

Michigan Evaluation of School-based Health *Baseline Parent Survey: Children's access to and use of health care services*

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Executive Summary

Purpose of the Evaluation

The primary purpose of the Michigan Evaluation of School-based Health (MESH) Project is to evaluate the impact of state-funded clinical school-based health centers¹ (SBHCs) on the health outcomes, school attendance, and healthcare costs of children attending the schools in which SBHCs are located. This evaluation is based on a sample of youth and their parents from 16 middle and high schools with and without SBHCs located throughout the state of Michigan. The overall aim of the evaluation is to determine if students attending schools with health centers experience better health outcomes and lower healthcare costs in the area of emergent care. This report presents data from surveys of parents regarding their children's health insurance status, access to and use of health care services, and parents' perceptions of the quality of their child's health care services. The evaluation and the baseline health status of children are described in another report (McNall, Lichty, Forney, Mavis, & Bates, 2007).

Participants

We received parental consent for a total of 1134 students, representing 26% of eligible sixth and ninth grade students across all schools. In addition, 1027 parents consented to participate in the study. Of these, 922 were mailed a copy of the survey. A total of 419 parents returned surveys, for a participation rate of 45%.

Key Findings

- ***Health Insurance.*** 96% of parents reported that their children have health insurance. Of those children with health insurance, 41% were enrolled in a public health insurance program such as Medicaid or MICHild.
 - While the insurance rate among our sample of children might seem high, it is consistent with the 2004-2005 Michigan Household Health Insurance survey (Michigan Department of Community Health, 2006), which found that 3.7% of individuals below the age of 18, or roughly 100,000 children, were uninsured.
 - According to the 2006 U.S. Census Bureau Current Population Survey, of insured children 0-17 years of age, 31% have some form of government health insurance. This suggests that our sample includes more parents of children with government health insurance than parents in the general Michigan population. Given that many of the SBHCs in our study are located in low-income neighborhoods, this finding is not surprising. In addition, state funded SBHCs assist families in applying for Medicaid as part of their basic program requirements, increasing the number of children with government insurance.

- ***Medical Homes.*** Following the American Academy of Pediatrics' definition of a medical home—a place where children regularly received their health care—a majority of youth in our study possess the elements of a medical home:
 - 88% of parents reported having a “usual” health care provider they take their child to for medical care.
 - Most parents reported taking their children to either a family/general physician (54%) or a pediatrician (33%).
 - Most parents reported their children's regular health care provider was located in a private practice (52%) or community based clinic/health center (28%).

¹ School-based health centers are known in Michigan as Child and Adolescent Health Centers.

- Of those who had access to a school-based health center, 15% reported it was their child's usual health care provider.
- **Number of Health Care Visits.** More than 50% of parents reported taking their child for a single well-child visit during the 2006-2007 school year. On average, parents reported one sick-child doctor visit in the previous year. Nearly 30% of parents reported taking their child to the hospital emergency room at least once during the 2006-2007 school year.
- **Work Missed Due to a Sick Child.** The majority of parents reported not missing work due to a child's sickness in the past four weeks (95%). However, *in the past 12 months, 35% of parents had missed work due to a child's illness.* Of those who did miss work in the past 12 months, parents, on average, missed approximately two and a half work days due to a child's sickness.
- **Ease of Obtaining Health Care.** Of those parents who felt their child needed care during the 2006-2007 school year, 83% reported it was not a problem to obtain health care for their child, 10% reported it was a small problem, and 7% reported it was a medium to big problem to obtain care when they felt it was necessary.
- **Satisfaction with Health Care Provider.** Parent responses to seven satisfaction questions suggest that the vast majority of parents are satisfied with their child's regular health care provider. The area of dissatisfaction that parents reported most often was how quickly children can get appointments; 14% of parents expressed some degree of dissatisfaction with this aspect of their child's care.
- **School-based Health Center Utilization.** 59% of the parent respondents whose children had access to a school-based health center reported their children used the health center. On average, children used the health center three times during the 2006-2007 school year. The most common reasons for not using the health center were because it was not needed (50%), their child already had a family doctor (29%) or because the parents were not aware of or did not know how to use the health center (8%).
- **Comparing SBHC Users to Non-Users.** In order to better understand differences between SBHC users and non-users, four comparative statistical tests were run.
 - **Type of Insurance.** Significantly *more* parents with public insurance reported that their children used the SBHC and significantly *fewer* parents with private insurance reported that their children used the SBHC.
 - **Well- and Sick-child Visits.** *Parents of children who used the SBHC reported that their children went for significantly more well-child medical visits in the 2006-2007 academic year than parents of children who did not use the SBHC in the previous school year reported. This finding suggests that SBHC use is associated with a greater use of preventive care.* There was no significant difference in the number of reported sick child visits.
 - **Work Missed.** Parents of children who use SBHCs missed significantly more work days on average over the past 12 months than parents of children who did not use SBHCs. However, this difference is slight (1.01 compared to .65 days missed on average) and can be accounted for by a few parents in the SBHC user

group who reported missing substantially more work. There were no significant differences in work missed during the previous 4 weeks.

- **Difficulty Obtaining Necessary Care:** There were no significant differences between parents of children who use and do not use the health center in their ratings of the degree of difficulty of obtaining health care.

Summary and Conclusions

While the findings from the parent survey overall suggest that the children of parents who completed the survey have health insurance and relatively easy access to health care, there are some areas warranting further attention.

- **Well-child visits.** Despite the majority of parents reporting they have health insurance for their children, 21% of the parents reported not taking their children for well-child visits during the 2006-2007 school year, suggesting that many children are not receiving routine preventive health care.
- **Medical homes.** 13% of parents reported that their child did not have a usual medical care provider, indicating that there is no single medical office that has a complete medical history for their child or a health care provider who is familiar with their child's health history. A lack of a complete medical history and established relationship between the family and their health care provider can impede the timely diagnosis and treatment of developing health conditions.
- **Emergency room use.** Nearly 30% of parents reported taking their child to the hospital emergency room at least once during the 2006-2007 school year. This ER utilization rate seems high, given that 96% of youth have some form of health insurance and therefore should not have to rely on emergent care to provide a substantial portion of their health care services. The reasons for this ER utilization rate warrant further investigation.
- **SBHC Use.** 43% of parents report their child is not taking advantage of the health center. While the majority of parents indicated that their child did not need to use the center (e.g., the child was not ill while at school), nearly 10% of parents reported they did not know about the health center or how to use it. This speaks to the need for additional marketing of the health centers to parents in order to both raise awareness of their presence in the schools and to clarify the process for making use of the centers' services.

Report

Background and Purpose

The state of Michigan funds 45 clinical school-based and school-linked health centers, known as Child and Adolescent Health Centers², to provide a wide range of primary care, preventative, and early intervention services to more than 30,000 children at all grade levels throughout the State of Michigan. To date, there has been no state-wide evaluation to assess the impact of these centers on the health outcomes and health care costs of the children they serve. The primary purpose of the Michigan Evaluation of School-based Health (MESH) Project is to evaluate the impact of state-funded³ clinical school-based health centers (SBHCs) on the health outcomes, school attendance, and healthcare costs of children attending the schools in which SBHCs are located. This evaluation is based on a sample of youth and their parents from 16 middle and high schools both with and without SBHCs throughout the state of Michigan. The overall aim of the evaluation is to determine if students attending schools with health centers experience better outcomes and lower healthcare costs in the area of emergent care. This report presents data from surveys of parents regarding their children's health insurance status, access to and use of health care services, and parents' perceptions of the quality of these services. The evaluation and the baseline health status of children are described in another report (McNall, Lichty, Forney, Mavis, & Bates, 2007).

Methods

Recruitment

Parental consent was obtained through a variety of means including mailing consent documents and cover letters to the homes of all children in grades six or nine in the selected schools and having research staff attend back-to-school events or parent-teacher conferences. When participation rates remained unsatisfactory in certain schools, we sponsored in-school competitions between classrooms for the most returned consent forms, regardless of whether consent to participate in the study was granted. As a result of our recruitment efforts, we received parental permission for a total of 1134 students, representing 26% of eligible students across all schools. In addition, 1027 parents consented to participate in the study.

Survey Administration

An adapted version of the parent survey used in the Health Foundation of Greater Cincinnati's "Prescription for Success" study of SBHCs was mailed to all parents who consented to participate in the study. Parents were offered a \$5.00 gift card for each returned survey. Of the 1027 parents who consented to participate in the study, 922

² Also called school-based health centers (SBHCs)

³ One school-based health center included in this evaluation is not state-funded. This health center follows the same policies, practices, and regulations as state-funded health centers and therefore is appropriate for inclusion in the study

were successfully mailed a copy of the survey.⁴ A total of 419 parents returned surveys, for a participation rate of 45%.

The MESH project study protocol was reviewed and approved by the Michigan State University and Michigan Department of Community Health Institutional Review Boards.

Sample

Parents. Of the parents/guardians who completed and returned a survey, 92% were birth parents, 3% were step-parents, 2% were adoptive parents, and 2% were grandparents. The remaining 1% identified themselves as foster parents, aunts/uncles, or legal guardians. The vast majority of parents/guardians were female (92%), meaning that the parent survey sample is composed almost entirely of mothers.

Parents'/guardians' ages ranged from 27 to 70 years old; their average age was 41. Of the parents/guardians who completed the survey, 62% were White, 25% were African American, 7% were Hispanic, 3% were multi-racial, 2% were Native American, and less than one percent identified themselves as Asian-Pacific Islanders (0.7%) or "other" (0.5%).

The educational backgrounds of parents/guardians were diverse. Eleven percent reported they did not possess a high school degree or equivalent; 29% had graduated from high school or received a GED; 38% had some college or a 2-year degree; and 22% possessed a 4-year college degree or beyond. Regarding employment, 54% of parents/guardians were working full time; 15% were home-makers; 14% had a part-time job; 7% were unemployed, laid-off, or looking for work; and 7% were disabled. The remaining participants were retired (2%), in school (2%), or reported "other" (6%) as their work status.

The annual household incomes reported by parents/guardians varied widely:

Income Range	Respondents
\$19,999 or less	30%
\$20,000 - \$39,999	23%
\$40,000 - \$59,999	18%
\$60,000 or more	29%

Thus, the majority (53%) of parents/guardians reported annual household incomes below \$40,000—well below the median family income of \$48,043 for Michigan residents,⁵ indicating that low-income families are overrepresented in the study sample. This is not surprising, however, in that SBHCs have historically been sited in low-income neighborhoods in order to make health care services available to children in poverty.

⁴ The remaining parents had left the district or the school had invalid or unavailable addresses and therefore did not receive the survey.

⁵ This figure represents the 2005-2006 average median income from the U.S. Census Bureau's Current Population Survey, 2005 to 2007 Annual Social and Economic Supplements

Findings

Health Insurance Status

Ninety-six percent of parents/guardians reported that they currently have some form of health insurance for their children. Specifically, 30% reported that they have Medicaid, 11% reported having MIChild, 49% reported having private insurance, and 12% reported having some other insurance. One percent of parents did not know the type of health insurance they have for their child and 4% reported having no insurance.

The fact that 96% of children have some form of insurance is good news and is consistent with the 2004-2005 Michigan Household Health Insurance survey, which found that the rate of uninsurance for those under the age of 18 was 3.7% (Michigan Department of Community Health, 2006). However, *this study also estimated that an uninsured rate of 3.7% meant that roughly 100,000 children were uninsured.*

Forty-one percent of the children in our sample were enrolled in government health insurance programs. According to the 2006 U.S. Census Bureau Current Population Survey, of insured children 0-17 years of age, 31% have some form of government health insurance. This suggests that our sample includes more parents of children with government health insurance than the general Michigan population. Given that many of the SBHCs in our study are located in low-income neighborhoods, this finding is not surprising. This result is also consistent with the income data, which shows a lower median family income for our sample than the general Michigan population. In addition, state funded SBHCs assist families in applying for Medicaid as part of their basic program requirements, increasing the number of children with government insurance.

When asked why they do not have health insurance for their child, parents reported two primary reasons for not having insurance, both of which reflect economic barriers to health insurance: 1) they could not afford it and 2) they were unemployed.

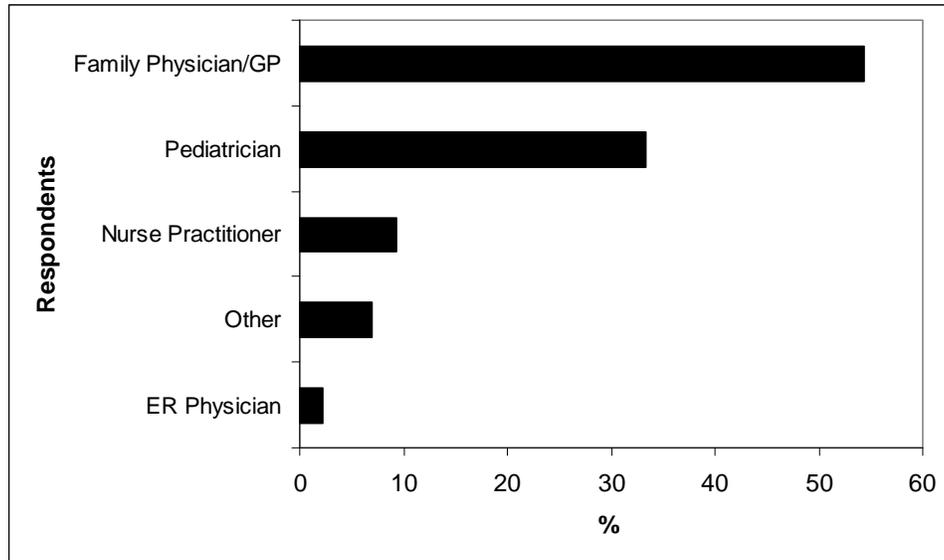
Medical Home: Description of Regular Health Care Provider

The American Academy of Pediatrics (2007) defines a medical home as a model of delivering primary care that is “accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective.” Elements of a medical home require that each patient have an ongoing relationship with a personal physician who is trained to provide continuous and comprehensive care and that this health care be provided in a physician directed medical practice. According to this standard, most children in our study possess the elements of a medical home. During the 2006-2007 school year, 88% of parents (n=360) reported having a clinic, health center, doctor’s office or other facility that they *usually* took their child to when their child was sick, needed health advice, or for routine medical health care.

Among parents whose child had a “usual” health care provider during the 2006-2007 school year, 54% reported that the health care provider their child usually saw was a

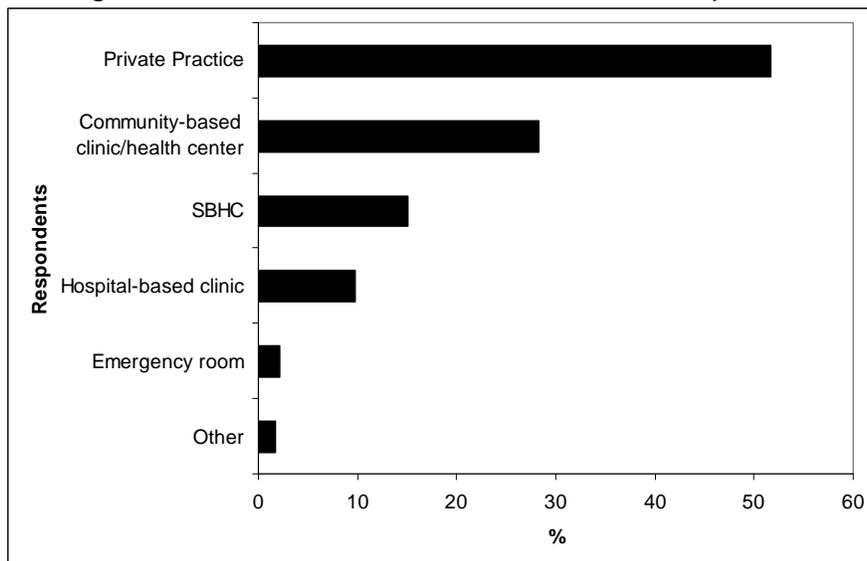
family physician/general practitioner, 33% a pediatrician, 9% a nurse practitioner, 7% other, and 2% an emergency room physician (Figure 1).⁶

Figure 1. Child's usual health care provider



The two most common locations parents reported taking their child for health care were private practices (52%) and community-based clinics/health centers (28%), followed by SBHCs (15%), hospital-based clinics (10%), emergency rooms (2%), and other (2%; Figure 2).⁷

Figure 2. Location of child's usual health care provider



⁶ Parents reported more than one type of health care provider, resulting in a total greater than 100%.

We found no differences in whether or not a child had a regular health care provider depending on insurance type (public versus private) or age (middle school versus high school).

Number of Health Care Visits

Parents were asked to report the number of well-child, sick, and emergency room visits their child had during the 2006-2007 school year.

Well-child Visits. The number of well-child visits ranged from 0 to 20, with the majority of parents (52%) reporting their child had one well-child visit in the previous year (median=1). *Twenty-one percent of parents reported not having taken their child for a well-child visit during the past year.* This suggests that some children are not receiving routine preventive care.

Sick-child Visits. Regarding sick-child visits, parents reported from 0 to 15 total sick-child visits in the 2006-2007 school year. On average, parents took their child to the doctor once when she/he was sick. Twenty-three percent of surveyed parents reported having taken their child to see his/her health care provider when they were sick once this past year, 24% reported taking their child 2 times, 8% reported taking their child 3 times, and 11% reported taking their child 4 or more times. It is worth noting that 34% of parents reported that they did not take their child to an appointment to see his/her doctor or health care provider when she/he was sick in the previous year.

Emergency Room Visits. Regarding emergency room visits, *nearly one-third (29%) of parents/guardians reported that they took their child to a hospital emergency room during the 2006-2007 school year.* Twenty-one percent of parents reported taking their child once, 7% reported taking their child 2-3 times, and 1% reported taking their child 4-9 times. One parent reported taking his/her child to the emergency room 10-12 times.

Additional analyses were conducted to explore the relationships between the frequency of well- and sick-child visits and differences in age (middle school versus high school), insurance (public versus private insurance carriers), and possession of a medical home.

Middle versus High school Students. On average, parents of high school students reported that their children had significantly more well-child medical visits than parents of middle school students. There was no significant difference in the number of sick-child visits (Table 4). It is possible that the increase in well-child visits is associated with the increased opportunity for involvement in sports requiring physicals at the high school level.

Table 4. Comparing Middle and High School Student Rates of Well- and Sick-Child Visits (2006-2007 School Year)

	Middle School		High School		Significance Test
	N	Mean	N	Mean	
Well-child visits	158	1.12	244	1.61	t=-2.75, p<.05
Sick-child visits	157	1.48	252	1.79	t=-1.47, NS

N = number of students; Mean = average number of visits per student

Public versus Private Insurance. On average, parents with public insurance (e.g., MIChild, Medicaid) reported that their children had significantly more well-child and sick-child medical visits than parents with private insurance (Table 5) during the 2006-2007 school year.

Table 5. Comparing Rates of Well- and Sick-Child Visits for Children with Public versus Private Health Insurance

	Public Insurance		Private Insurance		Significance Test
	N	Mean	N	Mean	
Well-child visits	157	1.94	185	1.03	t=3.91, p<.05
Sick-child visits	159	2.06	187	1.45	t=2.65, p<.05

N = number of students; Mean = average number of visits per student

NOTE: This analysis excluded all respondents who reported they had “other” insurance, did not know what insurance they had, or who skipped this question.

Regular Health Care Provider. On average, children with a regular provider had significantly more sick-child medical visits than children without a regular provider. No significant difference emerged in the number of well-child visits in the 2006-2007 school year (Table 6).

Table 6. Rates of Well- and Sick-Child Visits for Children with and without a Regular Health Care Provider

	Has Regular Health Care Provider		No Regular Health Care Provider		Significance Test
	N	Mean	N	Mean	
Well-child visits	355	1.48	41	.93	t=-1.67, NS
Sick-child visits	356	1.79	47	.83	t=-3.00, p<.05

N = number of students; Mean = average number of visits per student

Ease of Obtaining Health Care

Of those parents who felt their child needed care during the 2006-2007 school year, 83% reported it was not a problem to obtain health care for their child, 10% reported it was a small problem, and 7% reported it was a medium to big problem to obtain care

when they felt it was necessary. It is worth noting that 14% of parents reported that their child did not need care.

We found no significant difference in reported difficulty of obtaining health care between parents of middle school versus high school students. However, *parents of children with private insurance reported that getting health care for their child was significantly less of a problem than did parents whose child was covered through public insurance* (Table 7). It is worth noting that, although this difference is significant, both groups' average ratings indicate that parents perceive it to be virtually no problem to obtain health care, regardless of their health insurance carrier.

Table 7. Comparing Ratings of Difficulty Obtaining Health Care

	Middle School		High School		Public Insurance		Private Insurance	
	N	Mean*	N	Mean	N	Mean	N	Mean
Problem to get health care	134	3.78	222	3.70	147	3.67	151	3.83
Significance Test	t=1.13, NS				t=-2.10, p<.05			

*Range: 1=big problem to 4=no problem

Work Missed Due to Child Sickness

Parents were asked how much work they missed during the past four weeks and past 12 months due to their child being sick. During the past four weeks, the vast majority of parents/guardians (95%) reported that they have *not* missed work because their child was sick. Three percent of parents reported missing one day of work because their child was sick, and the remaining two percent reported missing 2 to 14 days of work due to their child's illness.

During the past 12 months, 35% of parents reported that they missed work due to a sick child. Of those who did miss work in the past 12 months, parents on average missed approximately two and a half work days due to a sick child. Specifically, 12% reported missing one day of work, 9% reported missing 2 days, 5% reported missing 3 days, 5% reported missing 4 days, and the remaining 4% of parents reported missing 5 or more days of work in the past 12 months due to an ill child.

Satisfaction with Health Care Provider

A majority of parents are highly satisfied with their child's regular health care provider (Table 8). With regard to the place where their child usually receives health care, over 90% of parents either agreed or strongly agreed that: 1) their child feels comfortable with the people there, 2) the hours are convenient, 3) the people there communicate well with them, and 4) the people there help them understand their child's illness. One area of relative dissatisfaction appears to be how quickly parents can get appointments for children. Fourteen percent of parents either disagreed or strongly disagreed that their child is able to get an appointment quickly.

Table 8. Satisfaction with Health Care Provider

	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
My child feels comfortable with the people there	43.6%	51.6%	2.9%	0.7%	1.2%
The hours are convenient	31.6%	58.6%	6.4%	1.7%	1.7%
The people there communicate well with me	40.9%	54.3%	2.9%	0.7%	1.2%
My child gets an appointment quickly	35.0%	49.1%	10.3%	3.9%	1.7%
My child gets good follow-up care	35.1%	54.1%	5.2%	1.5%	4.2%
It is easy for my child to get to	35.7%	54.3%	6.6%	1.5%	2.0%
The people there help me understand my child's illness	38.6%	53.8%	3.2%	1.0%	3.4%

School-based Health Center Utilization

Among parents whose children attended schools with SBHCs, 59% reported that their child had used their SBHC at least once during the previous year. These parents reported their children used the SBHC from 1 to 20 times during the 2006-2007 school year, with children on average using the SBHC three times.

Parents who reported that their child had not used his/her SBHC offered three main reasons for this:

- 50% reported that their child was either not sick/ill, did not need treatment/care, or that it simply was not necessary.
- 29% reported that their child did not use his/her SBHC because they chose to receive health services from either a family physician, private doctor, pediatrician or other personal health care provider.
- 8% reported that they did not know about the SBHC, did not know how to use it, or had forgotten about it.

SBHC Users vs. Non-users

In order to better understand differences between SBHC users and non-users, we compared SBHC users and non-users in terms of 1) type of health insurance (i.e., public versus private insurance) 2) number of well-child visits, 3) number of sick-child visits, and 4) difficulty of obtaining needed health care during the 2006-2007 school year.

As Table 9 shows:

- **Public versus Private Insurance.** Parents of children who used their SBHC were significantly more likely to report having public insurance than parents of children who did not use the SBHC (70% vs 49%).
- **Well- and Sick-child Visits.** According to parent reports, children who used the SBHC went for significantly more well-child visits than children who did not use SBHC. There was no significant difference in the number of reported sick-child visits.
- **Work Missed.** Parents of children who use SBHCs missed significantly *more* work days on average over the past 12 months than parents of children who did not use SBHCs. However, this difference is slight (1.01 compared to .66 days missed on average) and can be accounted for by a few parents in the SBHC user group who reported missing substantially more work.⁷ There were no significant differences between the groups in work missed during the previous 4 weeks.
- **Difficulty Obtaining Necessary Care.** There were no significant differences between parents of children who use and do not use the health center in perceived difficulty of obtaining health care.

Table 9. Comparing SBHC Users and Non-Users

	SBHC Users		SBHC Non-Users		Significance Test
	N	Mean	N	Mean	
Insurance:					
Public	82		34		$\chi^2=12.49, p<.05$
Private	67		70		
Well-child visits	168	1.41	115	1.08	t=2.04, p<.05
Sick-child visits	168	1.85	118	1.48	t=-1.46, NS
Work Missed:					
Past 4 Weeks	168	.17	119	.05	t=-1.27, NS
Past 12 Months	167	1.01	118	.66	t=-2.01, p<.05
Problem to get health care	151	3.75	101	3.79	t=-.56, NS

Summary of Key Findings

- **Health Insurance.** 96% of parents report that their children have health insurance. Of those children with health insurance, 41% were enrolled in a public health insurance program such as Medicaid or MICHild.
 - While the insurance rate among our sample of children might seem high, it is consistent with the 2004-2005 Michigan Household Health Insurance

⁷ When then three parents from the SBHC user group who reported missing significantly more work than the rest of the group (more than the maximum number of days reported by members of the non-user group (6) and more than two standard deviations from the SBHC user group mean) were excluded from the analysis, the differences were no longer statistically significant.

survey (Michigan Department of Community Health, 2006), which found that 3.7% of individuals below the age of 18, or roughly 100,000 children, were uninsured.

- According to the 2006 U.S. Census Bureau Current Population Survey data of insured children 0-17 years of age, 31% have some form of government health insurance. This suggests that our sample of parents includes more parents of children with government health insurance than the general Michigan population. Given that many of the SBHCs are located in low-income neighborhoods, this finding is not surprising.
 - Parents reported that economic barriers (i.e., cost and lack of employment) were the primary reason for not having health insurance for their children.
- **Health Care Providers.** Following the American Academy of Pediatrics' definition of a medical home—a place where children regularly received their health care—a majority of children in our study possess the elements of a medical home:
 - 88% of parents reported having a “usual” health care provider they take their child to for medical care.
 - Most parents reported taking their children to either a family/general physician (54%) or a pediatrician (33%).
 - Most parents reported their children's regular health care provider was located in a private practice (52%) or community based clinic/health center (28%). Of those who had access to a school-based health center, 15% reported it was their child's usual health care provider.
 - **Number of Health Care Visits.** More than 50% of parents reported taking their child for a single well-child visit during the 2006-2007 school year. On average, parents reported one sick-child doctor visit in the previous year. Nearly 30% of parents reported taking their child to the hospital emergency room at least once during the 2006-2007 school year.
 - **Work Missed Due to a Sick Child.** The majority of parents reported not missing work due to a child's sickness in the past four weeks (95%). However, in the past 12 months, 35% of parents had missed work due to a child's illness. Of those who did miss work in the past 12 months, parents on average missed approximately two and a half work days due to a child's sickness.
 - **Ease of Obtaining Health Care.** Of those parents who felt their child needed care during the 2006-2007 school year, 83% reported it was not a problem to obtain health care for their child, 10% reported it was a small problem, and 7% reported it was a medium to big problem to obtain care when they felt it was necessary.
 - **Satisfaction with Health Care Provider.** Parent responses to seven satisfaction questions suggest that the vast majority of parents are satisfied with their child's

regular health care provider. The most commonly reported area of dissatisfaction was how quickly children can get appointments; 14% of parents expressed some degree of dissatisfaction with this aspect of their child's care.

- **School-based Health Center Utilization.** 59% of the parent respondents whose children had access to a school-based health center reported their children used the health center. On average, children used the health center three times during the 2006-2007 school year. The most common reasons for not using the health center were because it was not needed (50%), their child already had a family doctor (29%) or because the parents were not aware of or did not know how to use the health center (8%).
- **Comparing SBHC Users to Non-Users.** In order to better understand differences between SBHC users and non-users, four comparative statistical tests were run.
 - **Type of Insurance.** Parents of children who used their SBHC were significantly more likely to report having public insurance than parents of children who did not use the SBHC.
 - **Well- and Sick-child Visits.** Parents of children who used the SBHC reported that their children went for significantly more well-child medical visits in the 2006-2007 academic year than parents of children who did not use the SBHC in the previous school year reported. This finding suggests that SBHC use is associated with a greater use of preventive care. There was no significant difference in the number of reported sick child visits.
 - **Difficulty Obtaining Necessary Care:** There were no significant differences between parents of children who used the health center and those who do not in their ratings of how difficult it was to get health care for their child.

Conclusions

While the findings from the parent survey overall suggest that the children of parents who completed the survey have health insurance and relatively easy access to health care, there are some areas warranting further attention.

- **Well-child visits.** Despite the majority of parents reporting they have health insurance for their children, 21% of the parents reported not taking their children for well-child visits during the 2006-2007 school year. This finding suggests that many children are not receiving routine preventive health care.
- **Medical homes.** 13% of parents reported that their child did not have a usual medical care provider. For these children it is likely there is no single medical office that has a complete medical history for the child or a health care provider who is familiar with the child's health history. A lack of a complete medical history and established relationship between the family and their health care provide can impede the timely diagnosis and treatment of developing health conditions.
- **Emergency room use.** Nearly 30% of parents reported taking their child to the hospital emergency room at least once during the 2006-2007 school year. This

ER utilization rate seems high, given that 96% of youth have some form of health insurance and therefore should not have to rely on emergent care to provide a substantial portion of their health care services. The reasons for this ER utilization rate warrant further investigation.

- **SBHC Use.** 43% of parents report their child is not taking advantage of the health center. While the majority of parents indicated that their child did not need to use the center (e.g., the child was not ill while at school), nearly 10% of parents reported they did not know about the health center or how to use it. This speaks to the need for additional marketing of the health centers to parents in order to both raise awareness of their presence in the schools and to clarify the process for making use of the centers' services.

Study Limitations

The findings presented in this report should be considered in light of some limitations of the study. Because the process evaluation component of this study depends on high quality SBHC billing data to accurately assess the numbers and types of healthcare services delivered by SBHCs, the schools with SBHCs that were selected to participate in this study were those with a demonstrated track record of submitting high quality billing data. For each school with an SBHC that was selected to participate in this study, a school without an SBHC with a similar student demographic profile was selected. As such, both the schools and the students in this study represent non-probability (non-random) samples. Because of this, caution should be exercised in generalizing from the results for the students in this study to the population of students attending public middle and high schools in Michigan.

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