non-FQHC user group). Costs for service for which a PMPM was not specifically calculated<sup>3</sup> were higher for the FQHC user group (\$108 PMPM versus \$84 PMPM) than for the non-FQHC user group.<sup>4</sup> Costs for all services for this FQHC user group were 4.2% lower than for the non-FQHC user group.

**Chart 7. Non-Disabled Medicaid Beneficiaries 18 through 64  
 Average Utilization of Services per Beneficiary  
 Calendar Years 2003 and 2004**



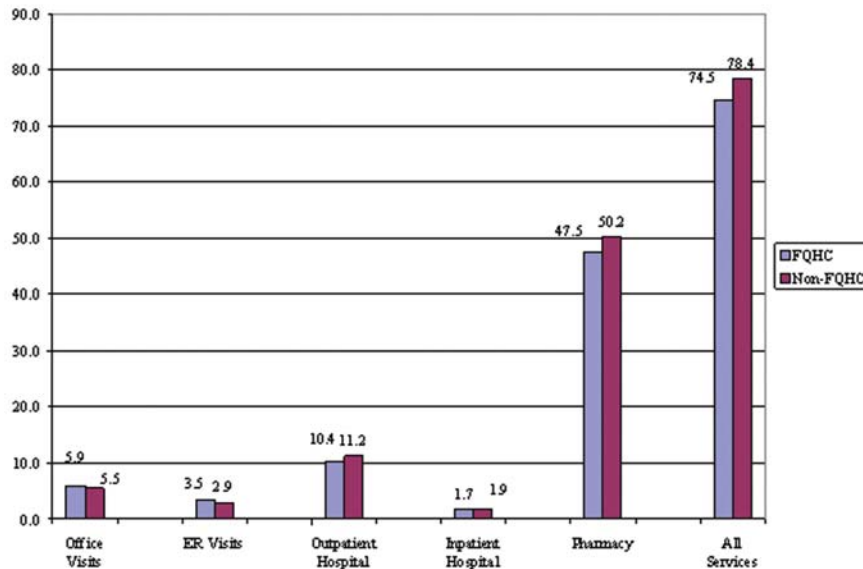
<sup>3</sup> A specific PMPM was calculated for office visits, ER visits, outpatient hospital services, inpatient hospital admissions, and pharmacy (i.e., prescriptions). The All Services bars include these five services plus all additional Medicaid services received by the beneficiaries (e.g., durable medical equipment or physical therapy).

<sup>4</sup> For both groups of children (Charts 3 and 5) the PMPM for these services was either the same or lower for the FQHC user group.

Utilization of the adult disabled groups is shown in Chart 8. The FQHC user group consists of 6,541 beneficiaries with 138,410 member-months of eligibility. The non-FQHC user group includes 53,758 beneficiaries with 1,127,169 member-months of eligibility.

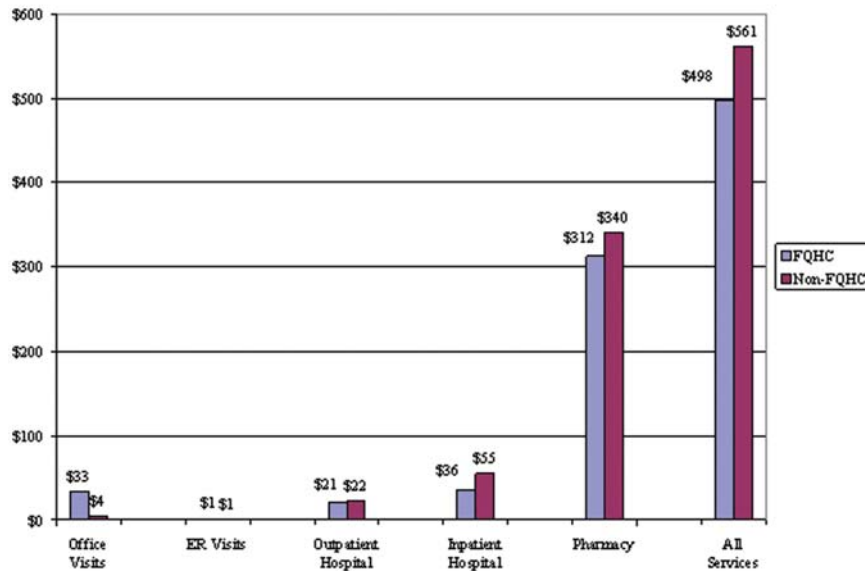
Non-FQHC users utilized, on average, fewer office and ER visits during the study period but more outpatient hospital, inpatient hospital, pharmacy, and total services than the FQHC user group. Overall, the FQHC user group utilized 5.0% fewer services than the non-FQHC user group. It is interesting to note that disabled adult non-FQHC users utilized an average of 34.6 fewer services than disabled children in the same group, and disabled adult FQHC users utilized 30.4 fewer services than disabled children in the same group. Average PMPM costs for both groups of children were more than twice as high as their adult counterparts.

**Chart 8. Disabled Medicaid Beneficiaries 18 through 64  
Average Utilization of Services per Beneficiary  
Calendar Years 2003 and 2004**



PMPM costs for the adult disabled groups are shown in Chart 9. Pharmacy costs account for 62.6% of the total PMPM costs for the FQHC user group and 60.6% of the total costs for the non-FQHC user group. FQHC user costs are higher for office visits, the same as non-FQHC users for ER costs, and lower for outpatient and inpatient hospital, pharmacy, and total costs. FQHC user PMPM costs are 11.2% lower than non-FQHC user costs for all services. Services included in the total costs, but for which a specific PMPM was not calculated, were higher for the non-FQHC user group and accounted for \$44 of the difference in total costs.

**Chart 9. Disabled Medicaid Beneficiaries 18 through 64  
Cost of Services (PMPM)  
Calendar Years 2003 and 2004**



**For disabled Medicaid beneficiaries who are 18-64, FQHC user per-member-per-month costs are 11.2% lower than non-FQHC user costs for all services.**

The average length of enrollment in the Medicaid program varies little between FQHC users and non-users among the four groups, and the differences do not appear to be a significant factor in the PMPM calculations. Average enrollment for each of the subgroups is displayed in Table 1.

**Table 1. Average Months of Enrollment in Medicaid by Subgroup  
Calendar Years 2003 and 2004**

	FQHC Users	FQHC Non-Users
<b>Under 18 Non-Disabled</b>	12.5 months	14.4 months
<b>Under 18 Disabled</b>	23.4 months	23.2 months
<b>18-64 Non-Disabled</b>	9.9 months	9.8 months
<b>18-64 Disabled</b>	21.2 months	21.0 months

The enrollment differences among the groups reflect the differences in Medicaid eligibility policy for the various groups. For example, children in Michigan's Medicaid program are guaranteed 12 months of eligibility through the *Healthy Kids* program; adults are not. Persons with disabilities have serious medical conditions that must continue for 12 months or longer to qualify them for Medicaid under a disability category. Non-disabled adults are not guaranteed eligibility and can lose eligibility if their family situation changes and minor children are no longer in the home or if income changes.

## **Conclusions**

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The purpose of this study was to compare claim costs for Federally Qualified Health Center (FQHC) users to non-FQHC users to determine if FQHCs are cost effective given that they receive supplemental payments from the Medicaid program for their services. The supplemental payments that FQHCs receive are over and above regular Medicaid fee screens and are included in the per-member-per-month costs analyzed in this study.

Based on the analysis of Medicaid fee-for-service claims for 2003 and 2004, Federally Qualified Health Centers are cost effective and their patients incur lower total per-member-per-month Medicaid costs than similarly situated

non-FQHC users. This is true at the macro level and for each of the four groups reviewed in this analysis.

This study is simply a cost analysis and does not attempt to determine causality for the differences shown in utilization or per-member-per-month costs between FQHC users and non-FQHC users. A number of hypotheses could be tested in an attempt to explain the differences and to shed greater light on the issue of Federally Qualified Health Center cost effectiveness. However, a number of anecdotal explanations appear not to be true. For example, the age of the populations served does not appear to explain the differences in utilization or cost between FQHC users and non-FQHC users since the FQHCs' per-member-per-month costs for the two age groups reviewed in this study are both lower than non-users. In addition, disability of the beneficiaries served does not appear to be a factor since the FQHC users' costs are also lower in both groups of disabled persons reviewed.

**Comparing per-member-per-month costs  
for FQHC users and non-FQHC users,  
FQHCs produced a per-member-per-month  
cost savings of \$44.87.**

## **Attachment A. What is an FQHC?**

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Federally Qualified Health Centers (FQHCs) are different from other health care providers in that they are eligible to receive loans and grants from the Health Resources and Services Administration (HRSA), Department of Health and Human Services (DHHS) under Section 330 of the Public Health Services Act. FQHCs also receive special reimbursement from both the Medicare and Medicaid programs. To be an FQHC, there are a number of requirements established in Section 330 and in federal regulations that a health center must meet. The major requirements include:

**Service Area:** An FQHC must be located in a federally designated medically underserved area (MUA) or must serve a federally designated medically underserved population (MUP). In Michigan, there are FQHCs that are designated based upon their location in a MUA and FQHCs that serve a MUP.

**Organizational Structure:** FQHCs must be either public or private non-profit organizations that are governed by a board of directors whose majority are consumers who receive services through the FQHC. The board must meet monthly, set the FQHC's hours of operation, choose the services the FQHC provides (a minimum set of services is required and discussed below), set the annual FQHC's budget, select the FQHC's director, and establish the FQHC's operating policies.

**Health Services:** FQHCs are required to provide primary health services and additional health services necessary to support the required primary health services.

Required primary health services include:

- (1) services related to family medicine, internal medicine, pediatrics, obstetrics, or gynecology that are furnished by physicians or, where appropriate, physician assistants, nurse practitioners, and nurse midwives
- (2) diagnostic laboratory and radiologic services
- (3) preventive services including prenatal and perinatal services, appropriate cancer screening, well-child services, immunizations, screening for elevated blood lead, screening for communicable disease and high cholesterol, pediatric screening to determine the need for vision and hearing correction and dental care, voluntary family planning services, and preventive dental services

- (4) emergency medical services
- (5) pharmaceutical services as appropriate for the center
- (6) referrals to specialists, substance abuse and mental health services
- (7) case management services and other services designed to help health center patients in establishing eligibility for and gaining access to federal, state, or local programs that provide support or financially support the provision of medical, social, housing, educational, or other related services
- (8) services that enable individuals to use the FQHC's health services such as transportation, outreach and/or translation services
- (9) health education services for center patients and persons living in the FQHC's service area regarding the availability and proper use of health services

Services that may be offered in addition to the basic FQHC services include behavioral, mental health, substance abuse, recuperative care, and environmental services. FQHCs that serve migratory and seasonal agricultural workers may also offer certain occupational services including screening for infectious disease and injury prevention programs including those related to exposure to agricultural chemicals and pesticides.

**Service Provision:** An FQHC must provide services to all residents within its service area regardless of their ability to pay. In addition, the FQHC must have a sliding fee schedule that is based on the patient's family income.

Historically, FQHCs have received cost-based reimbursement for Medicaid beneficiaries that were in fee-for-service and wrap-around payments that supplemented managed care payments for beneficiaries who were in a managed care program.

The payments were based on an encounter rate that bundled all services provided in a single day to an FQHC patient—there were exceptions made to the single encounter per day rule if a patient returned to the FQHC for a completely different health problem. However, Section 703 of the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA) changed FQHC Medicaid payments from a cost basis to a prospective payment system. Each FQHC's cost-based payments for 1999 and 2000 were averaged and then trended forward using the Medical Expenditure Index to arrive at a payment rate for subsequent years. An FQHC's payment rate could also be modified based on changes in the scope of services provided by the FQHC.

In Michigan, BIPA was implemented through a memorandum of agreement (MOA) signed by the State Medicaid program and each of the FQHCs. The MOA established a Medicaid payment limit for each FQHC and included provisions for a step down in payments to FQHCs that had average costs over their Medicaid limit. In calendar year 2006, Medicaid payments would equal the FQHC's Medicaid limit. The current MOA expires December 31, 2006.

In addition to loans and grants under Section 330 and enhanced payment rates for Medicare and Medicaid, FQHCs have access to the Federal Tort Claims Act program for medical malpractice coverage and to discounted drug prices under Section 340(B) of the Public Health Services Act.