



THE RALES MODEL EVALUATION

Executive Summary

RUTH
AND
NORMAN
RALES

Rales
Center
for the Integration
of Health
and Education



MARCH 2021



THE RALES MODEL EVALUATION: EXECUTIVE SUMMARY

The Rales Center for the Integration of Health and Education was established in 2014 as a program of the Johns Hopkins Children's Center with a gift from the Norman and Ruth Rales Foundation. The Rales Center envisioned a new approach to school health, one that partners health professionals with educators to provide comprehensive health care, wellness, prevention, and social supports in school, with the goal of improving not just health outcomes but educational outcomes. This overview report focuses on the Rales Center's signature project, launched in the summer of 2015—the implementation and evaluation of the Rales Model, a comprehensive, integrated school health program at KIPP Baltimore.



Rationale

Children's health and achievement are powerful predictors of health and prosperity across the life course, and socioeconomic and racial inequities in these outcomes are widening [1, 2]. Children who grow up in poverty, particularly children from historically marginalized racial and ethnic groups, are less healthy than their more advantaged peers and, as a group, they have poorer academic achievement [3]. These disparities are driven by factors such as structural racism, inadequate access to care and educational funding, as well as greater exposure to known risks to child wellbeing such as community violence and food insecurity. Given the well-established interdependent relationship between health and educational outcomes [4], innovative strategies are needed to support and protect child wellbeing. Schools provide a natural place to address children's health and psychosocial needs because students spend the majority of their time in them [5]. However, school health resources, particularly in schools that serve low-income communities, are often constrained or inadequate [5].

While the resources afforded to support comprehensive student wellness in schools vary widely, in most schools, school health clinics are “co-located” rather than integrated into schools. School-based health centers (SBHCs), in particular, provide health services to a subset of students who are enrolled and may be removed from the day-to-day educational activities of the school. Greater integration and partnership between health and educational stakeholders is needed.

Informed by the Centers for Disease Control and Prevention's Whole School, Whole Community, Whole Child (WSCC) framework [6], the Rales Model reimagines school health using a multidisciplinary team of professionals who become part of the fabric of the school community; this approach allows for proactive identification and monitoring of students whose health concerns might otherwise go unnoticed, and partners with students, parents, and staff to support the foundations of child health and achievement.

The Needs of Children in Baltimore

Compared to children in surrounding areas, children in Baltimore City have less opportunity to fulfill their potential. Seventy-two percent of City residents are members of a historically marginalized racial or ethnic group [7] and 26% of children live in poverty [8]. Stark inequalities driven by racial and economic marginalization provide the backdrop for the health, wellbeing, and achievement of many of Baltimore's children.

Persistent inequalities in health and opportunity in Baltimore are the result of discriminatory policies with roots in the Jim Crow era. Now, more than a century later, individuals in the wealthiest neighborhood in Baltimore City live 20 years longer than those in the poorest neighborhood [9]. While structural and economic solutions are essential, additional strategies to reduce barriers to health and wellbeing among school children in Baltimore are urgently needed.

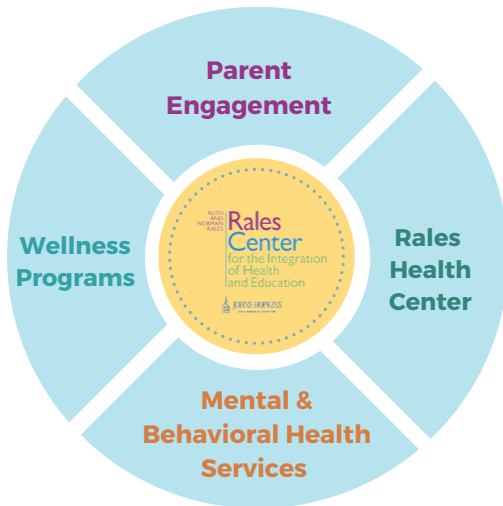
The Demonstration Site: KIPP Baltimore

The Rales Center Model is being tested at KIPP Baltimore. The Knowledge is Power Program (KIPP) is a national network of public charter schools focused on college preparation. KIPP Baltimore is comprised of KIPP Harmony Academy (elementary) and KIPP Ujima Village Academy (middle), two public charter schools that are co-located in the same building. Together, the schools serve more than 1,500 students in grades K-8 enrolled from around the City by lottery. More than 80% of KIPP Baltimore students live in areas of concentrated poverty, and more than 99% of students are Black or African American.



Rales Model Overview

The Rales Model was implemented beginning in Fall 2015. The breadth and intensity of activities offered as part of the Rales Model are reflective of the complex health and psychosocial needs of students in this setting.



Rales Health Center

The Rales Health Center (RHC) provides comprehensive preventive and acute care, chronic disease management, and family advocacy at KIPP Baltimore. School Health Services (SHS, i.e., school nursing) are provided by RHC nurses and are available to every student. SHS also implements population health screening for all students. The school-based health center (SBHC) requires parental consent but allows RHC staff to provide a higher level of care. Services are provided by a pediatrician/medical director, pediatric nurse practitioner, medical assistant, two school nurses, and a family advocate who aim to make population health a seamless part of the educational experience.

Mental and Behavioral Health Services

Two Master's level mental health clinicians from Johns Hopkins Bayview's Expanded School-Based Mental Health Program supplement school-district provided mental health personnel under an agreement with KIPP Baltimore. A child psychiatrist visits the health center monthly and RHC's clinicians collaborate with mental health clinicians in managing students on psychiatric medications.

Wellness Programs

In addition to health services, the Rales Model focuses on student and staff wellness. Informed by the CDC's WSCC model, a full-time wellness director is based at the school and works in partnership with school leadership and staff, supported by a Rales Center faculty lead. Wellness program components include social and emotional learning, restorative and trauma-informed approaches to school discipline and school climate, physical activity programs, health education, and staff wellness activities.

Parent Engagement

Parent engagement efforts aim to connect families in need to community resources and to create programs that build positive relationships between parents, the school, and the Rales team. Parents help set program priorities and provide feedback on initiatives.

Rales Model Wellness Programs by domain of the Whole School, Whole Community, Whole Child (WSCC) Model

Social & Emotional Climate*

- Served as thought partner for long term culture and climate planning focused on social and emotional learning, trauma informed approaches, restorative practices, and principles of social justice
- Led communities of practice focused on implementing restorative practices
- Facilitated professional development, and coached staff in social and emotional learning, trauma, and restorative practices

Health Education

- Advocated for delivering comprehensive, standards-based health education
- Collaboratively planned health education units and lessons with health educators
- Delivered health-specific campaigns on topics including hygiene, oral health, cold and flu prevention, and nutrition
- Supported social media campaigns on health and wellness

Physical Education and Physical Activity*

- Redesigned recess policies and procedures based on the CDC's Recess Planning in Schools guidelines
- Trained recess monitors in best practices for structuring indoor and outdoor recess to maximize opportunities for physical activity
- Supported the use of GoNoodle for in-class physical activity and brain breaks
- Supported FitnessGram assessment as part of physical education classes



Physical Environment

- Secured funding to build school garden
- Provided resources and shared knowledge on the impact of building temperatures and heating/cooling system challenges on student health, especially for students with asthma

Family and Community Engagement

- Supported the creation of the School Family Council
- Engaged community and university volunteers to support health and wellness program delivery
- Organized activities for families including 5k/1k Fun Run, and healthy cooking demonstrations

Employee Wellness*

- Created KIPP Well, the staff health and wellness program
- Organized healthy eating activities for staff including Salad Fridays and healthy cooking demonstrations
- Organized staff wellness competitions designed to encourage healthy activities for our staff
- Conducted Mindfulness Based Stress Reduction class for staff
- Conducted yearly staff wellness survey to assess state of staff mental and physical health

Nutrition Environment and Services

- Delivered whole school nutrition campaigns
- Led cooking club for elementary students
- Partnered with local chefs for Chefs Move to Schools cooking demonstrations for students, families, and staff
- Partnered with Days of Taste to bring interactive healthy eating program to all 4th grade students, including a trip to Great Kids Farm

(Domains with an * are described in supplemental reports)

WSCC model Source: <http://www.ascd.org/programs/learning-and-health/wsc-model.aspx>

Rales Model Evaluation Overview

The evaluation of the Rales Model at KIPP Baltimore had three goals: 1) to characterize the process of implementing fully integrated school health, including lessons learned; 2) to characterize health status at KIPP; and 3) to quantify the impact of the program on health and educational outcomes. This report examines implementation during Years 1-4 (school years 2015-16 to 2018-19). Year 5 outcomes were omitted due to 1) the school's move across West Baltimore which resulted in a change in 20% of the school population; and 2) the COVID-19 pandemic, which shifted the school to virtual learning in March 2020. (The Rales Center's efforts during the COVID-19 pandemic are detailed separately).

MAJOR FINDINGS

Student Health and Wellbeing

KIPP Baltimore students had high rates of several health conditions.

Chronic Conditions



65.1% of students at KIPP had a chronic condition (e.g., asthma, overweight/obesity, epilepsy, diabetes, and sickle cell disease) compared to 51.0% of children nationwide [1].

Asthma



36.5% of KIPP students had asthma compared to 14.1% among youth ages 5 to 14 nationwide [2].

Overweight/obesity



38.8% of KIPP students had overweight or obesity compared to 35.1% nationwide [3].

Vision



47% of students did not pass vision screening

ADHD



7% of KIPP students had RHC-documented ADHD.

Depressive Symptoms



21% of 7th graders screened positive for depressive symptoms.

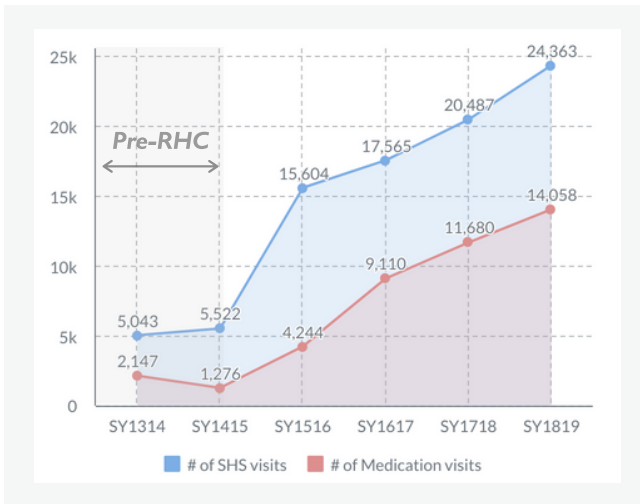
At the same time, KIPP Baltimore middle school students reported more physical activity and lower rates of substance use and weapon carrying than their peers in Baltimore City and Maryland overall.

RALES HEALTH CENTER IMPLEMENTATION Year 1 -Year 4

Utilization Overview

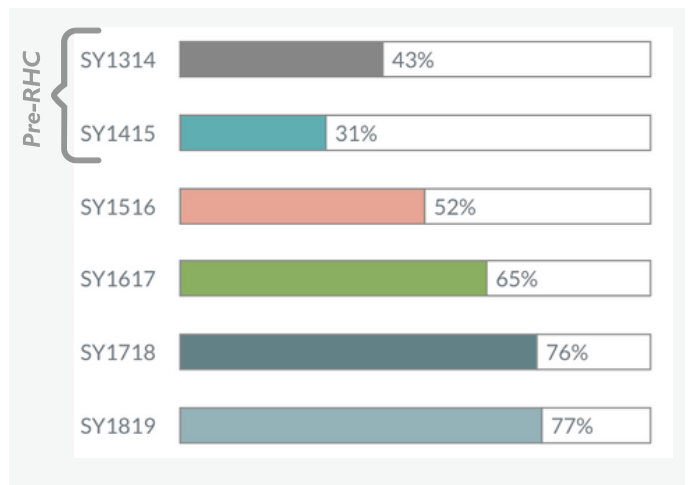
<p>SBHC ENROLLMENT</p> <p>77%</p>	<p>RETURN TO CLASS RATE</p> <p>94%</p>	<p>ED VISITS ADVERTED</p> <p>263</p>	<p>HEALTHCARE COST SAVINGS</p> <p>\$420,800</p>
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School Health Services Utilization

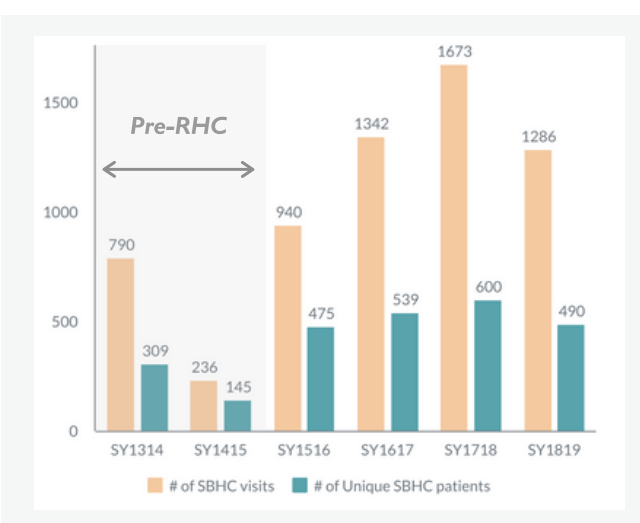


<p>MENTAL HEALTH REFERRALS</p> <p>190</p>	<p>SBHC INITIAL ADHD EVALUATIONS</p> <p>96</p>
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Enrollment in the School-Based Health Center



School-Based Health Center Utilization



Better asthma control over time contributed to decrease in utilization in Year 4.

Year 4 SBHC utilization declined 23% from Year 3 due to a substantial decrease in acute asthma visits. This suggests that comprehensive asthma programs resulted in better asthma control.

Asthma Programs

A central part of the Rales Model was the use of a population health framework to understand the true burden of asthma at KIPP Baltimore, identify students with previously unidentified or uncontrolled asthma, and implement comprehensive disease management programs to improve health and educational outcomes for students with asthma.

Intensive case-finding efforts revealed that approximately one-third of KIPP students had asthma. We then utilized screening, school health, and absenteeism data to identify students in most need of support from the RHC team by applying a prioritization system we developed [10]. Finally, we provided a menu of intensive disease management services including education, case management, SBHC medical management, and directly observed asthma controller therapy (DOT). The DOT program was targeted at students with the most poorly controlled asthma- it served, on average, 20% of students in the school with persistent asthma. Adherence to medication doses for DOT participants was more than 80% in Year 4, and average unscheduled albuterol utilization (an indication of poor control) declined by 70%. Overall, there was a 62% decrease in the proportion of SBHC asthma visits for asthma exacerbation.

Chronic absenteeism among students with asthma declined by 49% between years 1 and 3 among students enrolled in the school all three years.

Vision Program

Partnering with a community provider allowed for more than 90% of eyecare services and glasses to be billed to a third-party payer

The Rales vision program expanded the frequency and scope of vision screenings at KIPP Baltimore, provided in-school optometry services and glasses, developed a financially sustainable model for school-based vision care, and tested interventions to promote eyeglass-wearing. An average of 47% of students did not pass vision screening each year; 390 students received in-school optometry services. In Year 2, we initiated a partnership with a community-based optometry provider who performed comprehensive exams at KIPP Baltimore.

Despite substantial outreach to families by RHC staff and teachers, many students did not participate in in-school vision events. This may have been particularly true for families with high levels of competing social needs. While the proportion of students who did not pass vision screening was high, there were no statistically significant differences in standardized test performance by vision screening results or receipt of glasses. This may be because do wear their glasses as prescribed [11] or may have developed compensatory mechanisms to address vision challenges.

A pilot glasses-wearing intervention implemented by the Rales team at KIPP Harmony was associated with an increase in glasses wearing from 56% to 73% of students, and small but statistically significant improvements in classroom behavior and engagement. These findings suggest that schoolwide efforts to encourage glasses-wearing could pay dividends for school climate.

A glasses-wearing intervention was associated with improvements in classroom behavior and engagement.



Mental Health

The number of students receiving direct school-based mental health services more than tripled from 100 in Year 1 to 324 in Year 4.

Services for mental and behavioral health disorders (MBHD) posed one of the greatest challenges to full integration in the Rales Model, due, in part, to regulatory limits on data sharing and collaboration. Parents and school staff identified difficulty accessing mental health assessments, medication management, and therapy services as an ongoing need.

The RHC team worked to improve early identification of students with MBHD through professional development for teachers and school staff, adolescent depression screening, and a streamlined referral system to school-based mental health clinicians and RHC providers for evaluation. To meet the need for high-quality school-based mental health services, in Year 4, we partnered with KIPP Baltimore to transition to a new provider (Johns Hopkins Bayview School-Based Mental Health Program) that served 47% more students per clinician full-time equivalent and provided onsite psychiatry services.



During Year 5, RHC and KIPP Baltimore leaders partnered to create monthly multidisciplinary team meetings each school to support collaborative case management of students and families with complex needs, including MBHD. This was a critical way to optimize coordination on behalf of students with a variety of needs.

Wellness Programs

The Rales Center designed a universal whole child wellness program guided by CDC WSSC model [6]. In partnership with school leadership, the Wellness team implemented programs to promote school climate and culture, created opportunities for students to engage in and learn the benefits of regular physical activity and proper nutrition, and worked collaboratively to implement health education and staff wellness programs.

The Wellness team provided expertise, support, and resources as KIPP Baltimore brought to fruition their vision of a school culture based on principles of restorative practices, trauma-informed approaches, and concepts of social justice. The team partnered with school and regional leadership to support KIPP Baltimore in adopting restorative approaches to discipline, implementing an evidence-based trauma-informed social emotional learning curriculum (Conscious Discipline) across all grades, integrating core concepts of social justice and culturally relevant pedagogy, and adopting a whole child approach to school climate and culture. Ultimately, we found that two factors were most influential in prompting culture and climate shifts: 1) relying on evidence to demonstrate the importance of culture and climate; and 2) gaining the investment of trusted academic leaders.

In response to this effort, there were substantial improvements in teacher-reported culture and climate between 2016 and 2019, including the quality of student-teacher interactions and the safety and productivity of the learning environment. We hoped our work would lead to a decrease in exclusionary discipline practices. Suspension incidents decreased markedly in KIPP Harmony, a change that reflects not just culture and climate programs but also changes in district policies about suspension of the youngest students. In contrast, suspensions at KIPP Ujima increased substantially. We believe that changes in leadership and challenges with staff turnover influenced these outcomes.

Key teacher-reported school culture and climate metrics improved, including the quality of student-teacher interactions and the safety and productivity of the learning environment

Three factors were essential to the success of Rales Model culture and climate programs:

- 1. Relying on evidence and research-based programs;***
- 2. Leveraging best practices from academic school change models;***
- 3. Working collaboratively with school partners to understand and meet their needs.***

Health Conditions and Academic Outcomes

Establishing the relationship between health conditions and academic outcomes is important to establishing a plausible mechanism by which the Rales Model could impact educational success. We focused on key indicators of academic performance and engagement: chronic absenteeism and two standardized assessments: Partnership for Assessment of Readiness for College and Careers (PARCC) English Language Arts (ELA) and mathematics, and Measures of Academic Progress (MAP) reading and mathematics. We chose PARCC given its role in school accountability and MAP given its ability to measure academic growth over time across the entire age spectrum.

Asthma and Attendance

After accounting for a wide range of demographic and health factors, RHC-documented asthma was associated with 2.5 excess absences per year, net a variety of other health and social risks [12]. Health center record of asthma explained just 18% of all absenteeism. These findings confirm the relationship between asthma and absenteeism and underscore the importance of a holistic intervention model given that there are many non-asthma related factors that drive attendance in students with asthma.

Rales Health Center-documented asthma accounted for 18% of all absenteeism among KIPP students—up to 412 school days a year

Asthma and Standardized Test Performance

Students with poorly controlled asthma demonstrated significantly lower likelihood of proficiency on the PARCC assessment and lower scores on the MAP assessment over three school years [13]. Robust asthma identification and management programs are important, therefore, for preventing compounding learning losses over time.

The impact of poorly controlled asthma may be magnified over time. Students with significant asthma had 58% lower odds of proficiency on the PARCC math assessment over 3 school years

ADHD and Academic Outcomes

Students with ADHD were 2.4 times more likely to be chronically absent than those without ADHD. ADHD was also associated with 97% lower odds of proficiency on PARCC ELA and 96% lower odds of proficiency on the PARCC math. Similarly, ADHD was associated with 8.8-point lower MAP reading score and 10.8-point lower MAP math score.

Students with ADHD were 2.4 times more likely to be chronically absent and more than 90% less likely to demonstrate proficiency on the PARCC tests compared to students without ADHD.

RHC Enrollment and Academic Outcomes

Previously we noted a 50% decrease in chronic absenteeism between Years 1 and 3 among students with ADHD and a 49% decrease among students with asthma who attended KIPP all three years. In the current analyses we focused on change across all four years regardless of chronic condition.

RHC Enrollment and Chronic Absenteeism

We investigated whether enrollment in the RHC was associated with students' likelihood of being chronically absent across time compared to themselves at baseline. We found that SBHC enrollment was associated with 2.8 times greater likelihood of chronic absenteeism in Year 2, and 3.4 times greater likelihood of chronic absenteeism in Year 3 compared to baseline. In Year 4, however, RHC enrolled students were no more likely to be chronically absent. This suggests that program impacts may lag enrollment.

RHC Enrollment and Standardized Assessments

The MAP assessment is designed to assess student growth in reading and math. Using models comparing individuals to themselves over time (thereby limiting threats from unmeasured differences between students), we evaluated the relationship between RHC SBHC enrollment and spring MAP score growth (Years 1-4), accounting for grade and absenteeism. Among those not enrolled in the RHC, we observed a modest but statistically significant improvement over time for math, but no significant growth in reading. In contrast, among those enrolled in the RHC, we saw modest but significant growth in both math and reading scores. We saw a larger association between RHC enrollment and growth in math as compared to reading. We did not see meaningful differences by enrollment in the odds of PARCC math or ELA proficiency.

Among those not enrolled in the RHC, we observed modest improvement over time on math assessments but no significant growth in reading. In contrast, among those enrolled in the RHC, we saw modest but significant growth in both math and reading

Academic Impact of the Whole Child Kindergarten Intake Pilot

An enhanced kindergarten intake process was implemented in the summer before students entered school in Year 4. The intake assessed academic readiness, social and emotional functioning, vision, hearing, speech/language, unmet health and developmental needs, and family social needs. In total, 17% of incoming kindergarteners were flagged as at-risk on developmental screenings, which allowed for earlier implementation of services including speech/language interventions. In 2018-19 there were twice as many students receiving speech/language interventions by mid-September than in the prior year. Reading proficiency increased by 2% compared to the prior year's baseline.

A whole child kindergarten intake pilot was associated with earlier entry into educational support services and small but meaningful increases in reading ability compared to the prior year

Cost Benefit and Cost Savings

We found a net social benefit from the U.S. societal perspective of \$4.20 for every dollar invested in the RHC [14]. RHC prevented 263 ambulance transports and associated emergency department(ED) visits, with estimated health care savings of \$420,800.

ED VISITS
ADVERTED

263

HEALTHCARE
COST SAVINGS

\$420,800

SUMMARY OF CONCLUSIONS

The results of the Rales Model evaluation demonstrate that a new model of fully-integrated school health, one that embodies the CDC's WSSC model [6] can be successfully implemented in a large, urban school setting. We demonstrated large and robust associations between health conditions and poorer school attendance and standardized test performance, particularly among students with chronic conditions. The Model was associated with high utilization, better identification of students at health and social risk, and better medication adherence among students with chronic conditions. Moreover, enrollment in the Rales Health Center was associated with decreased chronic absenteeism among students with chronic conditions as well as modest but meaningful improvements in standardized test score growth over time, particularly in math.

Rales Model Essential Program Elements

Five years of implementing the Rales Model helped us to identify the most impactful elements of the model. Here we summarize these elements of the program alongside a relative indication of their cost:

\$\$\$ Health Center with Enhanced Staffing and Population-Based Approach

\$-\$\$ Schoolwide Asthma Screening Program

\$\$ Directly-Observed Asthma Controller Therapy

\$-\$\$ Trauma-Informed Restorative Culture and Climate Programs

\$ Classroom Physical Activity Breaks

\$-\$\$ Whole Child Kindergarten Intake Program

\$ Multidisciplinary Team Meetings

Some other Rales Model elements are promising but will need additional longitudinal follow-up or data to estimate their impact.

Financial Sustainability Considerations

School health programs like the Rales Health Center are unlikely to be sustained by insurance billing revenue alone [15]. Public funding can provide a more consistent and integrated source of support for school health programs. However, an independent report commissioned by the Maryland Council on the Advancement of School-Based Health Centers in 2018 noted that Maryland has dramatically less state level funding available for SBHCs than other states with similarly-sized SBHC programs.

Ideally, philanthropy can help start or seed new programs and fill gaps with increasing fractions of operating costs borne by public and healthcare dollars. Some creative solutions have been offered to try to drive additional public funding for new SBHCs, including taxes on e-cigarettes, tax increment financing (TIF), and consortia to provide loans and tax credits for financing of new Federally Qualified Health Centers [15].



Systems Alignment to Support Fully-Integrated Models

Health care, public health, and education sectors have common and complementary missions: to ensure children have the physiological, cognitive, and emotional skills and capacities to support wellbeing and success, and the success of their future families and communities. Nonetheless, collective action among these entities to fund school health programs has been stymied by “wrong pockets” problems [16]. Investments may take years or decades to produce benefit, and, when they materialize, these benefits may accrue to other sectors [16]. Further, health care, public health, and educational systems operate in environments with scarce and variable funding and have their own specific cultures and performance measures.

To fully realize the benefits of the Rales Model at scale, greater alignment of healthcare, public health, and educational sectors is needed; this requires common priorities, cost-sharing, and a systematic approach to data sharing. In addition, linked health and educational data systems and a consistent approach to addressing privacy laws (HIPAA/FERPA) to support communication are needed. While the COVID-19 pandemic has temporarily disrupted each of these systems, there may be opportunity to advocate for alignment and joint investment in the post-COVID-19 era; the pandemic has highlighted critical interdependencies among the healthcare, education, and public health sectors. The Rales Model is well-positioned to provide data about the promise of coordinated investments.

Understanding the often patchwork funding landscape of school health services and school-based health centers is an important first step in launching a new program. Funding from school systems will be linked primarily to academic outcomes, while health systems will focus on health outcomes, particularly those that decrease unnecessary utilization and cost. Payers may also be motivated by measures like patient satisfaction and quality metrics. These measures are increasingly tied to reimbursement for health systems. Targeting outcomes that most impact funders' bottom line may make programs most financially viable; however, keeping the needs of students and the school community at the center cannot be compromised. Creativity and successful grant writing may sustain a single program. Advocacy for educational and school health funding reform is needed to transform systems at scale.

Future scaling efforts must be firmly grounded in a child-, family- and relationship-focused approach. We must be cautious to avoid assuming that “if we build it, they will come”—students, their families, staff, and leadership must be full partners. Building relationships of trust and mutual respect takes time, but ultimately drives engagement with the systems and programs we build.

Results in Context

We found the most evidence in support of programs and services we controlled directly. Unsurprisingly, we found a more modest impact on outcomes that are more distal to our program and are multifactorial, including educational outcomes. There are several factors that are likely to have influenced community, school, staff, and student health and educational outcomes during the implementation period including: highly constrained district and school budgets, school leadership changes, an increasing fraction of KIPP Baltimore kindergarteners entering school not yet ready to learn, a move to a new school building, and COVID-19. Despite these threats, the Rales Model partnership has demonstrated promising results for health and educational outcomes.

KEY LESSONS LEARNED

Relationships Are the Foundation

High-quality, accessible pediatric care, coupled with intensive family relationship-building, can engage families in systems of care, improving student health and educational outcomes. Alongside comprehensive preventive and acute care, chronic disease management, wellness services, and family advocacy, the RHC also provides a safe, affirming, and supportive environment and serves as a pathway to engagement for many families. Over time, RHC staff have built relationships in which families experience true partnership in caring for their children.

The Right People Make it Work

The success of the Rales Model has been dependent as much on the “who” as the “what.” Creative, flexible, innovative staff make our program work. Finding staff, particularly health center staff, with the clinical, communication, and technical skills required to provide services that are aligned with the many regulations impacting school health, while also re-imagining the delivery system to best serve schools and communities can be difficult. Taking the time to identify staff that are aligned to this creative culture pays dividends.

The Importance of Being There

The sense of safety that comes with high-quality onsite health support every single day is what prompts families of students with complex or chronic conditions to feel comfortable sending their children to school. Moreover, everyday interactions with students and their families, particularly when they are well, helps team members get to know them and how best to support them. The team's constant presence in the school building, at school events, and in the community also facilitates trusting relationships. Trust-building can be a long process, especially for a new program. It is well worth the wait because it facilitates true partnership and integration.

Integration is Key

Proactive discussions about needs and priorities at the school (or district) level are critical to identifying ways fully-integrated school health programs can add value from the school perspective. Regular, structured touchpoints to provide updates on the partnership, reflect on priority alignment and outcomes, and adjust as needed are essential. Specific attention to appropriately structured agreements for data exchange and individual releases of information from students/families are both likely to be needed to facilitate collaboration.

Data are Essential

Program evaluation is key to demonstrating program impact and securing long-term funding. Functional, integrated data systems that can be easily used for evaluation are not the norm in school health programs. Identifying systems that work for clinical care and that facilitate evaluation are worth the upfront investment.

Focus on Common, High-Burden Conditions

Identifying and focusing efforts on the health conditions that are most common and have the greatest impact on educational success is an efficient way of dedicating resources and generating impact. If resources are limited, consider investing modest additional effort on programming related to a high impact condition.

Prepare for the Long Haul

Change often comes slowly, especially in large systems. Bureaucracy can be draining. Dogged persistence is often needed to accomplish even small goals. The needle eventually moves. Persistence can demonstrate commitment, ultimately building trust with key stakeholders.

The Promise of Health and Educational Integration

In summary, the Rales Model of health and educational integration has demonstrated tremendous promise in real-world conditions. Over time, we have built critical relationships with school staff, students, and parents. These relationships have translated to high levels of engagement with the Rales Health Center, shifts in school culture and climate, better chronic disease management, better attendance among students with chronic conditions and more student academic growth. The success of the Rales Model and the lessons learned to date provide a blueprint for scaling the Model and its components in settings beyond Baltimore to more fully realize the potential of health and educational integration.

REFERENCES

1. Peterson JW, Loeb S, Chamberlain LJ. The intersection of health and education to address school readiness of all children. *Pediatrics*. 2018;142(5):e20181126.
2. Cheng TL, Johnson SB, Goodman E. Breaking the intergenerational cycle of disadvantage: The three generation approach. *Pediatrics*. 2016;137(6):99-108.
3. National Academies of Sciences E, Medicine. *A roadmap to reducing child poverty*. Washington, DC: National Academies Press; 2019.
4. Hayward MD, Hummer RA, Sasson I. Trends and group differences in the association between educational attainment and US. Adult mortality: Implications for understanding education's causal influence. *Soc Sci Med*. 2015;127:8-18.
5. Brindis CD, Sanghvi RV. School-based health clinics: Remaining viable in a changing health care delivery system. *Annual Review of Public Health*. 1997;18(1):567-87.
6. ASCD. Centers for Disease Control and Prevention (CDC). *Whole School, Whole Community, Whole Child: A collaborative approach to learning and health*. Alexandria, VA; 2014. Available from: <http://www.ascd.org/programs/learning-and-health/wsc-model.aspx>.
7. United States Census Bureau. *Quickfacts: Baltimore City, Maryland 2019*. Available from: <https://www.census.gov/quickfacts/fact/table/baltimorecitymarylandcounty/AGE295219>.
8. Kids Count Data Center. *Children in poverty in Baltimore City: Annie E. Casey Foundation; 2020*. Available from: <https://datacenter.kidscount.org/data/tables/4460-children-in-poverty#detailed/5/3302/false/37,871,870,573,869,36,868,867,133,38/any/10017,10018>.
9. Baltimore City Health Department. *20-year gap in life expectancy between richer, poorer areas of Baltimore*. July 7, 2017. Available from: <https://health.baltimorecity.gov/news/news-coverage/2017-07-07-20-year-gap-life-expectancy-between-richer-poorer-areas-baltimore-cbs>.
10. Rabner M, Bissett K, Johnson SB, Connor KA. A risk stratification algorithm for asthma identification and prioritization in a low-income urban school. *J Sch Health*. 2020;90:538-44.
11. Haag T, Valazquez G, Wiggins T, Johnson S, Spin P, Connor K. An intervention to improve adherence to glasses-wearing among urban public elementary school students: Associations with classroom behavior. *J School Nursing*. in press.
12. Johnson SB, Spin P, Connolly F, Stein M, Cheng TL, Connor K. Asthma and attendance in urban schools. *Prev Chronic Dis*. 2019;16:E148.
13. Senter J, Smith B, Prichett L, Connor K, Johnson S. Pediatric asthma and academic achievement in urban elementary and middle school students. *Academic Pediatrics*. In press.
14. Padula WV, Connor KA, Mueller JM, Hong JC, Velazquez GC, Johnson SB. Cost benefit of comprehensive primary and preventive school-based health care. *Am J Prev Med*. 2018;54(1):80-6.
15. Katz E. *Realizing the potential of school-based health centers: A research brief and implementation guide*. Cambridge, MA: EdRdesign, Harvard Graduate School of Education; 2020. Available from: <https://edredesign.org/files/edredesign/files/sbhc-brief-1?m=1601040943>.
16. Roman J. *Solving the wrong pockets problem: How pay for success promotes investment in evidence-based best practices*. Washington, DC: Urban Institute; 2015. Available from: <http://www.payforsuccess.org/sites/default/files/2000427-Solving-the-Wrong-Pockets-Problem.pdf>.



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We are grateful to all those who have joined us in our mission to create models of school health that help every child to achieve their full health and academic potential. Special thanks to the Norman and Ruth Rales Foundation and our partners at KIPP Baltimore; without them this work would not be possible.

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