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School-Based Health Centers
Improve Care for Adolescents

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EXECUTIVE SUMMARY

The School-Based Health Center Improvement Project (SHCIP) was a joint project of Colorado and New Mexico to identify effective, replicable strategies for enhancing the quality of health care for children and youth. The five year (2010-2015) project was one of 10 grant-funded awards made to states and child health providers by the Centers for Medicare and Medicaid Services, and made possible through the Children's Health Insurance Program Reauthorization Act (CHIPRA). The Colorado Department of Health Care Policy and Financing served as lead agency for SHCIP.

Twenty-two school-based health centers (SBHCs) participated in SHCIP, 11 in each state. SBHCs are located on school grounds and offer comprehensive primary and behavioral health care services to children and youth. Nationally, school-based health centers occupy a key role in the health care delivery system, providing improved access to services for underserved populations. SBHCs also offer integrated care to meet the specific needs of the populations they serve, engaging youth in their health care and promoting healthy behaviors.

Focus
Adolescents

The demonstration project focused its efforts on adolescents, a population that has the lowest rates of primary care use and tends not to receive preventive health care services. Patterns of behavior developed in adolescence, such as substance abuse or unhealthy eating habits, can influence health throughout the lifespan. This is particularly true for mental health conditions, such as depression, and chronic physical health conditions, such as diabetes. As such, it is a critical time when health care and health messages have the potential to affect future health and the use of health care services.

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School-Based Health Centers (SBHCs)

The demonstration project was designed with SBHCs at the core because of their close proximity to students. SBHCs are well positioned to reach and serve low-income, underserved, and hard-to-reach adolescents who are typically disengaged from the health care system. As well, the project built on significant investments Colorado and New Mexico had made in SBHCs as a way to provide access to health care for their considerable rural populations and for youth who typically do not seek health care but may have physical and behavioral health needs.

Goals

The SHCIP goals were to showcase the ability of SBHCs to address the health care needs of adolescents covered by Medicaid and Children's Health Insurance Program (CHIP), and to demonstrate how they can strengthen health care delivery for adolescents. Each of the participating SHBCs received coaching and technical assistance to apply the principles of quality improvement in integrating the medical home approach into SBHCs, improving the quality of care delivered in SBHCs, actively engaging adolescents in their

own health care, and using service data for practice and policy improvement. The demonstration project also focused on the role of SBHCs in addressing health care needs and improving clinical care in five areas that are particularly important for adolescent patients: Early and Periodic Screening, Diagnosis and Treatment (EPSDT) exams/well child checks, pediatric obesity/overweight, depression and anxiety, sexually transmitted infection (STI) screenings, and appropriate immunizations.

Outcomes

As shown below, the demonstration project strengthened the ability of the participating SBHCs to more effectively meet the health care needs of the youth they serve. SHCIP also provided key lessons and recommendations, together with new tools and processes that will serve to advance the field as a whole.

Integrate the Medical Home Approach into School-based Health Centers.

The integration of the patient-centered medical home (PCMH) model into SBHCs encourages the centers to continually explore ways to reduce costs, improve quality and outcomes, and keep up with the ever-changing health

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SHCIP developed the Patient-centered Medical Home Core Elements Tool, a simplified, yet comprehensive assessment designed to help SBHCs systematically integrate the medical home approach into their practices.

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care environment. Examples of how some of the participating SBHCs integrated key PCMH elements include:

- **Accessibility:** Strengthened the school registration process to increase SBHC enrollment

- **Coordinated:** Hired a full-time care coordinator to assist with internal and external referrals

- **Comprehensive:** Utilized internal and external clinical resources to more fully meet the needs of students

- **Youth Centered:** Developed or expanded youth-led outreach initiatives to better understand and meet the needs of the school populations

- **Quality Improvements:** Developed and implemented best practice protocols, resulting in improvements in clinical care.

In Colorado, all participating SBHCs received PCMH recognition through the use of the state designated Medical Home Index. In New Mexico, coaches developed the PCMH Core Elements Tool to help sites integrate the medical approach into their practices.

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SBHCs achieved significant quality improvements when they received coaching in specific clinical areas.

Improve the Quality of Care Delivered in School-based Health Centers.

Focused quality improvement efforts can inform SBHCs on specific ways to strengthen the delivery of clinical services, integrate the medical home model, engage youth, and collect data. All of the participating SBHCs worked to improve the quality of:

1. **Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Exams** through the adoption of best practices, better identification and documentation of risk factors, and appropriate referrals. The quantity of EPSDT exams also increased as a result of the SBHCs proactively identifying and providing students with needed preventive services.

Once proficiency was achieved in the EPSDT exams, the SBHCs moved on to one or more of the following clinical content areas of their choosing:

2. **Pediatric Overweight/Obesity (POW):** Improved identification and screening of overweight/obese students, which led to better evaluation, management, and treatment

3. **Depression/Anxiety:** Improved the screening and identification of students at risk for depression and/or anxiety, which led to improved behavioral health and primary care integration, including better treatment, referral, and follow up

4. **Sexual Health:** Developed new and innovative procedures, which improved the screening and treatment of sexually-transmitted infections for sexually active students

5. **Appropriate Immunizations** Increased the percentage of students up-to-date on adolescent immunizations by improving the tracking and delivery of vaccines.

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Youth Engagement
Key Lessons Learned and
Recommendations Include:

Identify dedicated staff to lead youth engagement efforts and seek opportunities for partnerships to support youth engagement work.

Actively involve youth in providing feedback on how the needs of students are being met by the SBHC and to assess collective youth engagement efforts by the clinic; utilize feedback to make improvements.

Integrate youth engagement into clinical practice to grow their health literacy and self-efficacy and to improve the quality of care received by adolescents.

Engage Adolescents in their own Health Care.

Research has shown that patients who are more engaged with their health care are more satisfied with the care they receive and enjoy better outcomes. With the support of coaches, participating SBHCs enhanced their youth-friendly care by fostering youth engagement, ensuring a safe and youth-friendly environment, and creating opportunities to increase health literacy and health self-efficacy.

Many of the participating SBHCs established a youth advisory group, which brought together a diverse array of young people, and at least one adult sponsor from the SBHC, to identify health needs of importance to them and their school community. Through group discussions, youth and SBHCs worked together to identify ways to strengthen services, spread awareness, and share health promotion messages.

Through the Youth Engagement with Health Services (YEHS!) survey, SHCIP found that youth who were more engaged reported better experiences with health care, received more anticipatory guidance that met their needs, and reported fewer unmet health needs.

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Use Service Data to Improve Practice and Policy.

The collection and use of comprehensive data helps to identify problems, suggest ways to continuously improve practice and policies, and can help to more fully integrate SBHCs in the health care system. A number of steps taken by SHCIP coaches, evaluators, and state SBHC programs to strengthen participating SBHCs' data collection, and examples of how these efforts improved the quality of service data (also called visit or encounter data), include:

- **Strengthened Coding Capabilities:** Helped the SBHCs maximize billing revenues

- **Improved Encounter Data Warehouse:** Provided data that included person, visit, and diagnosis levels to help SBHCs identify areas for improvement

- **Improved Medicaid Claims Data:** Set in motion ongoing collaborative efforts to address the challenges encountered with SBHC Medicaid claims data, particularly in regard to location coding

- **Established New Data Analytic and Reporting Method:** Improved the ability to create site-specific and aggregate reports.

> **Improvements in the quality of service data will serve to better tell the story of school-based health centers and strengthen the case for expanded state funding.**

Data Collection
Key Lessons Learned and Recommendations Include:

Data collection and reporting can help to assure SBHCs that their contributions are "counted" and recognized by medical sponsors, Medicaid, and accountable care organizations.

SBHCs can maximize their billing reimbursements, and benefit from financial incentives for meeting Medicaid performance indicators, as measured by claims data.

Data can help SBHCs tell the story of the services they provide and the role they play in delivering health care to children and youth, particularly those who are low-income, underserved, or hard-to-reach.

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Conclusion

Given the considerable resources and efforts that fueled this demonstration project, and the clear conclusion that school-based health centers offer a significant opportunity to change course in the struggle to provide health care to adolescents, we encourage state and national partners and policy leaders to put these findings to use so that we can better meet the health needs of our young people.

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SBHC Tools

Electronic Student Health Questionnaire (eSHQ)
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Middle school and high school versions of the eSHQ were developed through SHCIP to advance quality improvements and assess the risk behaviors and identify protective factors of adolescent users. The user-friendly iPad application promoted integration between primary care and behavioral health providers and allowed for broader population management through the use of aggregate data reports.

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Youth Engagement with Health Services (YEHS!) Survey
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The YEHS! survey was developed to measure levels of youth engagement with their health care and the quality of their health care experiences. It was administered on an iPad, providing SBHC staff with information about needed anticipatory guidance and individual and collective youth engagement through user-friendly reports.

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INTRODUCTION

The goals of the Colorado and New Mexico demonstration project were to showcase the ability of school-based health centers to address the health care needs of adolescents covered by Medicaid and CHIP, and to demonstrate how they can strengthen health care delivery for adolescents.

Background: School-Based Health Center Improvement Project

Colorado and New Mexico worked together on the **School-based Health Center Improvement Project (SHCIP).** The five-year (2010-2015) project was supported by one of 10 grant awards made to states and child health providers by the Centers for Medicare and Medicaid Services (CMS) to "conduct demonstration projects to identify effective, replicable strategies for enhancing the quality of health care for children and youth."[1] The grants were made possible through the Children's Health Insurance Program Reauthorization Act (CHIPRA), legislation that was passed by Congress in 2009 to provide states with new funding and supports to increase the number of children covered through Medicaid and the Children's Health Insurance Program (CHIP). This grant opportunity followed concerns about the quality of children's health care that had been raised by the Robert Wood Johnson Foundation's Commission to Build a Healthier America, which found that a quarter of children with insurance and as many as half of all children without insurance were not receiving recommended routine well child visits.[2]

The Colorado Department of Health Care Policy and Financing (HCPF) served as sponsor for SHCIP. Twenty-two school-based health centers (SBHCs)

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Figure 1: SBHCs that Participated in SHCIP, by Cohort and Year of Initiation

Cohort 1: Fall 2011

1 **Basalt:** Roaring Fork School Health Center at Basalt High School

2 **Breckenridge:** Summit High School SBHC

3 **Lamar:** WHELL Clinic at Lamar High School

4 **Bayard:** Cobre High SBHC

5 **Casa Blanca:** Laguna-Acoma Teen Center at Laguna-Acoma High School

6 **Española:** Española Valley High SBHC

7 **Pojoaque:** Pojoaque Valley High SBHC

8 **Silver City:** Silver High SBHC

Cohort 2: Fall 2012

9 **Basalt:** Roaring Fork School Health Center at Basalt Middle School

10 **Frisco:** Summit Middle School SBHC

11 **Montrose:** Northside Child Health Center

12 **Sheridan:** Sheridan Health Services SBHC at Sheridan Middle School

13 **Albuquerque:** Van Buren Middle SBHC

14 **Española:** Carlos Vigil Middle SBHC

15 **Ojo Caliente:** Mesa Vista Middle SBHC

16 **Roswell:** Mesa Middle SBHC

Cohort 3: Fall 2013

17 **Commerce City:** Adams City High School SBHC

18 **Commerce City:** Adams City Middle School SBHC

19 **Cortez:** Southwest Open School SBHC

20 **Fort Collins:** Centennial High School SBHC

21 **Albuquerque:** Highland High SBHC

22 **Ruidoso:** Ruidoso High SBHC

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Table 1: Characteristics of the SBHCs that Participated in SHCIP

	Colorado SBHCs	New Mexico SBHCs
Type of School	5 high schools (2 alternative schools) 6 middle schools	7 high schools 4 middle schools
Rural/Urban Sites	7 rural 4 urban	8 rural 3 urban
Student Population	5 mostly Hispanic/Latino 1 significantly American Indian (34%) 5 mostly White	10 mostly Hispanic/Latino 5 with American Indian (between 6% and 42%)
Hours of Operation	7 full time (5 days a week, all day) 4 part time (20-30 hours/week) 5 limited summer hours	4 full time (5 days a week, all day) 7 part time (16-24 hours/week) 6 limited summer hours
Sponsor	4 FQHC 4 community sponsoring medical provider 3 statewide sponsor of multiple SBHCs	6 FQHC 4 university 1 regional education cooperative
Services	11 primary care 11 behavioral health 6 dental	11 primary care 11 behavioral health 4 dental

participated in the demonstration project, 11 in each state (see Figure 1). SBHCs received between $10,000 and $13,000 for each year of participation. Table 1 shows the characteristics of the participating SBHCs.

The SHCIP goals were to showcase the ability of SBHCs to address the health care needs of adolescents covered by Medicaid and CHIP, and to demonstrate how they can strengthen health care delivery for adolescents. The project sought to achieve these goals by:

1. Integrating the medical home approach into SBHCs

2. Improving the quality of care delivered in SBHC settings

3. Actively engaging adolescents in their own health care

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Figure 2: Ideal School-Based Health Center

Easy Access
on school grounds

Open Regularly
with 24/7 options when closed

No/Low-Cost Care
Medicaid Enrollment Available;
no student turned away

Integrated Care
Regular Team Meetings

Utilize Community Resources

Coordinate Care with
Outside Providers

Provide Health
Education/Promotion

Range of Services

Behavioral Health

Primary Care

Oral Health

Supportive Relationships

Strong Relationship
with School

Supportive Sponsor

Strong Community
Partnerships

Youth Engagement Approach

4. Using service data for practice and policy improvement.

Additionally, the demonstration project focused quality improvement efforts on Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) exams/well child checks, pediatric overweight/obesity, depression/anxiety, sexually transmitted infections (STI) screenings, and appropriate immunizations. Quality improvement (QI) coaches worked with each of the SBHCs, providing instruction on QI methodology, resources and tools, ongoing coaching, and facilitation of learning collaboratives to meet project goals.

During the three school years SBHCs participated in SHCIP, the project team collected qualitative and quantitative data from each site for each element of the intervention.

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School-based health centers are uniquely positioned to provide health care services to low-income and underserved adolescents who are typically disengaged from the health care system.

Setting: School-based health centers

School-based health centers effectively provide health care services to low-income, underserved adolescents who are typically disengaged from the health care system. As such, designing a demonstration project with SBHCs at the core was a logical approach to engage a difficult-to-reach population such as adolescents. Additionally, the project built on the significant investments Colorado and New Mexico had made in SBHCs as a way to provide access to health care for their considerable rural populations and for youth who typically do not seek health care but may have physical and behavioral health needs.

Nationally, school-based health centers also occupy a key role in the health care delivery system (see box, above). The Affordable Care Act of 2010 (ACA) authorized $200 million in funding to establish new SBHC sites and expand services at existing sites, reflecting an awareness of the critical role SBHCs play in providing services to school-aged youth and adolescents.[3, 4] SBHCs provide access to a broad spectrum of critical primary care and preventive services, including medical, oral, nutritional, case management, and behavioral health services for children and adolescents who may otherwise not have access to health care services due to financial, cultural, or geographic barriers (see Figure 2).[5]

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Some important advantages offered by the school-based health center model of care include:

Improved Access. The location of SBHCs in urban and rural schools,[6, 7, 8] where students spend a large part of their day, offers youth the opportunity to conveniently access services during school hours. This lessens transportation and scheduling barriers to care for school-aged children and adolescents. SBHCs also provide services at no charge to students who lack insurance, and their staff help to enroll eligible students in Medicaid or CHIP.[5] As well, more than 70% of students in schools that have SBHCs are ethnic or racial minorities.[4] Studies show that SBHCs have demonstrated the ability to improve access to health care services, especially for uninsured and underserved youth.[6, 9, 10, 11]

Integrated Care. Offering behavioral health services in the same setting as physical care is especially important due to the prevalence of depression, anxiety, and stress among adolescents. Behavioral health and other psychosocial concerns often emerge during this period of development.[12] The availability of integrated services is critical to early identification, referral, and treatment of students with behavioral or emotional challenges and reduces the stigma of seeking such care.[4] Nearly three-quarters of SBHCs nationwide offer both primary and behavioral health care

providers.[7] All state-funded SBHCs in Colorado and New Mexico are required to offer behavioral health services and do provide integrated care.

Engaged Youth. SBHCs are optimally positioned to support adolescents in taking an active role in their own physical, behavioral, and oral health care. Because of their close proximity to students, SBHCs can reinforce health education messages and encourage healthy behaviors. They are also able to track and monitor adolescent health conditions, and can help students monitor adherence and compliance with required medications.[4]

Improved Health Outcomes. SHCIP data show that students who say the SBHC is their usual source of care receive recommended vaccines and screening for high-risk behaviors at a greater rate than those for whom the SBHC is not their regular source of care. SBHCs have also demonstrated success in improving outcomes for such chronic diseases as asthma.[5] Additionally, studies have shown that SBHCs have the ability to reduce hospital and emergency department visits and overall health care costs to Medicaid and society.[13, 14, 15]

> **Offering behavioral health services in the same setting as physical care is especially important due to the prevalence of depression, anxiety, and stress among adolescents.**

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Focus: Adolescents

Adolescence is a time of transition to adulthood, when health care and health messages have the potential to affect future health and the use of health care services. A significant portion of adolescents are likely to be uninsured or underinsured and face challenges in accessing health care services.[16] These factors, as well as the many specific health care needs of adolescents, underscored the value of focusing the demonstration project on this population.

Adolescence is a time when:

Health Risks can Emerge. Patterns of poor health behavior developed in adolescence, such as substance abuse, unhealthy eating habits, inadequate physical activity, or unprotected sex can influence health throughout the lifespan. This is particularly true for mental health conditions, such as depression, and chronic physical health conditions, such as diabetes.[17]

Knowledge, Behaviors, and Interventions can Affect Future Health. As adolescents move toward adulthood and independence, SBHCs can help them gain knowledge and skills to prevent or reduce health risks. The majority of adult chronic diseases trace their origins to childhood and adolescence; early stage identification of health risks, preventive services, and early intervention may influence risky behaviors, promote healthy habits, mitigate or even prevent chronic health conditions, and improve overall health.[12, 16, 18, 23,]

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Health Care is Less Accessible.
Adolescents typically are the least likely age group to access health care. They have the lowest rates of primary care use and tend not to receive preventive health care services. According to the CDC's National Center for Health Statistics, more than 11% of children aged 6-17 did not have a health care visit to a doctor's office, emergency department, or home visit in the past 12 months.[19] The rate is even higher for adolescents from low-income backgrounds, who are more likely to be uninsured.[16] Adolescents are less likely to be insured than younger children and are likely to forego health care services.[20, 21, 22] Consequently, adolescents typically have unmet physical and behavioral health care needs.[4, 12, 16, 22, 23]

Target: Improve Health Outcomes

SHCIP focused on the role of SBHCs in addressing health care needs and improving the care of adolescents by targeting five key areas that are particularly important for adolescent patients:

1. **Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Exam:** The EPSDT exam, Medicaid's comprehensive health exam, was selected as a focus area of improvement because it is an evidence-based tool that serves as a starting point to diagnose health conditions at an early stage, helping to ensure appropriate interventions

and follow-up. Additionally, the EPSDT exam rates for adolescents in Colorado and New Mexico are low when compared with rates for younger patients.

Participating SBHCs focused their quality improvement efforts on services aligned with the EPSDT exam for a number of health conditions particularly relevant to adolescents, including pediatric overweight/obesity, depression/anxiety, STI screenings, and appropriate immunizations.

2. **Pediatric Overweight/Obesity (POW):** Obesity rates among adolescents aged 12-19 have more than quadrupled over the past three decades.[24, 25] The detrimental health effects of obesity are significant, ranging from sleep, respiratory, gastrointestinal, and nervous system problems, to psychiatric, orthopedic, and endocrine disorders, skin conditions and cardiovascular risk factors.[26] Obese adolescents are more likely to become obese adults and to have an elevated risk for the development of diabetes. Long-term effects include higher risk for heart disease, stroke, osteoarthritis, and certain types of cancer.[25]

SBHCs work with students to promote weight management, healthy eating, and chronic disease management.[7] They can serve an

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important role in providing "anticipatory guidance" (i.e., alerting youth and their families to health issues now, and those that may be encountered in the future) and partnering with youth to develop shared care plans for obesity prevention and weight management. SBHCs can also offer medical evaluation and management of coexisting conditions such as diabetes or hypertension, which affect youth in increasing numbers. Additionally, the potential for collaboration between medical, behavioral health, and school professionals and educators, including cafeteria staff, make the school-based health center an ideal environment for a more comprehensive and youth-centered approach to obesity intervention.[3]

3. **Depression/Anxiety:** Nationwide, more than one in 10 adolescents has a depressive disorder by age 18, according to the National Comorbidity Survey-Adolescent Supplement. Adolescent depression is typically accompanied by at least one comorbid psychiatric disorder such as an anxiety disorder, a

specific phobia, ADHD, or a substance use disorder.[27] Additionally, the CDC's National Youth Risk Behavior Survey found that more than one in four youth reported feeling sad or hopeless in the past year and nearly 16% of high school students reported having seriously considered suicide in the past year.[18]

The integrated physical and behavioral health services available in many SBHCs reduces the risk of students being stigmatized when they seek out behavioral health services.[4] One study of users of SBHCs found that students who reported depression and past suicide attempts were significantly more willing to use the center for counseling services.[28] Other studies found adolescents were 10- to 21-times more likely to go to a SBHC for mental health services than the community health center network or HMO.[29, 30]

4. **Sexual Health:** Nationally, nearly one-third of U.S. high school students reported they had sexual intercourse in the previous three

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The potential for collaboration between medical, behavioral health, and school professionals and educators, including cafeteria staff, make the school-based health center an ideal environment for a more comprehensive and youth-centered approach to obesity intervention.

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months, according to the 2011 CDC Youth Risk Behavior Survey. Of that number, nearly 40% reported they did not use a condom the last time they had sex, and nearly 80% reported they did not use birth control pills to prevent pregnancy the last time they had sex. More than 400,000 teenagers aged 15–19 gave birth in 2009. In addition to unintended pregnancy, adolescent risk behaviors such as unprotected sex increase the risk of HIV infection as well as other sexually transmitted infections (STI). One-quarter of all STI cases occur in adolescents. [16, 31, 32]

Most SBHCs offer pregnancy prevention counseling and provide other confidential services such as pregnancy testing and onsite diagnosis and treatment for STIs. Nearly half of all SBHCs, however, are prohibited from dispensing contraception by school district policy, health center policy, state law, medical provider sponsor, or state policy.[7]

5. **Appropriate Immunizations:** The federal requirements for the EPSDT examination include "appropriate immunizations" (according to the Advisory Committee on Immunization Practices). Vaccines appropriate for the adolescent population include a Tdap booster (tetanus, diphtheria, and pertussis); a human papilloma virus vaccine

(3 doses) to prevent cervical cancer and genital warts; a meningococcal vaccine and booster; and an annual influenza vaccine. Youth with certain risk factors may benefit from the pneumococcal vaccine and vaccines for hepatitis A. Further, youth should be brought up-to-date on any vaccines that were missed earlier in childhood.

The majority of SBHCs offer appropriate immunizations, expanding access to required and recommended vaccines for adolescents.[33] However, not all SBHCs participate in the Vaccines for Children (VFC) program or receive reimbursement for vaccine administration, so some sites do not provide vaccinations. Challenges for SBHCs include limited space and funds for the refrigerators needed to store vaccine, caseloads too small to make a vaccine program cost-effective and limited hours or staff to monitor storage equipment and track inventory.

The following chapters detail the work undertaken and outcomes achieved through SHCIP to address the health care needs of adolescents and to expand on the understanding of how SBHCs contribute to the health care system.

One-quarter of all sexually transmitted infection cases occur in adolescents. SBHCs are among the few sites that reliably provide confidential sexual and reproductive health services to adolescents.

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MEDICAL HOME

Integrating the Medical Home Model into SBHCs

Integrating school-based health center strengths with medical home standards increases their capacity to serve as medical homes for adolescents and encourages them to continually explore ways to reduce costs and improve outcomes.

Background: Patient-Centered Medical Home Approach

The medical home approach focuses attention on aspects of primary care that improve quality, reduce cost, and support alternative value-based payment models.[34] Health care providers use a patient-centered medical home (PCMH) approach to make sure their services are accessible, responsive to the patient and family's unique needs, culturally competent, and coordinated among all of the providers involved in the patient or family's life. The overall goal of the medical home model is to put patients and their families at the center of their own health care in order to improve their health.

Unfortunately, many adolescents do not have access to regular health care services or to a medical home. According to the 2011-2012 National Survey of Children's Health, 18.3% of adolescents aged 12-17 nationwide received no preventive medical care, and 35.9% needed but did not get behavioral health services.[36] However, SBHCs can play a vital role in addressing the special health needs of adolescents, particularly when they integrate key components of the PCMH model (see Table 2). Indeed, more than 70% of youth who completed the demonstration project's Youth Engagement with Health Services Survey (2012-2013) reported their SBHCs as their usual source of care. This suggests that SBHCs are already acting as the primary care medical provider for many SBHC users.

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Table 2: PCMH Components Present in Ideal SBHCs

Key Elements of the Patient-centered Medical Home Model	How School-based Health Centers Can Meet Elements of the Patient-centered Medical Home Model
Accessible	SBHCs are located in the most accessible location for young people: their schools. They allow for same-day appointments, arrange for 24/7 coverage, and meet adolescents' communication and cultural needs.
Coordinated	SBHCs utilize an interdisciplinary team approach to deliver coordinated primary, behavioral, and dental health care. They coordinate with social service agencies, school personnel, community-based providers, and specialists.
Comprehensive	SBHCs effectively provide behavioral, medical, and dental health services. They also identify health risks utilizing an adolescent risk and resiliency screening tool, and use electronic health records (EHR) to their full capacity.
Youth Centered	Youth and parents are active members in the SBHC community (i.e., participate on advisory committees), and SBHCs promote youth health literacy.
Quality Improvement	SBHCs follow established state standards and routinely engage in quality improvement activities.

SBHCs are already acting as the primary care medical provider for many SBHC users.

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Findings: Integrating PCMH Into SBHCs

As a first step, each of the SBHCs participating in the demonstration project was assessed to determine what support they needed to integrate a medical home approach. The results of the assessments served as a baseline to plot where SBHCs were along the continuum of the medical home spectrum and lay out a plan for improvement. The SBHCs in the two states used different assessment processes due to the changing nature of PCMH, both nationally and at the state level.

Colorado Assessments: With the passing of Colorado Senate Bill 130 in 2007, standards, processes, and an enhanced reimbursement model were established to recognize health care providers that provide a medical home for children in Colorado. Recognition required providing evidence of meeting the identified medical home standards, completing the Medical Home Index (MHI) tool, and completing a quality improvement project on an annual basis. SHCIP used this same process to integrate PCMH principles into SBHCs. During SHCIP, all participating SBHCs in Colorado were recognized by the state of Colorado as patient-centered medical homes for children.

In June 2013, enhanced reimbursement for medical homes ended in Colorado. HCPF began to develop a new process for incentivizing Medicaid providers that met PCMH principles in the Accountable Care Collaborative (ACC) program. HCPF instituted new payments for providing PCMH services as of July 2014 through its Enhanced Primary Care Provider program. In the final months of the grant, participating SBHC sites in Colorado focused their medical home efforts on participating in the ACC program and pursuing payments as Enhanced Primary Care Providers.

New Mexico Assessments: Because New Mexico does not have a state-based PCMH recognition program, the initial four SBHCs participating in the demonstration project used the National Committee for Quality Assurance (NCQA) self-assessment of PCMH characteristics. However, it became clear that the intensive NCQA recognition process was not appropriate for all SBHCs, especially with no additional reimbursements available to PCMH-certified practices. This led SHCIP to develop the PCMH Core Elements tool. This simplified Excel-based document draws from the key PCMH elements as defined by NCQA (i.e., must-pass elements, plus one-to-three additional elements in each standard), provides examples relevant to SBHCs, and promotes best practices in adolescent care.

One Federally Qualified Health Center (FQHC)-sponsored site in New Mexico submitted for and received NCQA Level II PCMH recognition, and two others

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Figure 3: Average **Baseline** and **Follow-up** Scores for Seven New Mexico SBHCs that used the PCMH Core Elements Tool

Average PCMH Self-Assessment Score
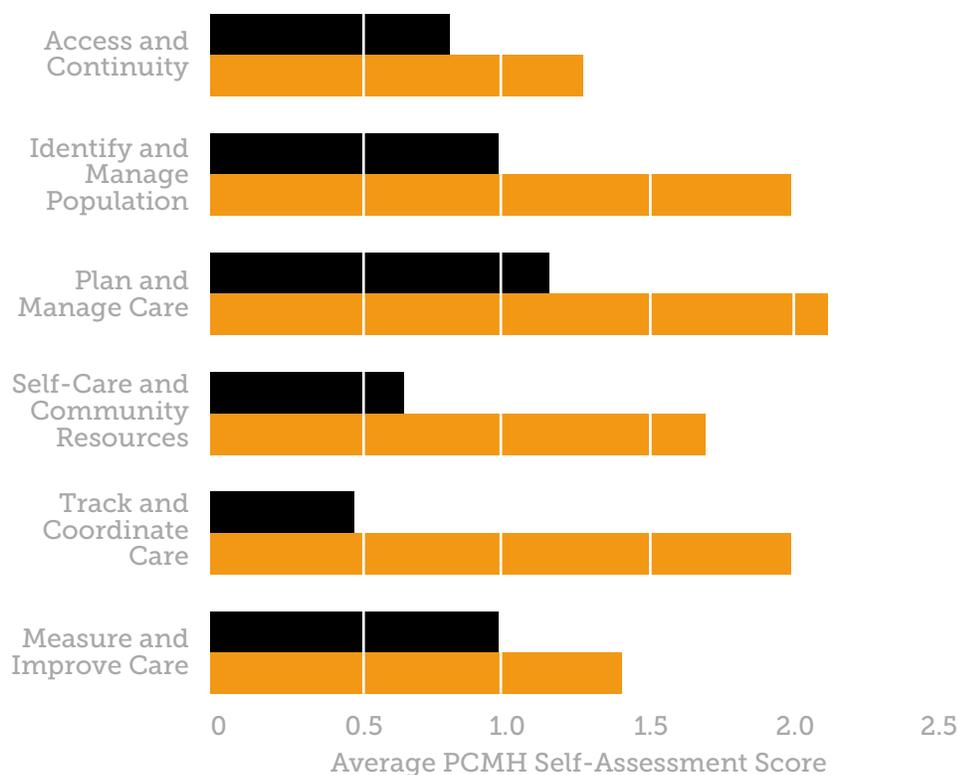
are planning to submit for NCQA recognition. The seven New Mexico SBHCs that used the PCMH Core Elements tool demonstrated improvements (see Figure 3). While their baseline scores were low, improvements were made in each area, with the average total scores increasing from 5.2 to 11.3, out of a possible 20 points. There is still room for improvement in all areas and the sites are continuing to work through their action plans to further integrate PCMH practices.

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Outcomes: SHCIP Strengthened Medical Home Integration

As detailed below, the participating SBHCs made significant improvements in their integration of key elements of the PCMH model, even as some challenges remain.

IMPROVEMENTS IN ACCESSIBILITY:

- Strengthened outreach to school staff, parents, and youth to ensure understanding of available SBHC services, and how to access them

- Changed staffing patterns to ensure health care providers are accessible when students need them

- Put processes in place to assure same day appointments are available

- Promoted SBHC providers as the primary care provider (PCP) for students

- Used youth-friendly language in materials (e.g., brochure) to explain how the SBHC could serve as a medical home

- Developed processes to ensure continuity of care, and ensure patients knew where and how to seek care when the SBHC was closed (e.g., over the summer)

- Strengthened the school registration process to increase SBHC enrollment and ensure students and/or parents were aware of services provided by the SBHCs

Ongoing Challenges:

- Insufficient funding to ensure full-time staffing and extended hours at SBHCs

- Difficult to balance time needed to assure students receive needed care in SBHCs with classroom requirements.

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ENHANCED COORDINATION IMPROVEMENTS:

- Strengthened coordination between SBHCs and school staff (i.e., nurse, counseling staff, teachers, administrators), including improved Memorandums of Understanding to allow for the exchange of appropriate health information

- Increased use of referral and lab tracking systems, including within electronic health records (EHRs)

- Improved integration and coordination between PCPs and behavioral health providers (BHPs)

- Implemented health information technology (HIT) data-sharing mechanisms (e.g., statewide immunization registries and ACA data portals)

- Provided information to students about care transitions (i.e., middle school to high school, and high school to adult care)

- Developed a behavioral health registry to help track at-risk students to ensure they received appropriate care and follow-up, and reviewed registry at care coordination meetings

- Changed clinic schedules to promote "warm handoffs," where PCPs directly introduced clients to BHPs

- Hired a full-time care coordinator to assist with internal and external referrals; coordinators made sure patients and families were able to access specialty services, helped students set and get to appointments, fill out forms, and identify financial needs

Ongoing Challenges:

- Inadequate staff time to coordinate with outside PCPs, BHPs, and other specialists

- Difficult to share patient health information between multiple EHRs, or when a SBHC does not have an EHR

- Don't always receive information from community providers when students are seen outside the SBHC.

> **Care coordinators made sure patients and families were able to access specialty services, helped students set and get to appointments, fill out forms, and identify financial needs.**

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IMPROVEMENTS IN COMPREHENSIVE CARE:

- Implemented electronic, comprehensive adolescent health risk screening tools

- Identified and addressed areas of high need and risk in the population

- Standardized care plans were created in partnership with students and families

- Implemented evidence-based guidelines to inform best practice in SBHCs

- Implemented on-site services such as dieticians, patient navigators, and community health workers

- Utilized internal and external clinical resources to expand their scope of care and more fully meet the needs of students

Ongoing Challenges:

- Insufficient funding to provide needed, regularly available services on-site.

Comprehensive Care

At one participating SBHC, the electronic Student Health Questionnaire (eSHQ) helped to identify a prevalence of eating disorders, together with a lack of accessible nutrition services. After engaging individual patients in conversation and discussing this with the student health advisory committee, a nutritionist was assigned to come to the SBHC on a weekly basis. At another site, the nurse practitioner at the SBHC worked with a psychiatrist at the nearest university to coordinate medication management for students diagnosed with depression and anxiety.

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IMPROVEMENTS IN YOUTH-CENTERED CARE:

- Developed surveys and utilized findings to ensure information was understandable and useful to students, and to increase patient satisfaction

- Created and expanded student health advisory committees/youth advisory groups (YAGs)

- Developed educational materials to increase youth health literacy

- Made improvements to ensure a youth-friendly environment and culturally competent staff

- Made efforts to ensure youth were aware of, understood, and felt comfortable accessing all services at their SBHC

- Gathered, recorded, and utilized information on students' preferred methods of contact by SBHCs to ensure staff communicated effectively with students

Ongoing Challenges:
- Inconsistent development, engagement, and utilization of YAGs

- Insufficient time set aside for staff to plan and promote youth-engagement activities.

EXPANDING QUALITY IMPROVEMENTS:

- Formed quality improvement teams

- Used the Plan-Do-Study-Act process to put protocols in place and make necessary adjustments

- Developed a process to consistently review master medical records (MRRs)

- Used individual and aggregate data consistently to inform quality improvement efforts

- Included students in the quality improvement process

Ongoing Challenges:
- Sponsoring medical organizations often promote adult-focused QI projects rather than those that are youth-focused

- Continuity of QI efforts were impeded by staff turnover

- Multiple demands and requirements placed on SBHCs made it difficult to implement a consistent QI process.

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Medical Home — Key Lessons Learned and Recommendations Include:

Additional education for state and national partners is required to help them better understand how the SBHC model can effectively serve as a medical home for youth.

Simplified PCMH-recognition assessments provide a helpful alternative to the more in-depth national recognition process, particularly for minimally-staffed SBHCs.

SBHCs should adopt PCMH principles into their practices, policies, and procedures to strengthen the delivery of care for children and adolescents.

Policy: National and state PCMH authorities should include SBHCs in respective recognition programs and enhanced payment initiatives.

Policy: Federal, state, and local governments should increase funding to SBHCs to support their successful transition as medical homes, including ongoing evidence-based, data-driven quality improvement.

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AN SBHC Tool:

The electronic Student Health Questionnaire

Routine comprehensive risk and resiliency screening is crucial for identifying and addressing the physical and behavioral health needs of youth.

Background: eSHQ

To advance quality improvements (QI), assess the risk behaviors, and identify protective factors of adolescent users, participating SBHCs adopted and implemented the electronic Student Health Questionnaire (eSHQ). Routine comprehensive risk and resiliency screening is crucial for identifying and addressing the physical and behavioral health needs of youth. As well, the consistent use of a standardized comprehensive screening tool requires process improvement to incorporate it into the clinic workflow.

Middle school and high school versions of the eSHQ were developed after reviewing the American Academy of Pediatrics' Bright Futures guidelines,[37] existing adolescent health risk assessments, consulting with the staff of participating SBHCs, and reviewing the literature related to youth health risk assessments. Some new questions were developed and others were adapted from existing instruments.[38] The eSHQ was also tested, refined, and translated into Spanish.

Findings: Many Benefits, Few Challenges

Participating SBHCs implemented the eSHQ through the use of iPad technology. The development and implementation of the instrument presented some challenges, and many benefits, including:

User-friendly for Students. The electronic format of the eSHQ allowed for more efficient

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Students were more amenable to taking the screening tool, and more thorough in completing the questionnaire, when administered via an iPad.

administration and deeper probing questions based on prior responses. Many SHCIP sites reported that students were more amenable to taking the screening tool, and more thorough in completing the questionnaire, when administered via an iPad; students found it engaging and easy to navigate. Additionally, because of programming and skip patterns built into the electronic application, errors in completion of the questionnaire were reduced. Research has shown that use of an electronic student health questionnaire also enhances physician counseling and improves adolescents' perceptions of the visit.[39]

Early Identification of Health Risk Behaviors and Promotion of Protective Factors. Providers can see the results of the survey on the iPad immediately upon completion. An Alert Report (see Figure 4) highlights risk factors and areas that need attention. It is also possible to generate a more detailed report that provides responses to each question. Using the Provider Review feature, health care providers are able to use an iPad to review and make comments directly on individual reports, and then electronically sign and print or upload the report to the student's EHR.

Integration of Primary Care and Behavioral Health Care. The eSHQ promoted integrated care by facilitating early identification of risks to physical and behavioral health. Participating SBHCs reported increased numbers of referrals, and simpler referral processes between primary care and behavioral health care. The eSHQ also helped PCPs initiate difficult conversations with students about sensitive emotional and

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Figure 4: Sample eSHQ Alert Report

Submitted Sep 9, 2014 — **Student Health Questionnaire - Alert Report (HS)** — Edit Review

Name	Date of Birth	Age	Grade	Sexual Orientation
Smith, Jill	September 9, 1999	15	10 - Tenth	Heterosexual

Legend: N/A | Unanswered | Needs Attention | Risk Factor | 🚩 CRAFFT Alert | No Concern

Home/School — Marked as Risk:
1. Lives with: Mother, Father, Sister, Brother
2. Someone they can talk to: Friend, Parent
3. Problems at home: Violence
4. Problems in school or work: Missing school, Grades
Comments:

Health Behaviors — Marked as Risk: Yes
5. Participate in 1 hour of physical activity per day: Yes
6. More than 2 hours per day watching TV/Video: No
7. 5 or more servings of fruits and vegetables: Yes
8. More than 8 hours of sleep per night: No
9. Dental care in last 12 months: Yes
Comments:

Safety / Injuries — Marked as Risk: Yes
10. Always wears a seatbelt: Yes
11. Always wears a helmet: Yes
12. Text, talk, surf Internet while driving: N/A
13. Feel afraid, threatened, hurt: Yes
14. Physically, sexually, emotionally abused: No
15. Hit by boyfriend/girlfriend: Yes
16. Carry a weapon for protection: No
17. Foster care, group home or homeless: Yes
18. Spent a night in jail or detention center: No
Comments: Teen dating violence education referral

Feelings / Well-Being — Marked as Risk: Yes
19. Worry or feel like something bad will happen: Yes
20. Tense, stressed out, trouble relaxing: No
21. Feeling down, depressed, irritable, hopeless: Yes
22. Less enjoyment or interest: No
23. Hurt yourself on purpose: Yes
24. Thought, planned or attempted suicide: No
Comments: Referred for behavioral health

Relationships / Sexual Activity — Marked as Risk: Yes
25. Has had sex: Yes
26. Always use condoms: No
27. Methods to prevent pregnancy: Yes
28. Been pregnant or gotten someone pregnant: No
29. Male or female partners: Females and Males
30. Think partner could have STI: Yes
Comments: Sex education, sti screen, gave condoms

Health behaviors / Substance Use 🚩 3 — Marked as Risk: No
31. Used tobacco in last 12 months: Yes
32. Ridden in car with someone who was impaired: No
33. Ever drank alcohol: Yes
34. Ever used marijuana: No
35. Ever taken other drugs: Yes
36. Use alcohol/drugs to relax or fit in: Yes
37. Use alcohol/drugs alone: No
38. Forget things while using alcohol/drugs: Yes
39. Family/friends say to cut down: No
40. In trouble while using alcohol/drugs:
Comments: This was last year

Development / Future Plans — Marked as Risk: No
40. Concerns/questions about body: No
41. Do you like yourself?: 5
42. Future Goals: Going to college
43. Contact Info — Email: Jill@gmail.com; Cell: 5055555555; Friend's #: 5051234567
Comments:

Signature of Reviewer: Jill Smith | Reviewed with student: X | Date: September 9, 2014

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behavioral health topics. As well, the tool alerted BHPs to possible medical concerns not typically addressed in the behavioral health setting. The eSHQ also provided a shared database through which the PCP and BHP were able to review notes and exchange information, even when shared EHRs were not available. This enhanced provider communications and limited repetitive questions and procedures for students.

Population and Panel Management. The eSHQ also strengthened the ability of participating SBHCs to understand and manage the populations they served (see Figure 5). An aggregate report on risk percentages for each question was provided to the SBHCs at the end of the first semester and again at the end of the school year. The reports showed the highest risks and needs of the SBHC users compared to

> Providers can see the results of the survey on the iPad immediately upon completion.

The eSHQ helped PCPs initiate difficult conversations with students about sensitive emotional and behavioral health topics. The tool also alerted BHPs to possible medical concerns not typically addressed in the behavioral health setting.

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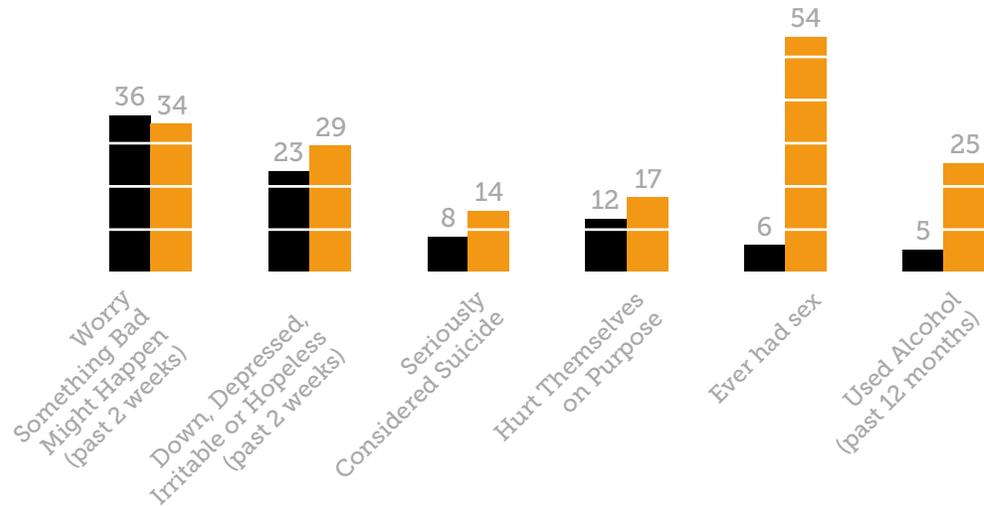
Middle School N=1083; High School N=1850

statewide data. Additionally, SBHC staff and QI coaches used these data to track and respond to change over time. Some sites also used these reports to guide their youth outreach initiatives. Finally, these reports have been shared with school administration and sponsoring organizations to demonstrate high need and encourage the continued support and sponsorship of SBHCs. One example is that the eSHQ alerted staff at one middle school SBHC to an increase in drug use and abuse that was supported by the opinions of their youth advisory group. The advisory group conducted a drug use/abuse awareness campaign, and project staff developed youth-friendly resources regarding marijuana and other drugs of choice.

Challenges. While the participating SBHCs found the eSHQ to be an extremely beneficial tool, it also presented some challenges. Most challenges were due to technology issues such as wireless Internet availability and signal strength, frequent updates to the iPad application, and difficulty in interfacing directly with the SBHC's EHR. Beyond available technical supports, successful implementation of the eSHQ was aided by support from the school and/or sponsoring organization, and the ongoing training of SBHC staff in the administration of the tool.

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CLINICAL QUALITY IMPROVEMENT

Improving the Quality of Care Delivered in SBHCs

School-based health centers that adopt quality improvement principles, methods, and best practice guidelines have an enhanced ability to consistently provide high quality care for children and adolescents.

Background: Quality Improvement

In New Mexico, all 11 of the participating SBHCs were working on quality improvement (QI) projects before the demonstration project began. Seven of the sites said they had a lot of QI experience and the other four said they had some experience. In Colorado, three of the participating SBHCs said they had a lot of QI experience prior to SHCIP, six said they had some, and two had little or no QI experience.

During the demonstration project, QI coaches worked intensively with each participating SBHC QI team. Through in-person coaching, phone calls, email, and webinars, the coaches provided:

• Instruction on QI principles and methods to meet the goals of youth engagement, medical home integration, and improvement in service delivery

• Written best practice guidelines in the five clinical content areas

• Facilitation of learning collaboratives

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- Analysis of MRRs, encounter data (see pages 33–41), YEHS! survey data (see pages 47–53), and other data points to inform QI

- Hardware and IT support for use of the electronic Student Health Questionnaire (eSHQ) and YEHS! survey

- A comprehensive library of materials and resources to promote youth engagement, available electronically to all sites.

SHCIP clinical QI work focused on the adoption of the electronic Student Health Questionnaire (eSHQ; see page 29) as well as improvement in the EPSDT exam and one or more of the other four clinical content areas: pediatric overweight/obesity, depression/anxiety, STI screening, and appropriate immunizations. Quality improvement methodology was also employed to make improvements in the other focus areas of the demonstration project: integration of the medical home model, youth engagement, and data collection.

Process: Adopting Best Practices

The first clinical QI project undertaken by all participating SBHCs focused on the quality of the EPSDT exam or annual adolescent well-child check. Once proficiency was achieved, the SBHCs moved on to one of the other four clinical content areas of their choosing.

Each participating SBHC also conducted MRRs biannually to inform improvement efforts in the quality of their delivery of services and measure success and sustainability of interventions. During the first year of

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Table 3: Medical Record Review Baseline and Final Percentages by Clinical Area

Clinical Area		N	% with Documentation of ALL Critical Elements		Common Areas for Improvement (Critical Elements and Additional Elements)
			Baseline	Final	
EPSDT	All sites worked on	22	48.7	76.5	Calculation of BP%, consistently giving weight category diagnosis, utilization of the eSHQ
POW	Worked on	8	33.3	76.3	Drawing blood for recommended POW lab tests, implementing POW care plans
POW	Did NOT work on	7	12.5	23.4	
STI Screening	Worked on	3	73.3	93.1	HIV testing for sexually active students
STI Screening	Did NOT work on	10	62.0	57.1	
Dep/Anx	Worked on	12	37.5	70.9	Use of depression/anxiety assessment tools (PHQ-9, SCARED), care coordination
Dep/Anx	Did NOT work on	3	44.4	52.1	
Immunization	Worked on	3	63.3	80.4	Assessing HPV vaccination status, providing informational materials, and administering vaccine
Immunization	Did NOT work on	12	43.3	45.2	

Note: All sites worked on the EPSDT exam; cohorts 1 and 2 did medical record reviews on POW, Dep/Anx, and Immunization beginning their second year of participation (14 SBCHs that participated full term and one for a portion of the project, thus N=15); and the same cohorts 1 and 2, minus two middle schools, did medical record reviews on STI Screening (thus N=13).

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participation, SBHCs conducted MRRs using an EPSDT exam MRR template. In subsequent years, they used the Master MRR form that included the recommended elements for each of the clinical content areas, including the EPSDT examination.

To assess quality in each of the five clinical content areas, the project team developed a set of "critical elements" based on a review of quality indicators from the Healthcare Effectiveness Data and Information Set (HEDIS) and CHIPRA, best practice recommendations from the Bright Futures Guidelines, the U.S. Preventive Services Task Force Guide to Clinical Preventive Services, and the CMS EPSDT exam required elements. While the critical elements were used for evaluation purposes and are noted in this report, the EPSDT exam and Master MRR forms included additional

elements that the QI coaches and SBHCs also used to guide their quality improvement work. The MRRs assessed whether all clinical elements were documented in a patient's medical record. Sometimes the lack of documentation was because the activity was not being done consistently; other times the lack of documentation was simply that, a failure on the provider's part to document all completed aspects of a visit.

Clinical quality indicator protocols, MRR templates, and other tools used by SHCIP were based on national best practice guidelines. Participating SBHCs that had not already adopted these best practices adopted them as a first step in their improvement efforts.

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Outcomes: SHCIP Advanced Clinical Quality Improvements

Participating SBHCs achieved significant quality improvements when they received coaching in specific clinical areas. This outcome strongly supports the SHCIP quality improvement coaching model. As well, smaller improvements were also achieved in some of the clinical areas even when the SBHCs did not intentionally focus on them (see Table 3). As detailed below, improvements were achieved by the participating SBHCs in five clinical areas.

> **Participating SBHCs achieved significant quality improvements when they received coaching in specific clinical areas.**

EPSDT Exam. Participating SBHCs improved the quality of EPSDT exams through the adoption of best practices, better identification and documentation of risk factors, and referral for follow-up treatment. Examples include:

- Developed or modified existing EPSDT exam template to include the blood pressure percentile (BP%) field, as well as all necessary components of the EPSDT exam

- Programmed EHR to automatically calculate body mass index (BMI) and BP%

- Administered the eSHQ before the well-child visit and incorporated the results into students' medical records

- Obtained immunization records and the results of vision and hearing screenings from the school nurse to incorporate into the medical record

- Included a weight category diagnosis code on all students, not just students found to be overweight and obese.

Figure 6: eSHQ Completion

59.8% 89.5%
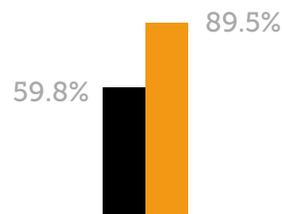
Baseline and **End of Project**
N=22

The SBHCs also increased the quantity of EPSDT exams by proactively identifying and providing students with needed comprehensive preventive services. Examples include:

- Used an EHR tickler system or other tracking system to identify students due for EPSDT exam

> **The SBHCs increased the quantity of EPSDT exams by proactively identifying and providing students with needed comprehensive preventive services.**

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- Added components to sports physicals and reproductive visits to make them more comprehensive and meet the EPSDT exam guidelines

- Marketed EPSDT exams to parents to let them know the well-child visit was more comprehensive and had no associated co-pay as compared to the charge for sports physicals

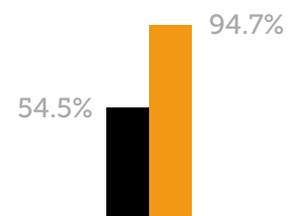- Increased the number of EPSDT exams scheduled and number of students coming into the clinic by sending out letters to students and families about importance of the exams.

Pediatric Overweight/Obesity.
Participating SBHCs improved identification and screening of overweight/obese students, which led to better evaluation, management, and treatment. Examples include:

- Purchased equipment and implemented necessary procedures so blood could be drawn for recommended lab tests

- Obtained recommended lab tests at the time of the initial visit rather than scheduling for a future date

- Identified community resources available to students identified as overweight/obese and incorporated these resources into the EHR so referrals could be tracked

- Ensured follow-up for all students with an elevated BMI and collaborated with the community health worker to provide nutrition/physical activity counseling and classes

- Implemented youth-centered care plans for overweight students within the EHR

- Identified and managed students with pre-hypertension and hypertension by consistently calculating BP%.

Figure 7: BP% Documented

54.5%   94.7%

Baseline and **End of Project**
Includes sites that worked on POW; N=8

Depression/Anxiety. Participating SBHCs improved screening and identification of students at risk for depression and/or anxiety, which led to improved behavioral health and primary care integration, as well as better treatment, referral, and follow up. Examples include:

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- Implemented regular care coordination meetings between the PCP and BHP

- Put systems in place to share notes from patient visit if the BHP and PCP utilized different EHRs

- Adapted clinic workflow to assure that students at risk for depression and anxiety (positive eSHQ screen) were administered standardized assessment tools (e.g., PHQ-9, SCARED) and had a full medical and behavioral health evaluation

- Developed and utilized a Behavioral Health Registry

- Utilized telepsychiatry to provide psychiatric medication to students as appropriate.

STI Screening. Participating SBHCs improved the screening and treatment of STIs for sexually active students by standardizing and developing new and innovative procedures. Examples include:

- Developed an STI template in the EHR to ensure all elements were addressed and documented

- Integrated STI screening with EPSDT exams to increase screening rates, especially among males

- Changed practices around partner treatment so that an STI-positive student could give antibiotics to a partner if the partner did not want to come into the SBHC

- Changed practice to consistently offer HIV testing.

Participating SBHCs improved screening and identification of students at risk for depression and/or anxiety, which led to improved behavioral health and primary care integration, including better treatment, referral, and follow up.

Figure 8: Depression/Anxiety Assessment

79.6%

54.5%
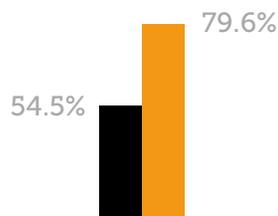
Baseline and **End of Project**

Includes sites that worked on
Dep/Anx; N=12

Figure 9: Chlamydia/ Gonorrhea Screening

93.1%

73.3%
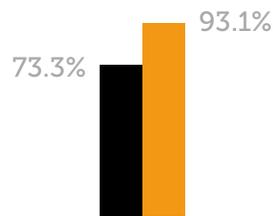
Baseline and **End of Project**

Includes sites that worked on
STI screening; N=3

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Figure 10: HPV Vaccination

76.7%　93.5%
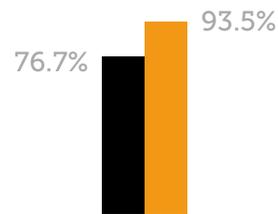
Baseline and **End of Project**

Includes sites that worked on
Immunization; N=3

Appropriate Immunizations.
Participating SBHCs increased the
percentage of students up-to-date on
adolescent immunizations by improv-
ing the tracking and delivery of vac-
cines. Examples include:

- Implemented a pre-visit process to
  assess immunization status

- Ensured that all students without
  recommended vaccines received
  youth-friendly handouts (with a
  specific focus on the HPV vaccine)

- Partnered with schools to obtain
  school immunization records and
  host vaccine clinics

- Implemented processes to assure
  documentation of immunization
  status in EHR.

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Clinical Quality Improvement — Key Lessons Learned and Recommendations Include:

Staff time and clinic resources must be devoted to quality improvement efforts in order to ensure meaningful and successful change, recognizing that institutionalizing meaningful change takes time.

QI coaches can accelerate successful quality improvement efforts by providing technical assistance, expertise, accountability, and opportunities for group reflection.

Measurement strategies and data are the key drivers of successful quality improvement.

Administrative, financial, and operations barriers must be assessed and addressed in order to successfully adopt best practice guidelines.

Allowing the SBHC QI team to select the clinical focus area(s) assures buy-in and contributes to success.

Policy: National leaders in healthcare quality improvement should develop quality measures for the screening, diagnosis, and treatment of common adolescent mental health conditions like depression and anxiety.

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AN SBHC Tool:

The Youth Engagement with Health Services Survey

Up to now patient engagement tools have focused primarily on adult patients or those who are chronically ill. The Youth Engagement with Health Services (YEHS!) survey focuses explicitly on the engagement of adolescents.

Background: YEHS! Survey

To advance youth engagement and clinical quality, SHCIP developed a survey designed to measure levels of youths' engagement with their health care and the quality of their health care experiences. Research shows that patients who are more engaged with their health care are more satisfied with the care they receive and enjoy better outcomes.[40, 41, 42, 43] Thus far, however, patient engagement tools have focused primarily on adult patients or the chronically ill. Development of the YEHS! survey conceived of an engagement appropriate for adolescents with and without special health care needs, an engagement comprised of two facets: health access literacy (the knowledge necessary to access care) and health self-efficacy (the ability to interact effectively with the health care system and providers to ensure one's health care needs are met).

Developed with input from evaluators, youth engagement specialists, quality improvement coaches, youth, and a national advisory council, the YEHS! survey was administered in all participating SBHCs. To encourage participation, sites provided respondents with a $5 gift card for completing the survey. Most sites administered the survey in their school-based health center, while others used health fairs or similar events to attract respondents. Once data were collected, sites received the results and QI coaches helped to identify strengths and opportunities for improvement.

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Table 4. Topics Included in the YEHS! Survey

Health Care Utilization	Receipt of care at SBHC and other sources
	Receipt of preventive care during the past 12 months
	Utilization of emergency room services
Receipt of Needs-Based Antcipatory Guidance	Receipt of recommended anticipatory guidance during the past 12 months
	Receipt of guidance that met the adolescent's needs
	Unmet needs for antcipatory guidance
Youth Health Engagement	Health Access Literacy: knowledge of how to access care
	Health Self-Efficacy: ability to interact with health care system and providers
Experience of Care and Satisfaction with Services	Overall satisfaction with services received at SBHC and elsewhere
	Experiences with health care providers (how often providers listen to them, explain things to them, respect what they have to say, and spend enough time wtih them)
Quality Improvement	SBHCs follow established state standards and routinely engage in quality improvement activities.
Youth-SBHC Involvement	SBHC provides a youth-friendly environment in which youth are provided with information and allowed to make decisions that affect their own health
	SBHC provides opportunities for youth to be involved in outreach and advocacy
	Youth involved in decision-making at SBHC

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Youth health engagement is comprised of two facets of engagement: health access literacy (the knowledge necessary to access care) and health self-efficacy (the ability to interact effectively with the health care system and providers to ensure one's health care needs are met).

Findings: Benefits and Challenges

The development and implementation of the instrument presented many benefits, including:

Information on Needed Anticipatory Guidance. The survey focuses on the health care needs of the adolescent, as well as services received (see Table 4). Previous adolescent health care surveys have asked about the receipt of preventive care services, including anticipatory guidance, but have mainly looked at whether guidance was received. While all of the guidance recommended in Bright Futures should be covered at some point during adolescence, the most important thing is ensuring adolescents are receiving guidance that meets their specific needs. The YEHS! survey includes questions about four domains of the recommended anticipatory guidance for adolescents (see Figure 11) and allows respondents to indicate whether their needs for guidance were met.

While the YEHS! survey was developed to make health care data available to providers to support their quality improvement efforts, some providers reported the YEHS! survey was also a helpful tool for engaging young people. For example, after taking the survey some young people would ask about anticipatory guidance topics covered in the survey, things they might otherwise not have thought to bring up with their providers.

Individual and Collective Youth Health Engagement. Measures to identify levels of individual student engagement are part of the YEHS! survey. These include knowing where to get health care when the SBHC is closed, knowledge of confidential services, knowing how to use health insurance to obtain care and medication, discussing treatment options with providers, and having a safe and trusting relationship with at least one health care provider. The survey also has a scale to measure the level of engagement of adolescents at

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Figure 11: Anticipatory Guidance Domains and Items Included in the YEHS! Survey

Physical Growth & Development
- Oral care
- Weight
- Diet
- Exercise
- Body image

Emotional Well-Being
- Moods
- Suicide
- Stress
- Sleep
- Sexual orientation/ gender identity

Social & Academic Competence
- Friends
- Family
- Grades
- Future plans

Sexual Health Risk Reduction
- STIs
- Condoms
- Abstinence
- Birth control
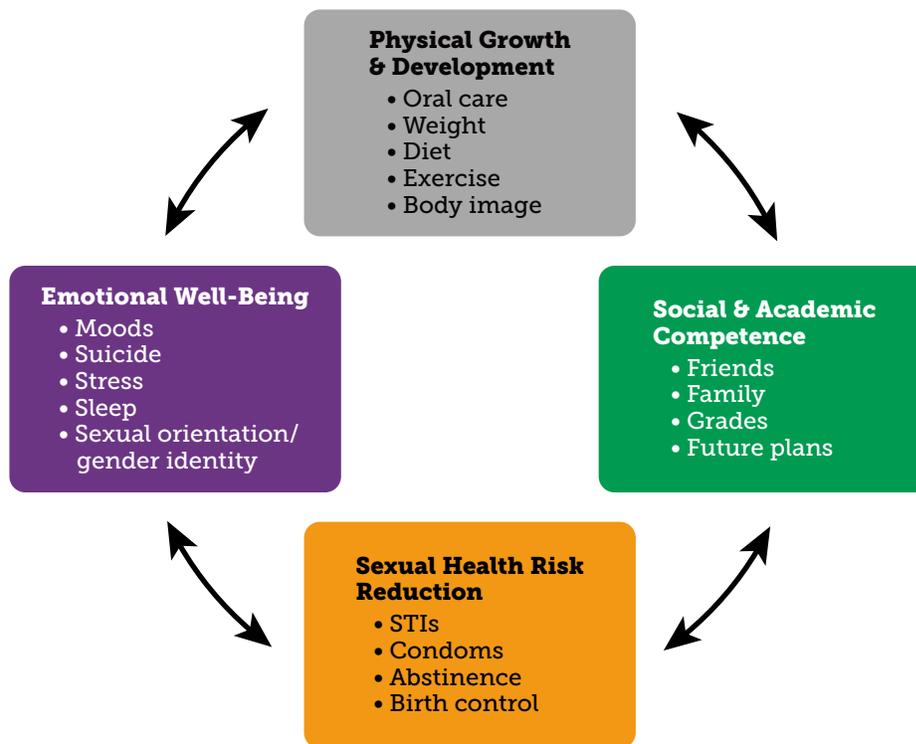
the collective level (e.g., involvement at the SBHC). These include determining whether the SBHC was perceived to be welcoming to youth, provided youth-friendly information, and allowed youth to make decisions about their own health care, and whether youth had a voice in the operation of the SBHC.

iPad Application. Having an electronic version of the survey improves the clarity of responses (e.g., no illegible writing) and eases many of the logistical issues of data collection. As well, students who used the app at participating SBHCs enjoyed taking the assessment on iPads.

Useful, User-friendly Reports. Participating SBHCs received tailored reports with information on utilization patterns, satisfaction levels, engagement behaviors, and needs for anticipatory guidance of their patient populations. Initial reports developed for the SBHCs proved to be long and cumbersome, making it difficult for people to digest information and use the data in meaningful ways. Collaborations between the participating SBHCs, QI

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coaches, and evaluators led to the development of shorter and more reader-friendly reports. SBHC staff noted the data were useful in many ways, including presentations to school administrators, reports to sponsoring medical organizations, and for grant applications.

Challenges. While participating SBHCs administered the survey once every school year during the demonstration project, the timing of data collection and method of recruitment influenced the sample, potentially affecting the comparability of results. Sites that administered the survey at different times from year to year and used different methods to recruit respondents (i.e., recruiting within the clinic one year and at a health fair the next) had less comparable results. In addition, because the survey was not provider- or clinic-specific, but rather addressed all health care experiences, it was sometimes hard for SBHC providers and staff to apply survey results to their practice.

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Youth Engagement

Actively Engaging Adolescents in their own Health Care

School-based health centers are well positioned to provide youth-centered care that engages young people in their health and health care, increasing health literacy and improving the quality of services provided.

Background: Youth Engagement

Youth engagement is one component of an evidence-based public health strategy. It is rooted in positive youth development, which focuses on increasing protective factors and decreasing risk factors. SBHCs support young people to become engaged in their health and health care by increasing their knowledge of accessing health care (literacy) and ability to interact with the health care system and their providers to get the care they need (self-efficacy). By engaging youth in their health care, SBHCs support young people as they transition into being active health care consumers as adults.

Given their close proximity to youth and focus on prevention and health promotion, SBHCs are well positioned to provide youth-centered care that engages youth in their health and health care. SBHCs have the opportunity to develop working relationships with their students by collaborating with them in various forms of outreach and advocacy activities and involving them in advisory committees or partnerships that allow for feedback to inform SBHC services. These collaborations, in addition to their focus on the needs of youth and promoting healthy behaviors, mean that SBHCs are able to create opportunities to enhance health literacy and health self-efficacy, leading to better experiences with health care and adolescents who are ready to transition into active, engaged adult consumers of health care.

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Development and Engagement

Positive Youth Development is an approach that focuses on building skills, opportunities, and supportive relationships while focusing on strengths, engaging and partnering with youth, and promoting equity and social justice.

Youth Engagement is the intentional, meaningful, and sustained involvement of young people in the programs, practices, and policies that seek to affect them. In partnership with adults, engaged youth develop the capacity and confidence to participate as productive partners in the decisions affecting them individually and collectively.

Youth Health Engagement provides youth with the knowledge and skills necessary to access health care, interact effectively with the health care system, and act as their own health advocate.

Findings: Engaged Youth Experience Quality Care

Findings from the YEHS! survey showed that students who said they received most of their care at SBHCs reported higher levels of engagement, specifically related to health self-efficacy (see Figure 12). Further, youth who were more engaged (those who scored higher on the health access literacy and health self-efficacy scales) reported better experiences with health care, received more anticipatory guidance that met their needs, and reported fewer unmet needs for anticipatory guidance (see Figure 13).

Throughout this project, coaches supported participating SBHCs to enhance youth engagement in their clinics, with a specific focus on youth health literacy and health self-efficacy.

Outcomes: SHCIP Strengthened Youth Engagement

As detailed below, the participating SBHCs used a number of tools and processes to strengthen their provision of youth-centered care and to more fully engage adolescents in their health and health care.

Fostered Youth Engagement. QI coaches worked with participating SBHCs to determine the most effective ways to engage young people in the centers. One useful mechanism was the YEHS! survey (see page 42), which created the opportunity for adolescents to voice responses to their health care experiences. Their input allowed SBHCs to identify areas of strength and areas for improvement in their approach to engaging youth.

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Figure 12: Usual SBHC Users are More Engaged With Their Health Care

Percentage of **Usual Users** vs. **Non-usual Users**

Somewhat or Strongly Agree that:

They have a safe relationship with a provider
83
73

They make a list of questions before an appointment
60
50

They make their own medical appointments
70
57

0   25   50   75   100
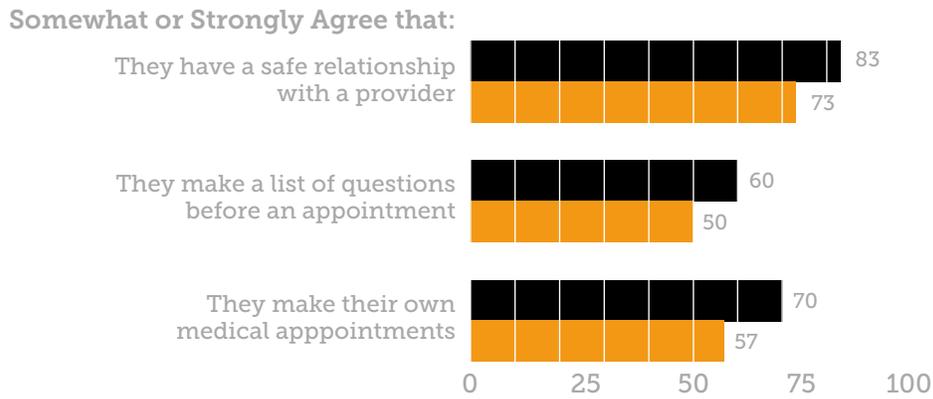
Source: YEHS! Survey, 2013-14   High School respondents, N=550

Figure 13: Engaged Youth Experience Better Care

Number of Unmet Needs for Guidance

Experience of Care

5
4
3
2
1
0

1   2   3   4
Youth Health Engagement Score
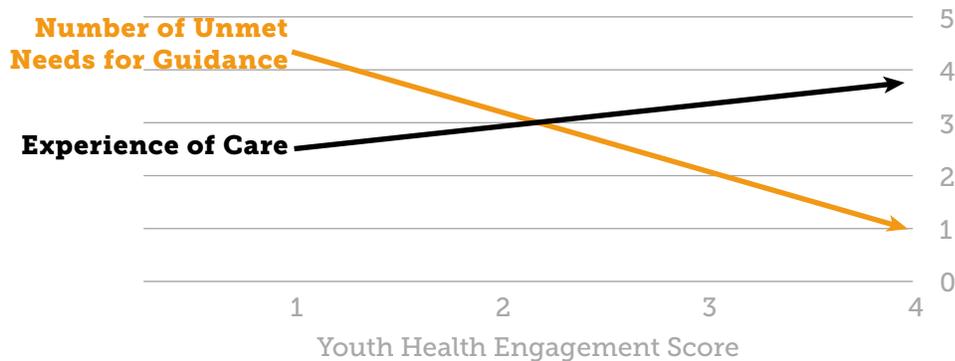
Source: YEHS! Survey, 2013-14 High School respondents, N=550

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Figure 14: Usual SBHC Users Communicate Better With Providers

Percentage of **Usual Users** vs. **Non-usual Users**

Providers Usually or Always:

Listen to what they have to say
- 87
- 79

Explain things in a way they can understand
- 82
- 73

0   25   50   75   100
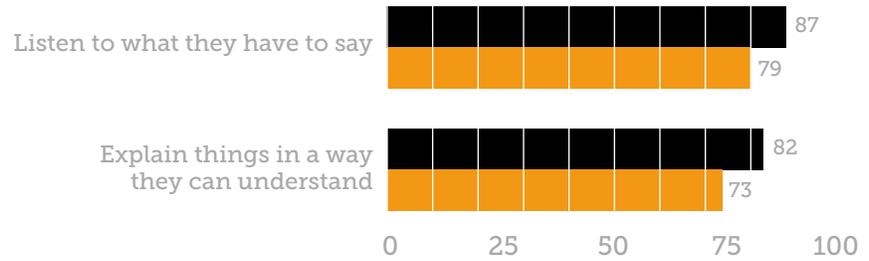
Source: YEHS! Survey, 2013-14   High School respondents, N=550

Many of the participating SBHCs also established a youth advisory group (YAG) or youth school health advisory council (SHAC). These advisory groups brought together young people, and at least one adult sponsor from the SBHC, to identify health needs of importance to them and their school community. Through group discussions, youth and SBHCs worked together to identify ways to strengthen SBHC services, spread awareness, and share health promotion messages. Examples include:

- Advocated for the local mayor to visit the SBHC and issue a proclamation to recognize School Health Day

- Planned and promoted school-wide health fairs with community partner participation. Youth created and hung posters around the school and took shifts working the SBHC booth during the fair

- Identified different health topics for each month of the school year and organized outreach activities related to the topic at a booth during lunch

- Developed materials, such as a healthy recipe cookbook, to give to students during Nutrition Month

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- Convened focus groups comprised of some SBHC users and non-SBHC users to understand the types of messages youth wanted to hear related to weight management and healthy lifestyles. Based on the results, the SBHC created a blog to share healthy messages and started a walking group

- Developed and administered a campus-wide student survey to gather information about the health concerns the student body wanted to address, sharing the results with the school principal and working to address the concerns

- Produced a video describing available SBHC services, which was shown during morning announcements

- Gathered student input for development of a new SBHC, and engaged students in development of its new webpage.

Provided Safe, Youth-friendly Environment. Maintaining a physical environment that feels safe and comfortable, and is geared toward youth, is essential to providing effective care for youth. Participating SBHCs established a youth-friendly atmosphere by employing a variety of strategies. Examples include:

- Hung youth-relevant posters with health messages and informational materials around the clinic

- Partitioned the waiting area so youth could have privacy while completing paperwork and assessments

- Had lounge-style furniture such as bean bags and couches

- Made condoms available in the bathroom so youth could privately take them

- Created a safe-zone environment for LGBTQ youth by hanging posters and implementing other welcoming strategies

- Established student-only hours in which community members and adults were not in the clinic for SBHCs that served the greater community

- Kept current with technology by having students complete screening tools on an iPad

- Used youth-friendly and developmentally-appropriate language when speaking with students (see Figure 14).

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The depression and anxiety assessment tools and process aided students' ability to identify, verbalize, and understand their symptoms so they were able to activate their coping skills or seek care when needed.

Created Opportunities to Increase Health Literacy and Health Self-efficacy. Several examples emerged from the demonstration project of participating SBHCs helping youth develop the knowledge and skills to be partners in their health care. For instance, when having students complete the depression and anxiety assessment tools (e.g., PHQ-9, SCARED), SBHC personnel reviewed the assessment(s) with students. Providers reported the tools and process aided students' ability to identify, verbalize, and understand their symptoms so they were able to activate their coping skills or seek care when needed. Some students also requested they be able to retake the assessments so they could monitor their symptoms and track their progress. Additionally,

based on identified needs for the YEHS! survey, project staff created resources to help adolescents develop health literacy and health self-efficacy. Examples include:

- Where to go for care and explanations of the differences between primary, urgent, and emergency care

- Health insurance basics, including understanding the insurance card

- Questions to ask a provider during a visit

- Navigating the health care system

- Privacy versus confidentiality.

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Youth Engagement – Key Lessons Learned and Recommendations Include:

Create an easily accessible warehouse for youth-friendly resources covering various health topics relevant to developmental stages and the needs of adolescents, especially related to health literacy.

Identify dedicated staff to lead youth engagement efforts and seek opportunities for partnerships (i.e., with community organizations, school staff, student groups) to support youth engagement work.

Integrate youth engagement into clinical practice to grow students' health literacy and self-efficacy and to improve the quality of care received by adolescents.

Policy: State agencies responsible for SBHCs should ensure that evaluations of adolescent health care quality include feedback directly from adolescents about their health care experiences. Survey instruments should be tailored specifically for youth, relevant, and youth-friendly. Results should be used to guide clinical care.

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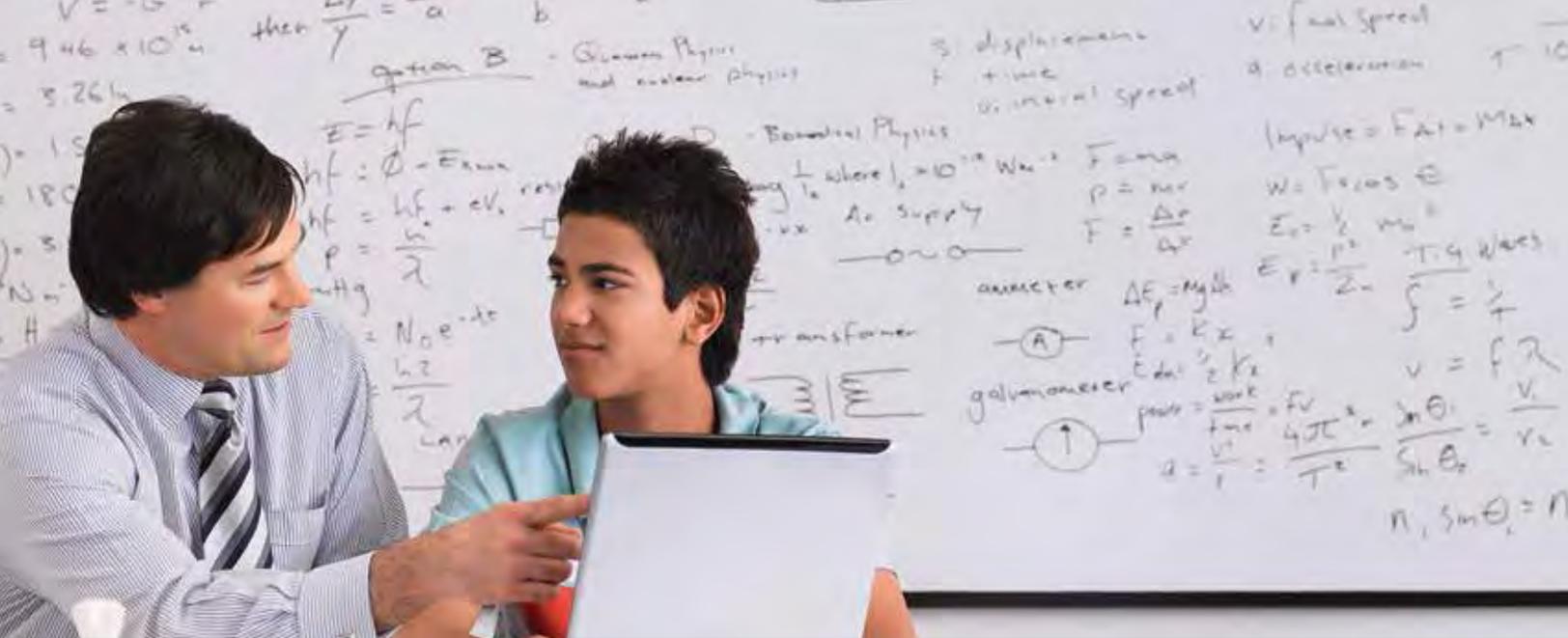
DATA COLLECTION

Using Service Data for Practice and Policy Improvement

School-based health centers, state administrators, and other stakeholders have a better understanding of how to collect comprehensive SBHC service data and use it to improve practice and policy.

Background: SHCIP Data Collection

SHCIP used new processes to collect, analyze, and report service data. These data, often called visit or encounter data, are a resource for quality improvement because they are collected in the normal course of business and typically do not require extra data collection steps. The goal of the demonstration project was to make service data useful, particularly for quality improvement, telling the story of SBHCs and how they fit in to the larger health care system.

The original evaluation plan included two sources of data to assess services provided at participating SBHCs: state-level Medicaid claims and a custom data warehouse of SBHC encounter data

(see Figure 15, page 57). Systems for collecting, managing, and reporting SBHC service data were created and refined in order to maximize the use of data collected during the course of giving care to accurately describe the role SBHCs play.

Findings: Data Limitations and Challenges

The initial examinations of Medicaid claims data and encounter data for participating SBHCs confirmed the data had the potential to be enormously useful from both practice and policy perspectives. At the same time, it became clear that more complete data would be more useful. To improve service data completeness and quality, resources and assistance were provided to participating SBHCs to:

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- Ensure that all primary care, behavioral health, and oral health service data were included in the encounter database by establishing data-sharing agreements with all SBHC partners

- Ensure the coding was correct for each service, including location coding that distinguishes Medicaid claims associated with services provided at SBHCs compared to those provided by the SBHC's sponsoring medical provider

- Improve the consistent collection of data fields (e.g., ICD-9 and CPT codes, race/ethnicity data, payer source)

- Fully understand and maximize the use of EHR reports, queries, and other functions.

Additionally, the project team worked to help participating SBHCs fully understand the limitations of the data. Data limitations include:

- Medicaid claims data only includes paid claims for Medicaid-eligible patients

- Behavioral health services provided at SBHCs may not be captured in Medicaid claims data, as was the case in Colorado where these services were typically billed by the behavioral health organizations

- Some SBHCs do not code or bill for reproductive health services and other confidential services due to concerns that parents might receive an explanation of benefits (EOB).

Outcomes: SHCIP Improved Data Quality

As shown below, a number of steps were taken throughout the demonstration project to improve the quality of service data both in the SBHC encounter data warehouse and in Medicaid claims.

Improved Coding Capabilities. In both New Mexico and Colorado, several of the participating SBHCs were relatively new to coding and billing for Medicaid-covered services. SHCIP's QI coaches provided SBHC staff with resources to improve the consistency and completeness of coding, addressing each site's questions and concerns. Coaches developed quick-reference coding guides, hosted coding webinars, and helped the SBHCs budget for additional coding assistance. Several SBHCs also worked with their EHR vendors to develop new templates to facilitate consistent documentation and reporting of services. Utilizing project resources to support better coding was intended to improve the quality of data in the Medicaid claims database and encounter data warehouse, and to help SBHCs maximize billing revenues for the services they provided.

> The encounter database, which includes all patients, visits, and codes, provides a comprehensive data picture for quality improvement.

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State-level Medicaid Insurance Claims Data

Medicaid claims data are an important source of information about billable SBHC services delivered to users covered by Medicaid. These claims show when and what billable services were accessed in SBHCs compared to those provided through community primary care or by specialists. During the demonstration project, both states worked with their Medicaid programs to collect and analyze SBHC Medicaid claims data.

State-specific Databases of SBHC Encounters

In addition to Medicaid claims data, New Mexico has an "encounter database." Supported with funding from the state's Department of Health, the database contains information about all services provided by New Mexico SBHCs. Each center electronically submits data on each service provided, regardless of payer or whether the individual services are billable. Thus, the database contains information for users who are on Medicaid, privately insured, and uninsured. Since the encounter database includes all patients, visits, and codes, it provides a comprehensive data picture for both quality improvement and evaluation. During the demonstration project, the 11 participating Colorado SBHCs followed suit, collecting and reporting encounter data using a process similar to that used in New Mexico.

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Figure 15: Important Distinctions between Claims and Encounters

Medicaid (Claims)
- From billing EHR
- Only billable
- Only Medicaid
- CPT codes
- Only paid claims

Warehouse (Encounters)
- From charting EHR
- All visits
- All diagnosis codes
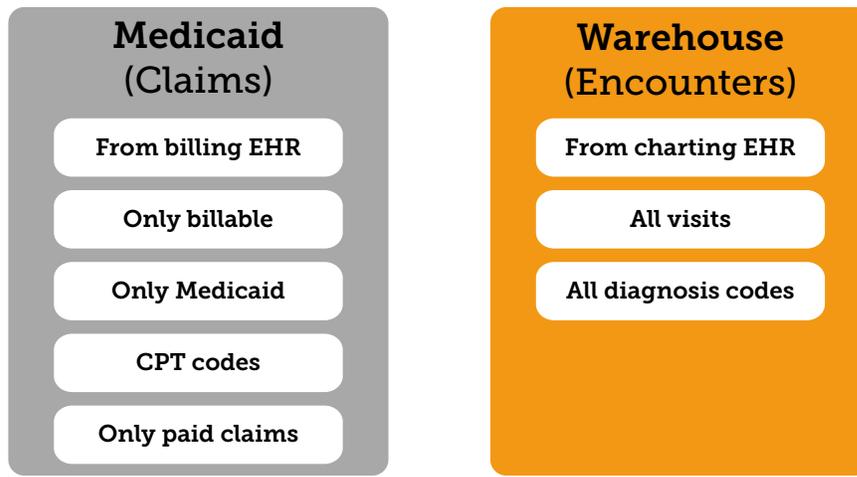
Improved Encounter Data Warehouse. SHCIP utilized a quality assurance process to refine the required data set and the data collection process. Ultimately, this process allowed the project team to select a minimum data set that was granular enough to construct, deconstruct, and compare data across SBHCs, patients, and visits (diagnoses and procedure codes), and over time.

In both states, QI coaches presented encounter data reports to participating SBHCs and used the reports to identify areas for improvement in data and service quality. The encounter data collection and reporting process influenced significant program, policy, and practice changes. Examples include:

- In Colorado, steps were taken to ensure that data on services delivered at SBHCs by outside organizations, such as behavioral health organizations, were exported to the database and included in reports with primary care data

- SBHCs adopted the use of standardized codes (e.g., SBIRT (Screening, Brief Intervention, and Referral to Treatment), depression screen) to improve billing and to improve reporting of Healthcare Effectiveness Data and Information Set (HEDIS) and CHIPRA measures

- QI coaches arranged trainings for SBHCs on the advanced use of EHRs

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- Some SBHCs created a secure system so that confidential visits could be captured in the EHR rather than in a separate paper chart

- Several SBHCs utilized project and state funds to create EHR templates that allowed them to automatically query and report encounter data

- Several SBHCs incorporated care plans and patient registries into their EHRs so they could automatically generate, count, and analyze the data.

Improved Medicaid Claims Data. The project team partnered with state SBHC programs, Medicaid administrators, and managed care/accountable care organizations in both states to begin to address the challenges encountered with SBHC Medicaid claims data, particularly in regard to location coding.

Colorado Medicaid required FQHCs to obtain separate billing identification numbers for each of their clinic sites by the end of 2013. This made it possible to differentiate Medicaid services provided by SBHCs that are sponsored by FQHCs. As well, as of July 2014, Colorado Medicaid required all SBHCs that do not have unique provider identification numbers to use the place-of-service code for "school" (03) on their claims. This enables the Medicaid program to identify claims filed by SBHCs. Stakeholders in Colorado are currently determining a plan for analyzing these

data to describe and inform SBHC services in the state.

In New Mexico, the Office for School and Adolescent Health (OSAH) hired a systems analyst to follow the billing process from FQHC and non-FQHC sponsored sites, comparing claims data with encounter data. The findings were presented to, and discussed with MCOs and other SBHC stakeholders. The conversations focused on the challenges in ensuring accurate coding for SBHC locations, including: differing interpretations of location; separate clinical and billing functions within a sponsoring agency; and changes to forms, codes, and billing procedures. Stakeholders are working together to develop and implement new procedures to ensure accurate location coding, and to reach agreement from all participating MCOs on ways to successfully track and link claims to SBHCs.

Established New Data Analytic and Reporting Methods. The demonstration project provided resources to develop site-specific and aggregate reports of encounter data that informed practice and policy. Most useful were data that could be examined and analyzed over time, taking person, visit, and diagnosis levels into consideration. The project evaluation plan was adapted to account for data limitations primarily by noting context and exercising caution in drawing conclusions. This helped participating SBHCs, as well as other stakeholders,

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Figure 16: About 20% of Students Make Most of the Visits, More **Behavioral Health** than **Primary Care**

Visits

wider bars represent greater volume of visits

Students

1,441   91

601   178

1,024

567   607

1,904

734   4,927

2,269

1,350

1 visit ——— # of visits per student

2 visits

3–4 visits

5+ visits
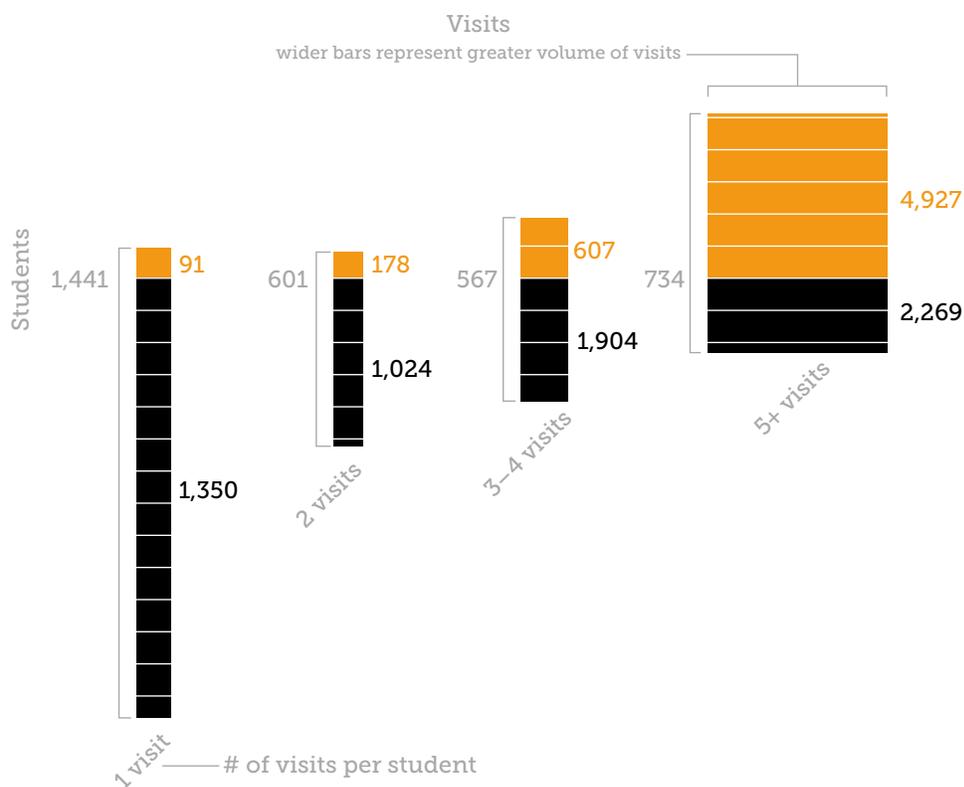
to understand the differences, and the implications of those differences, when assessing their sites, drawing conclusions, and making decisions.

Colorado expanded both collection and use of its SBHC encounter data, and New Mexico expanded use of its already robust dataset. In both states it became clear how valuable this data resource is in understanding and demonstrating both the delivery and utilization of SBHC services. For example, at the

participating New Mexico SBHCs, a small percentage of students accounted for a large percentage of visits, mostly for behavioral health (see Figure 16).

Committed to Continuous Improvement. Following the conclusion of the grant period, both states will continue their efforts to improve the quality of SBHC service data and to use the data to inform practice and policy (see Table 5).

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Table 5. Continuing Data
Improvement Efforts Post-grant

Colorado	New Mexico
Colorado's Accountable Care Collaborative (ACC) program utilizes Medicaid claims data to measure and incentivize practices' performance. The demonstration project's efforts to identify Medicaid services provided at SBHCs is helping to ensure that SBHCs can participate in and benefit from the ACC program. Colorado also plans to provide QI to SBHCs that want to access and utilize their claims data to improve on the ACC program's targeted metrics. Colorado Medicaid, CDPHE, and the Colorado Association for School-Based Health Care are partnering to identify evaluation questions and develop an analysis plan for SBHC Medicaid data now that the new place-of-service code is required.	New Mexico's Centennial Care Managed Care Organizations (MCOs) are collecting and reporting Medicaid claims data quarterly to the Human Services Department to demonstrate their ability to serve the Medicaid population. Efforts to identify Medicaid services provided at SBHCs will further establish the vital role SBHCs play in the health care delivery system and the ways in which they can help the MCOs meet their contractual requirements. The Office of School and Adolescent Health at the New Mexico Department of Health will continue to work with partners, including the New Mexico Alliance for SBHCs, to utilize SBHC service data reports to advocate for expanded funding for SBHCs statewide. Improvements in the quality of these data will serve to better tell the SBHC story and strengthen the case for expanded state funding.

Improvements in the quality of these data will serve to better tell the story of school-based health centers and strengthen the case for expanded state funding.

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Data Collection — Key Lessons Learned and Recommendations Include:

Collection and use of comprehensive data helps to identify problems, suggest ways to continuously improve practice and policies, and can help to more fully integrate SBHCs in the health care system.

Data collection and reporting can help to assure SBHCs that their contributions are "counted" and recognized by medical sponsors, Medicaid, and accountable care organizations.

SBHCs can maximize their billing reimbursements, and benefit from financial incentives for meeting Medicaid performance indicators, as measured by claims data.

Data can help SBHCs tell the story of the services they provide and the role they play in delivering health care to children and youth, particularly those who are low-income, underserved, or hard-to-reach.

SBHCs need to strengthen and refine their data collection capabilities as it will be required by the ACA and regional health information exchanges.

Policy: Federal and state Medicaid authorities should adopt a unique site designation code for SBHCs to accurately reflect SBHC encounters in Medicaid claims data.

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CONCLUSION

The Colorado and New Mexico School-based Health Center Improvement Project (SHCIP) provides valuable lessons to inform state and national efforts to strengthen the health and health care of adolescents, as well as the health system.

A continuous, dedicated focus on adolescents is essential. This population is typically the least likely to have access to health care. They have the lowest rates of primary care use and tend not to receive preventive health care services. Yet, this is the very time when many health risks begin to emerge (e.g., substance abuse, unprotected sex, inadequate physical activity, poor nutrition), and when patterns of behavior are developed that can affect lifelong health. Actively engaging youth in their health and health care, and helping them to gain the knowledge and skills necessary to promote healthy habits is critical as they begin to transition into adulthood.

There is ample evidence and increasing recognition that school-based health centers are well-positioned to meet this need. SHCIP findings suggest that SBHCs are already acting as the primary care medical provider for many young people. More than 70% of youth who completed the demonstration project's Youth Engagement with Health Services (YEHS!) survey (2012-2013) reported their SBHC as their usual source of care.

To build on this, it is important to continue to develop, make available, and support the use of tools and practices that are specifically tailored to youth, and to more fully integrate school-based health centers into the health care system. Such

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tools developed through this demonstration project include: the PCMH Core Elements Tool, a simplified, yet comprehensive assessment tool designed to help SBHCs systematically integrate the medical home approach into their practices; the YEHS! survey, a youth-focused survey to help measure levels of youth engagement with health care and the quality of students' health care experiences; and the electronic Student Health Questionnaire (eSHQ), a comprehensive risk screening tool administered on an iPad. As well, SHCIP found that participating SBHCs achieved significant quality improvements when they received coaching in specific clinical areas; this strongly supports the value of SBHCs utilizing coaching to achieve quality improvements.

> **We encourage state and national partners and policy leaders to put these findings to use so that we can better meet the health needs of our young people.**

SHCIP findings also underscored areas still to be addressed. Some of the toughest challenges SBHCs face – those that participated in SHCIP, as well as others across the country – are tied to funding limitations and differing school regulations. For example, even as studies indicate that reproductive health care is a common reason adolescents seek care at SBHCs, nearly half of all SBHCs are prohibited from dispensing contraception.

Similarly, limited funding makes it difficult for SBHCs to support full-time staffing, provide extended hours, or to adopt innovative and effective tools, processes, and practices, such as those identified through this demonstration project.

Given the considerable resources and efforts that fueled this demonstration project, and the clear conclusion that school-based health centers offer a significant opportunity to change course in the struggle to provide health care to adolescents, we encourage state and national partners and policy leaders to put these findings to use so that we can better meet the health needs of our young people.

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SHCIP Policy and Practice Recommendations

Based on the findings, lessons learned and barriers discovered from the School-based Health Center Improvement Project (SHCIP), we recognized the need for new policy directions and changes to fully implement and sustain gains. Despite the successes documented in this report, there were a number of barriers that prevented delivery of optimal care. These included inadequate financial resources for SBHCs to fulfill all PCMH requirements, need for policies and support to ensure that adolescents maintain continuous insurance coverage, need for new policies around provision of explanation of benefits for confidential services for adolescents, exclusion or lack of recognition of SBHCs in programs and policies that provide enhanced reimbursement or additional funding, and others. In addition, there is a need for mental health quality measures directed at adolescent care to assure early identification and treatment of common conditions.

The following policy recommendations are intended to address some of these barriers and ensure widespread benefit from the learnings of this demonstration project. Together, they set forth a new overall direction to enable best practices at SBHCs. We begin with an overall recommendation to CMS to spread innovations developed from the demonstration projects broadly so that this investment can have maximum yield. Other recommendations address barriers related to funding enhancements, regulation and requirement changes, and practice improvements.

CMS should develop a program to spread the innovations and learnings from our project to other SBHCs and from other CHIPRA demonstration projects to the field at large so that others might benefit from this effort.

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Funding Enhancements

Federal, state, and local governments should increase funding to SBHCs to support their successful transition as medical homes, including:

- Ongoing evidence-based, data-driven quality improvement in SBHCs

- Implementation and integration of clinical registries and risk screening results in EHRs in alignment with meaningful use requirements.

Federal and state health finance authorities should establish an encounter rate structure for SBHCs similar to that for FQHCs.

Regulations

Public and commercial insurers and health plans should suppress EOBs for confidential services provided to minors and adults covered as dependents to enable pediatric practices to bill for these services.

Federal and state Medicaid authorities should adopt a unique site designation code for SBHCs to accurately reflect SBHC encounters in Medicaid claims data.

Federal and state Medicaid authorities should: change Medicaid enrollment policies so that adolescents 16 and older who are eligible for Medicaid can sign up and maintain coverage independent of their parents; provide more supports for adolescents (who are uniquely vulnerable) to help them maintain continuous coverage; and ensure smooth transition to adult insurance programs for which they are eligible.

Practice Improvement

National and state PCMH authorities should include SBHCs in respective recognition programs and enhanced payment initiatives.

State health finance authorities should recognize SBHCs as primary care providers able to participate in policy reforms, including accountable care organizations (ACOs), payment reforms, and PCMH.

State agencies responsible for SBHCs should ensure that evaluations of adolescent health care quality include feedback directly from adolescents about their health care experiences. Survey instruments should be tailored specifically for youth, relevant, and youth-friendly. Results should be used to guide clinical care.

National leaders in healthcare quality improvement should develop quality measures for the screening, diagnosis, and treatment of common adolescent mental health conditions like depression and anxiety.

Federal and state public investment should be made to expand mental health provider infrastructure so that there are sufficient numbers of mental health professionals to adequately serve adolescents.

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ENDNOTES

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