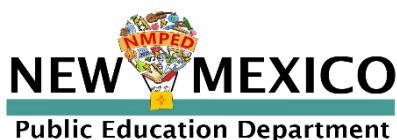


School-Based Health Centers and Education Outcomes

A New Mexico Case Study

School Years 2014-2019



Executive Summary

The physical and mental health of students and their academic achievement are closely connected. School-Based Health Centers (SBHCs) promote student health by providing physical and behavioral health care to students at/near school, which helps students miss less class time and removes transportation barriers. Additionally, SBHCs work alongside school health nurses, counselors, and social workers to provide wrap-around, coordinated care for high-need students.^{1,2}

Case studies show that SBHCs also contribute to improved academic outcomes among students who use their services.³ However, there are limited statewide studies providing empirical evidence of students' utilization of SBHCs on their academic outcomes. The New Mexico Department of Health – Office of School and Adolescent Health (OSAH) and the New Mexico Public Education Department (PED) have been working to fill this knowledge gap by partnering with Apex Evaluation. Together, they have conducted a statewide analysis of utilization data of OSAH-funded SBHCs and PED academic data from school years 2014 through 2019. This report summarizes the results.

Key Findings for School Years 2014 to 2019



OSAH-funded SBHCs are reaching higher-need students in under-resourced and/or rural communities. A higher proportion of students eligible for free/reduced lunch and/or receiving special education services use OSAH-funded SBHCs compared to the overall New Mexico public school population. Also, 75% of OSAH-funded SBHCs were in town or rural regions and 89% of OSAH-funded SBHCs were in counties rated medium-high to high on the Social Vulnerability Index (SVI).



A high school student who uses an OSAH-funded SBHC has better odds of graduating on time. Students who used an OSAH-funded SBHC for any reason in high school were **eight percentage points (83% compared to 75%) more likely to graduate on time** compared to their peers that did not use OSAH-funded SBHCs. Results from *predictive* tests, called regression analysis, found that high school students that used OSAH-funded SBHCs more than once were **3 times more likely to graduate** on time compared to high school students that did not.



Using OSAH-funded SBHC may serve as a **protective factor mitigating the academic impact of chronic absenteeism**. Among the students who were chronically absent for one year during high school, the **graduation rate of those who used OSAH-funded SBHC services was six percentage points higher** than students who had also been chronically absent but didn't use OSAH-funded SBHC services.

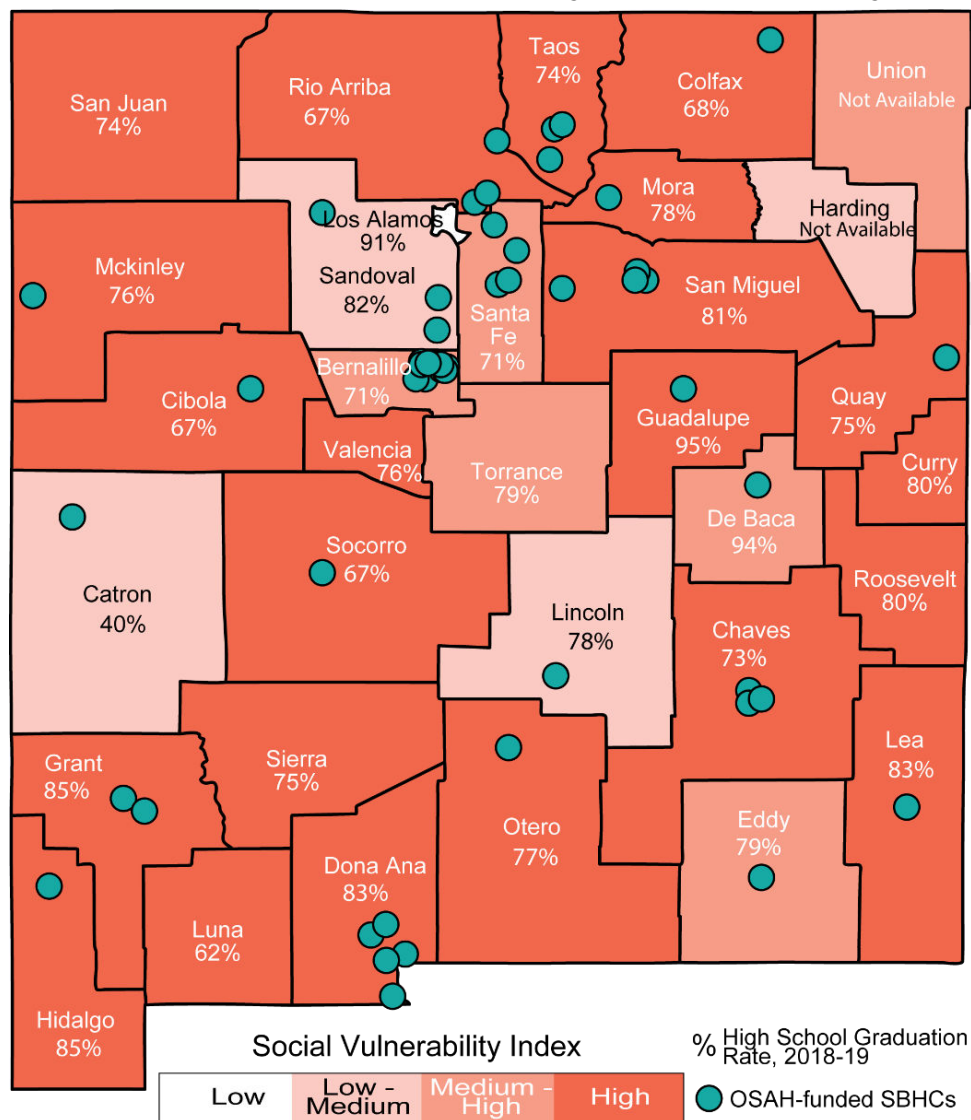
These findings do not definitively establish that visiting an SBHC *causes* reductions in absences or increases in graduation, yet they do *identify promising relationships to be further researched*. It is recommended that the next phase of analyses should expand the data set to include 1) pre- and post-COVID-19 years (2014-2019 vs. 2020-2024); 2) PED data that is linked to students' demographics (e.g., race, disability), providing insights of how the impact of SBHCs varies among demographics; and 3) academic data that includes students' learning proficiency and standardized testing scores, allowing for a better understanding of the impact of SBHCs from grade to grade and between demographics.

Summary of Results

New Mexico's Higher-Need Youth are Using SBHCs

OSAH-funded SBHCs provide primary health care, behavioral health care, and service coordination to students in remote and under-resourced communities. In 2018-2019, there were 47 OSAH-funded SBHCs, **75% of which were in town and/or rural regions** and **89% of which were in counties rated medium-high to high on the Social Vulnerability Index (SVI)**. Published by the U.S. Centers for Disease Control and Prevention (CDC), the SVI is a tool that measures a community's ability to respond to and recover from hazards based on factors like socioeconomic status, household composition, and access to resources. Also note, the number of operational OSAH-funded SBHCs varies between 2014 and 2019 due to some openings and closings during the same period.

Map 1. OSAH-Funded SBHCs and County's Social Vulnerability Index (2018) ^{4,5}



SBHCs funded by OSAH are committed to serving all students regardless of their ability to pay for care. SBHCs do not replace school nurses and counselors, rather, they work collaboratively with the school system to provide students with wrap-around service coordination. Services provided by SBHCs vary by location. However, generally, OSAH-funded SBHCs offer: *

- Primary Care services (e.g., sports physicals, well child checks, sick visits)
- Counseling and Behavioral Health services
- Assistance in finding additional support/services related to health, food, housing, etc.

OSAH-funded SBHC Services

School Years 2014-2019†

40,398 students served

50% of SBHC visits were for Primary Care

34% of SBHC visits were for Behavioral Health

A higher proportion of students eligible for free/reduced lunch and/or that are receiving special education services use OSAH-funded SBHCs compared to the state's overall student population.

Students in lower-income households and/or students with language or other learning needs are using OSAH-funded SBHCs. As shown below, these students are well represented in the OSAH-funded SBHC patient population. In fact, from 2014-2019, 91% of students who used an OSAH-funded SBHC were lower-income and eligible for free or reduced lunch (FRL), while FRL students only represent 79% of the state's total student population.

Students Eligible for Free/Reduced Lunch



Students Receiving English-Language Services



Students Receiving Special Education Services



Students Experiencing Homelessness



- Percent of students that used OSAH-funded SBHC service(s)
- Percent of total NM public-school student population

* Additional SBHC services that vary by location include health education sessions to school staff and students, immunizations, support in determining Medicaid eligibility, oral health services, reproductive health, and other wrap-around services specific to their community.

† Sixteen percent of visits did not specify the reason and/or were for other supportive services.

SBHC Utilization and Graduation Success

Graduating from high school is associated with better life outcomes, such as higher earning potential, improved job stability, and increased opportunities for further education/training.⁶ When students are ill or have untreated health issues, they often struggle to focus in class and are more likely to be absent, which can negatively impact graduation success.^{7,8}



SBHCs promote student health by providing physical and behavioral health care to students at/near school, which helps students miss less class time and removes transportation barriers that can keep students from accessing health care they need. OSAH-funded SBHCs also provide care to students no matter students' ability to pay or insurance status. Additionally, SBHCs work alongside school health nurses, counselors, and social workers to provide wrap-around, coordinated care for high-need students.

Analyses of PED data associated with the New Mexico classes of 2018 and 2019*, show that **a greater proportion of high school students who used an OSAH-funded SBHC (at least once) graduated on time** compared to high school students that did not use an OSAH-funded SBHC, as shown in the figure below.



83%

of OSAH-funded SBHC users graduated on time



74%

of students who **did not** use an OSAH-funded SBHC graduated on time



75%

of New Mexico students, overall, graduated on time



Chronic Absenteeism and Graduation Success

Results also show that using OSAH-funded SBHCs may serve as a **protective factor, mitigating the academic impact of chronic absenteeism**. For example, among the students who were chronically absent for one year during high school, the graduation rate of those who used OSAH-funded SBHC services was six percentage points higher than students who had also been chronically absent but didn't use OSAH-funded SBHC services (85% compared to 79%).[†]

High school students who used OSAH-funded SBHCs were more likely to graduate on-time, even when they experienced chronic absenteeism.

Chronic absenteeism is defined as a student missing 10% or more of school days for any reason. It is linked to lower academic achievement and increased dropout rates, and it often indicates that a student is facing untreated health issues, mental health challenges, unstable

* These classes were used for analyses because all four of their high school years are included in the 2014 to 2019 sample.

† Based on data associated with the New Mexico classes of 2018 and 2019.

housing, transportation difficulties, and/or other serious obstacles.³ SBHCs help to reduce absenteeism by providing onsite, coordinated mental and physical healthcare that students need to stay in class and to focus on learning.

The state's annual rate of chronic absenteeism increased from 15% to 18% from 2016 to 2019, the 12th highest in the country at the time.⁹ However, year-to-year, it is often different students experiencing chronic absenteeism. Thus, a greater proportion of the state's student population is experiencing chronic absenteeism at some point in their K-12 career than the annual rate may suggest. For example, PED student data shows that between 2014 and 2019 **nearly a third (31%) of New Mexico students experienced chronic absenteeism for at least one year**, while the annual rate of chronic absenteeism for the same years averaged 16%. PED student data from between 2014 and 2019 also shows that **14.5% of students were chronically absent for two or more years**.^{*}

Since the COVID-19 pandemic, the annual chronic absenteeism rate spiked to **40% and 39% in school years 2021-2022 and 2022-2023**, respectively. These rates were the third highest in the country, lower only than Alaska and the District of Columbia.⁹ With the state's more recent annual absenteeism rates being near 40%, New Mexico can anticipate that an even greater proportion of students will have experienced chronic absenteeism at some point in their K-12 career.



Predictive Models Show Greater Odds of Graduation Success when OSAH-funded SBHC Services are Used

SBHC and PED student data was also used to run *predictive* statistical tests, called regression analysis. Regression analysis is a way to look at how one thing, like graduating on time, is affected by other things, like using SBHC services. In this case, it helps us see if a student who uses SBHCs has better odds of graduating on time, or reduced chronic absenteeism, compared to a student who didn't use an SBHC.

A high school student who uses an OSAH-funded SBHC has better odds of graduating on time, according to regression analyses of data associated with the high school graduating classes of 2018 and 2019 in New Mexico. A high school student that used an OSAH-funded SBHC...

- **more than once was 3 times more likely to graduate** on time compared to high school students that did not use an OSAH-funded SBHC. For each additional visit, the likelihood of graduating on time increased.
- for mostly **Primary Care** visits was **3 times more likely** to graduate on time, compared to all other students.
- for mostly **Behavioral Health** visits was **2 times more likely** to graduate on time, compared to all other students.

Regression analyses also show potential for SBHCs to reduce chronic absenteeism. For example, regression analyses showed that high school students in the class of 2018 who

^{*} Percentages of the student population that experienced chronic absenteeism were determined by using the population of students who were enrolled in New Mexico public schools for all five school years (2014-2015 through 2018-2019).

used an OSAH-funded SBHC for any reason were 37% less likely to be chronically absent in high school compared to classmates that did not use OSAH-funded SBHC services. However, this reduction was not found when looking at the class of 2019 (the only other class with complete high school data in the sample). Yet, identifying this difference between both graduating classes merits further investigation through predictive models where other factors affecting absenteeism are included.

Conclusion and Strategic Recommendations

Research across the U.S. has found that the services students receive from SBHCs can provide youth the access to healthcare that they need, positively impacting educational trajectories, and thus, lifelong outcomes.³ Results from the exploratory analysis of 2014-2019 OSAH-funded SBHC utilization data and students' academic outcomes from PED in this report make the same conclusion. While the statistics in this report cannot explicitly establish that visiting an SBHC *causes* reductions in absences or increases in graduation rates, it does *identify promising relationships to be further researched*.

Additional research is urgent as youths' need for physical and behavioral services has increased in New Mexico since 2019. According to the 2022-2023 National Survey of Children's Health (NSCH), in New Mexico¹⁰:

- 20%** of those aged 12-17 needed treatment or counseling and did not receive it.
- 33%** of those aged 12-17 did not get adolescent well visit.
- 39%** of those aged 0-17 did not receive needed care coordination.
- 62%** of those aged 0-17 do not have an established healthcare provider (i.e., medical home).

Strategic Recommendations

The recommendations below are informed by lessons learned related to the analysis process of PED and SBHC data and are designed to advance our understanding of the relationships between SBHC utilization and education outcomes. Please note the order in which recommendations are listed is not significant.

Recommendation #1 Conduct an analysis of student education and SBHC utilization data for school years 2014 through 2024, providing a pre- and post-COVID-19 comparison (2014-2019 vs. 2020-2024). It is recommended that the next round of analysis include:

- PED data that is linked to students' overall demographics (e.g., race, ethnicity, gender, disability). This data would allow analysts to better identify comparable populations across the state and would provide a better understanding of how the impact of SBHCs varies between demographics.
- PED data that provides students' reading proficiency levels, math proficiency levels, and other standardized testing scores. In this report, academic

achievement analyses were limited to high school graduation rates. Providing learning proficiency data that is matched to student IDs would allow for a better understanding of the academic impact of SBHCs from grade to grade and between demographics.

The additional years of data and the expanded demographic and academic data points will allow for more nuanced descriptive and inferential analyses, providing deeper insights into the complex relationships among SBHC utilization, student demographic backgrounds, absenteeism, and academic achievement.

Recommendation #2 Develop and implement an evaluation plan to conduct ongoing analyses year-to-year, beyond 2024. This will build on the foundation of the work to date, and it will enable annual findings to be shared with key funding and legislative stakeholders.

Recommendation #3 Document positive youth development programs and supportive services provided to students at each school with OSAH-funded SBHCs, providing a more holistic picture of the systems of support impacting student education outcomes. Understanding the full system of support available to youth and linking it to their educational outcomes can support state and district stakeholders in deciding which types of youth-serving programs would be best to replicate and scale.



References

1. U.S. Department of Health and Human Services. (n.d.). *Social determinants of health: School-based health centers*. The Community Guide. <https://www.thecommunityguide.org/findings/social-determinants-health-school-based-health-centers.html>
2. University of Wisconsin Population Health Institute. (n.d.). *School-based health centers*. County Health Rankings & Roadmaps. <https://www.countyhealthrankings.org/strategies-and-solutions/what-works-for-health/strategies/school-based-health-centers>
3. Thomas, C. L., Price, A. A., Phillippi, S., & Wennerstrom, A. (2020). School-based health centers, academic achievement, and school discipline: A systematic review of the literature. *Children and Youth Services Review*, 118, 105467. <https://doi.org/10.1016/j.childyouth.2020.105467>
4. Centers for Disease Control and Prevention, Agency for Toxic Substances and Disease Registry, & Geospatial Research, Analysis, and Services Program. (2018). *CDC/ATSDR social vulnerability index 2018 database New Mexico*. Note: Data for Rio Arriba was not available for 2020. Rio Arriba was rated “high” for both 2016 and 2020, the nearest years in which data was available.
5. New Mexico Department of Health. (n.d.). *Graduation rates informed by New Mexico high school graduation rates by county, four-year cohort, 2018-2019*. <https://ibis.doh.nm.gov/indicator/view/HSGraduation.Cnty.html>
6. U.S. Department of Health and Human Services. (2023). *High school graduation*. Healthy People 2030. <https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/high-school-graduation>
7. Michael, Shannon L., Caitlin L. Merlo, Charles E. Basch, Kathryn R. Wentzel, and Howell Wechsler. (2015). Critical Connections: Health and Academics. *Journal of School Health*, 85, no. 11: 740–58.
8. Basch, Charles E. (2011). Healthier Students Are Better Learners: High-Quality, Strategically Planned, and Effectively Coordinated School Health Programs Must Be a Fundamental Mission of Schools to Help Close the Achievement Gap. *Journal of School Health* 81, no. 10: 650–62.
9. New Mexico Public Education Department. (2024). *NMPED STARS Annual State, Districts, and Schools Attendance Reports, 2016-2024*. <https://webnew.ped.state.nm.us/bureaus/safe-healthy-schools/attendance-for-success/annual-state-districts-and-schools-attendance-report/>
10. Child and Adolescent Health Measurement Initiative. (2022-2023). *National Survey of Children’s Health (NSCH) data query*. Data Resource Center for Child and Adolescent Health, supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). <https://www.childhealthdata.org>



About this Report

Purpose

To date, there are limited publications/studies describing the impact of SBHC utilization on students' academic outcomes. The New Mexico Department of Health – Office of School and Adolescent Health (OSAH) and the New Mexico Public Education Department (PED) aim to fill this knowledge gap. OSAH and PED have partnered with Apex Evaluation to conduct a statewide analysis of historical K-12 student health data (from SBHCs) and academic data from academic years 2014 through 2019. This report summarizes the analyses results.

Apex Evaluation

Apex is a consulting and technology services company specializing in systems evaluation. We have been serving the public and nonprofit sectors for over two decades, providing program planning, evaluation, facilitation, and technical assistance, including technology for data collection and reporting.

The Apex Blend

The Apex Blend includes leveraging systems thinking and utilization-focused evaluation approaches. Apex aims to match the learning need with the method while considering the burden of data collection methods on participants. Finally, Apex aims to create processes and products that are accessible, meaningful, and insightful to support our vision of “evaluation that works.”

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