CONCLUSIONS AND RECOMMENDATIONS

RUTH AND NORMAN RALES
Rales Center for the Integration of Health and Education

JOHNS HOPKINS CHILDREN'S CENTER

MARCH 2021

CONCLUSIONS AND RECOMMENDATIONS

The results of this evaluation demonstrate that a new model of fully-integrated school health, one that embodies the Center for Disease Control's (CDC) Whole Child, Whole Community, Whole School Model (WSCC) [1] 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 Rales Model was associated with high school-based healthcare utilization, improved identification of students at health and social risk, and better medication adherence among students with chronic conditions. Moreover, enrollment in the Rales Health Center (RHC) was associated with modest but meaningful improvements in standardized test score growth over time, particularly in math.

Essential Program Elements

Classroom Physical Activity Breaks
The integration of movement and "brain breaks" into classrooms using a commercially-available platform is a popular, efficient, and low-cost way to promote physical activity.

Multidisciplinary Team Meetings
Meetings between Rales Health Center staff, Rales Wellness leaders, school leaders, student support teams, and school-based mental health providers are used to identify and discuss student needs, ensuring that resources are being allocated most effectively to students.

Schoolwide Asthma Screening Program
The schoolwide asthma screening and prioritization system (RAPS) provides a systematic way to assess students for asthma in high-prevalence settings and prioritize them for follow-up. Schoolwide asthma screening data, coupled with an electronic health record, facilitate the Rales Model's multi-modal definition of student asthma.

Whole-Child Kindergarten Intake Program
Implementing holistic assessments of school readiness, developmental strengths and weaknesses, and health conditions during the summer before kindergarten allowed students to access services more quickly and was associated with modest increases in reading test scores.

Trauma-Informed Restorative Culture and Climate Programs
A strategic plan to transform culture and climate and to move the school toward a more trauma-informed and restorative approach to school discipline provided a foundation for student wellbeing. While the direct impact of the program is likely to take longer to be fully evident, its successful conceptualization and implementation has led to a more positive culture and more student and staff engagement, essential contributors to student success.

Directly-Observed Asthma Controller Therapy (DOT)

Proactive support for and management of chronic disease is an essential feature of the success of the Rales Model. School Health Services medication visits, particularly DOT, burgeoned. Chronic absenteeism dropped among students with asthma and ADHD, two conditions for which the RHC provides daily medications at school. Medication visits can be implemented in schools without a school-based health center (SBHC) provided that they have the staffing resources to coordinate the program and administer medications.

Rales Health Center with Enhanced Staffing and Population-based Approach

The RHC could not provide the level of proactive, intensive disease identification and management without robust staffing. This staffing model allows the RHC to be fully partnered with the school, to engage in population health outreach and screenings, and to participate in educational meetings on behalf of students, thereby more fully realizing the goal of true health and educational integration.

Promising Programs That Need More Time to Evaluate

Some Rales Model elements need additional longitudinal follow-up to estimate their impact because they were initiated later and/or data are not yet available:

Recess Redesign

Training and support to improve indoor and outdoor recess using a stakeholder-informed approach was popular and well-received. There is currently insufficient data to quantify the impact of recess redesign on academic and behavioral outcomes.

Mental Health Services

A new school-based mental health provider has increased the number of students treated per clinician and has added psychiatry services, which reduces barriers to assessment and treatment in the community. Enhanced communication and coordination among health center, school, and mental health staff is expected to benefit students, but there is insufficient data available to formally evaluate this prospect.

Financial Sustainability Considerations

In previous school-based interventions, the strongest evidence has come from projects that have been carefully planned and implemented and that have been able to maintain long-term grant or philanthropic funding to support extended follow-up [2]. Thus, financial sustainability is a key consideration not just for continuity of programs and services, but for the robust assessment of program impact.

Programs like the RHC are unlikely to be sustained by insurance billing revenue alone [3]. Gross billing revenue was modest (approximately $60,000/yr). Revenue might increase substantially if the RHC were a Federally Qualified Health Center (FQHC) [4]. The shift to FQHC status brings other reporting and regulatory obligations, however, which may offset some of the financial benefits.

Programs like the Rales Health Center are unlikely to be sustained by insurance billing revenue alone.

A key element of the success of the Rales Model was our ability to control all aspects of health services delivery at KIPP Baltimore, school health services and the SBHC, and to employ our own staff. School Health Services (SHS) are not billable, however, so future efforts must be cognizant of the ongoing financial obligation associated with providing them as plans for startup and financial sustainability are considered.

Public funding can provide a more consistent and integrated source of support for school health programs. SHS are typically funded through school district budgets. SBHCs are often funded through local health departments, school systems, FQHCs, hospitals, and health systems. Some school health programs can access federal grant monies. Others receive support from small state grant programs. 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. Key components of the Kirwan Commission's report, Blueprint for Maryland's Future, include funding for SHS and SBHCs in schools with a high concentration of poverty. These changes have the potential to alter the landscape of school health in Maryland. The Blueprint bill was vetoed by Governor Hogan this spring. It may be reconsidered in the coming legislative session.

Gaps in public funding for school health put pressure on philanthropy. Ideally, philanthropy can help start or seed new programs and fill gaps with increasing fractions of operating costs borne by public and healthcare dollars but it is not sustainable to rely on philanthropy alone. Some creative solutions have been offered to try to drive additional public funding for new SBHCs, in particular. For example, in Chicago, a coalition worked with city government to levy taxes on e-cigarettes and used tax increment financing (TIF). Other organizations, including, for example, the Healthy Future Fund, provide loans and tax credits for financing of new FQHCs [3].

Cost-Benefit and Systems Alignment

The costs of the Rales Model are substantially higher than a traditional health suite/SBHC combination, both because of robust clinical staffing and because of the focus on whole-school wellness, family advocacy, and parent engagement. RHC care generates $4.20 of net social benefit for every dollar invested [5] and saved the healthcare system an estimated $420,800. There are challenges, however, in leveraging these cost savings for scaling. 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 has been stymied by "wrong pockets" problems [6]. Investments may take years or decades to produce benefit, and, when they materialize, benefits may accrue to other sectors [6]. 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, and cost-sharing. Linked health and educational data systems and a consistent approach to addressing privacy laws (HIPAA/FERPA) to support communication are also essential. While the COVID-19 pandemic has temporarily disrupted each of these sectors, there may be opportunity to advocate for cross-sector alignment and joint investments in the post-COVID-19 era. The pandemic has highlighted the critical interdependencies among healthcare, education, and public health. The Rales Model is well-positioned to step into this gap.

Understanding the often patchwork funding landscape of School Health Services and SBHCs is an important first step in launching a new fully-integrated school health program like the Rales Model. Funding from school systems will be linked primarily to academic outcomes such as absenteeism and test scores; 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 or other quality metrics. These measures are increasingly tied to reimbursement for hospital systems. Targeting outcomes that most impact funders' bottom lines may make programs most financially viable; however, keeping the needs of students and 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.

Results in Context

There are several factors that influenced the implementation of the Rales Model at KIPP Baltimore, described briefly below.

The Baltimore Unrest

The unrest, which occurred four months before the Rales Model was launched at KIPP, was sparked by the death of Freddie Gray, who was from West Baltimore. The unrest was a source of trauma and disruption and set the stage for ongoing conversations inside and outside of the school around racial justice, anti-racism, and implicit and explicit racial bias. These factors influenced school culture and climate and students' families', and staff members' wellbeing. The uprising has been correlated with significant increases in absenteeism over time among Baltimore City School students [7].

Constrained Budgets

Although per-pupil funding has been historically very low in Baltimore in comparison to student needs [8], budgets were further tightened and there was increasing budget pressure on Baltimore charter schools, including KIPP. This led to some staff losses and an increasing structural budget deficit. The role of budget challenges cannot be overstated in the ability of the school to adapt to and respond to children's broad array of educational and social needs. Both inadequate funding and constant uncertainty about budgets were major challenges throughout the KIPP/Rales Center partnership.

Leadership Changes

KIPP Baltimore had two executive directors and three middle school principals in five years. Initiatives that started to take hold were sometimes set aside in favor of new priorities and emerging needs. New principals, trying to get their academic feet under them, were often pressed for time to lift new programs. School staff and leadership turnover has also been highlighted as a particular challenge for school-based health programs in other settings [3].

Increasing Academic Need

Data on kindergarten readiness demonstrate that, over time, students entering kindergarten were less ready to learn, creating additional pressure on the school to support struggling learners.

Move to a New School

Persistent issues with building temperature prompted the school to move at the beginning of Year 5. Rales Center staff had to re-build and re-launch the Rales Health Center from the ground up, including new regulatory approvals, which was a substantial additional lift. The move to the new school led to turnover of approximately 1 in 5 KIPP students.

A Pandemic

Just a few months into the first year on the new KIPP Baltimore campus, the COVID-19 pandemic forced KIPP to shift all learning to distance-based strategies. This prevented implementation and evaluation of the model in the way it was designed during Year 5.

In the context of real-world challenges, the Rales Model has demonstrated promising impacts on student health and achievement.

KEY LESSONS LEARNED

Relationships Are the Foundation

In many communities, including in Baltimore, scholars have noted the rise of "system avoidance"-- the active disengagement of parents and caregivers from public services, including schools, healthcare, policing, and public benefits programs [9,10]. Consistent with system avoidance, in Baltimore, rates of enrollment in SBHCs are around 40%,compared to near 90% in more affluent suburban communities, and rates of social service uptake remain low. However, more than 75% of students were enrolled in the RHC, demonstrating that 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 provides a safe, affirming, and supportive environment and serves as a pathway to system engagement for many families.

Students seek out RHC staff not just for medical care, but for a therapeutic hug and pep talk, a confidential conversation, or a high five to celebrate a milestone. Over time, RHC staff have built relationships in which families experience true partnership in caring for their children. Qualitative data from teachers and families bear this out:

> *"If [RHC staff] find out something's going on in my personal life, they're reaching out like, 'How can we support you?' It just doesn't end at school and they really care about us. I really care about them, and we're just so lucky to have them"*

> *"It's kind of night and day between what we had before, because I have a lot of students that just need family. The family needs support, too.That's been huge."*

KIPP staff also recognize the critical role of these relationships, for example, in a recent broadcast email expressing gratitude for RHC staff:

> *"[You] look after our babies when they are feeling blue; You smile, you laugh, you even give a hug; Which makes our KIPPsters feel safe and very loved; I may not say it often but one thing is true; Rales is amazing and we are grateful for you…"*

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 the program work. There will be challenges and changes, particularly when building a program that is very different from traditional school health. Finding 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 and disruptive mission is worth it. Poor fit, especially on a small team, limits program reach and impact.

The Importance of Being There

We have witnessed the powerful impact of having highly skilled pediatric clinicians in the school building every single day.The sense of safety that comes with this kind of onsite support is what prompts families of students with complex or chronic conditions to feel comfortable sending their children to school. Everyday interactions with students and their families, particularly when kids 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 facilitates trusting relationships. This can be a long process, especially for a new program. It is well worth the wait because these relationships facilitate true partnership and integration.

> *"There's so much potential in Rales having a long-lasting, clear impact on student and family wellness and staff wellness." - KIPP Staff Member*

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 touch-points to provide updates on the partnership, reflect on priority alignment and outcomes, and adjust as needed are essential. Operationally, scheduled meetings to discuss coordination and collaboration at the program and student level are a critical way to make the most efficient use of resources. Specific attention to appropriately structured agreements for data exchange and individual releases of information from students and families are both likely to be needed to facilitate these conversations.

Data are Essential

Program evaluation is key to demonstrating impact and securing long-term funding. Integrated data systems that can be easily used for evaluation are not the norm in school health. 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 in programming related to a high impact condition. For example, hiring an additional part-time medication tech to administer asthma controller medications or provide asthma education.

Prepare for the Long Haul

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

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.

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 increasing engagement with the Rales Health Center, better chronic disease management, better attendance among students with chronic conditions. We have identified critical program components that can be used in scaling efforts to improve the health, wellbeing, and academic success of students in Baltimore and beyond.

REFERENCES

1. 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/wscc-model.aspx.
2. Murray NG, Low BJ, Hollis C, Cross AW, Davis SM. Coordinated school health programs and academic achievement: A systematic review of the literature. J Sch Health. 2007;77(9):589-600.
3. 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.
4. Health Resources and Services Administration. FY 2019 School-Based Health Center Capital (SBHCC) Program (HRSA-19-073) technical assistance. U.S. Department of Health and Human Services; 2019. Available from: https://bphc.hrsa.gov/programopportunities/fundingopportunities/sbhcc/index.html.
5. 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.
6. 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.
7. Durham RE, Shiller J, Connolly F. Student attendance: A persistent challenge and leading indicator for Baltimore's community school strategy. Journal of Education for Students Placed at Risk. 2019;24(3):218-43.
8. City Schools releases its vision for a world-class education system for Baltimore's youth [press release]. January 19 2019. Available from: https://www.baltimorecityschools.org/node/987.
9. Weaver VM, Geller A. Transforming police surveillance of kids to the civic incorporation of youth. Working Papers,WP 19-08-ff, Princeton University, Woodrow Wilson School of Public and International Affairs, Center for Research on Child Wellbeing.
10. Brayne S. Surveillance and system avoidance: Criminal justice contact and institutional attachment. American Sociological Review. 2014;79(3):367-91.

THANK YOU FOR YOUR SUPPORT

To Our Loyal Supporters

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.

To learn more, please visit https://ralescenter.hopkinschildrens.org/

RUTH AND NORMAN RALES
Rales Center
for the Integration of Health and Education

JOHNS HOPKINS CHILDREN'S CENTER