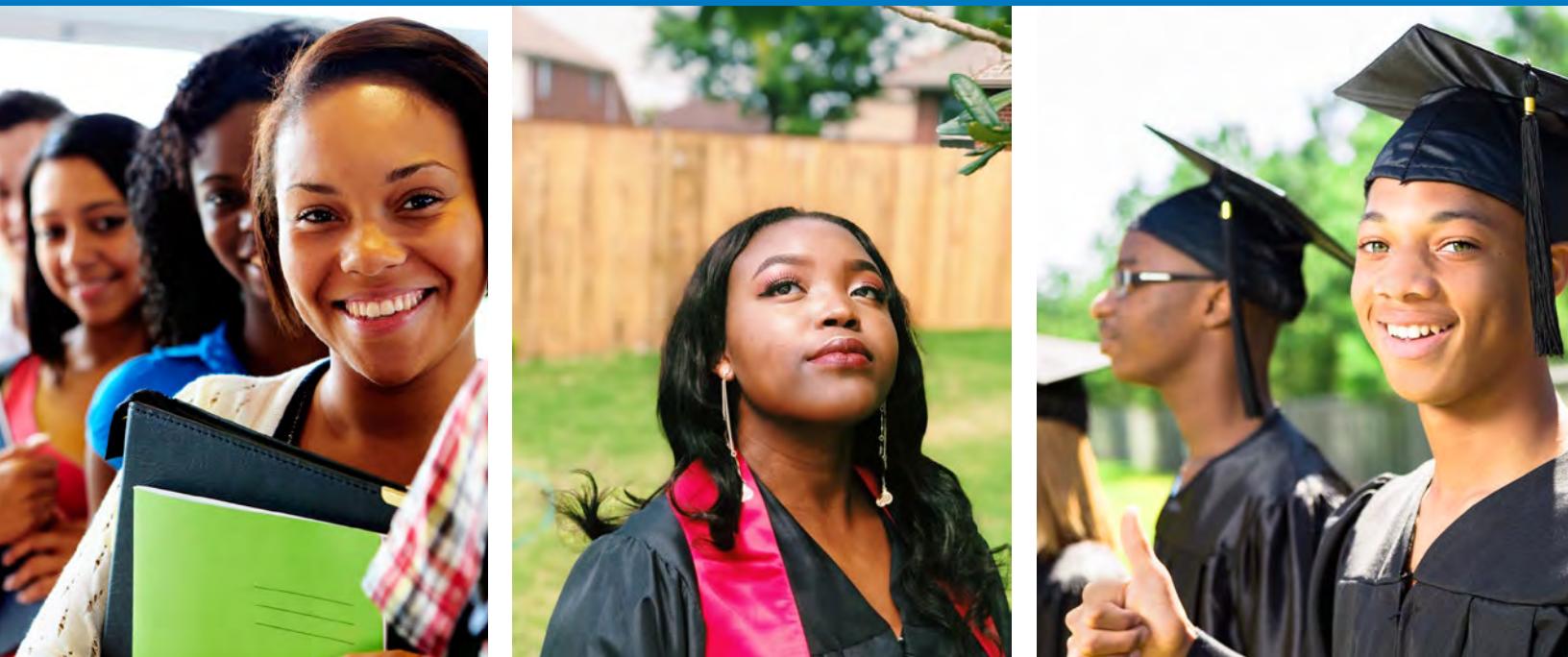


Integrating Public Health in Schools to Improve Graduation



AMERICAN PUBLIC HEALTH ASSOCIATION
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2019

Acknowledgments

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The authors wish to give special recognition to the school and community leaders who have worked to integrate public health services into their work to address and prevent social barriers to learning and health for vulnerable youth to thrive in the face of adversity. Their resilience inspires us to help others become more engaged in advancing equity in schools to ensure high school graduation and future potential.

APHA also wishes to thank the experts who were instrumental in the design, delivery and evaluation of the program, including the following consultants: Olga Acosta Price at the Center for Health and Health Care in Schools, Possibilities for Change and JFM Consulting Group.

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"Having APHA/CSHE's investment ... lent tremendous credibility to our efforts and ultimately got us into doors that were previously closed, helped us gain new partners ... and offered us greater opportunities to share and disseminate this work." — School-based health center administrator

Background and Introduction

Creating opportunities despite the odds

"A student was dealing with parental death and other serious issues. However, s/he was the poster child for the perfect student — never sad, just normal. After being identified as having suicide ideation, the student was admitted to the hospital. When s/he returned to school s/he told me, 'I just want to say thank you. I don't know where I'd be right now if you all hadn't done this.'" — High school principal



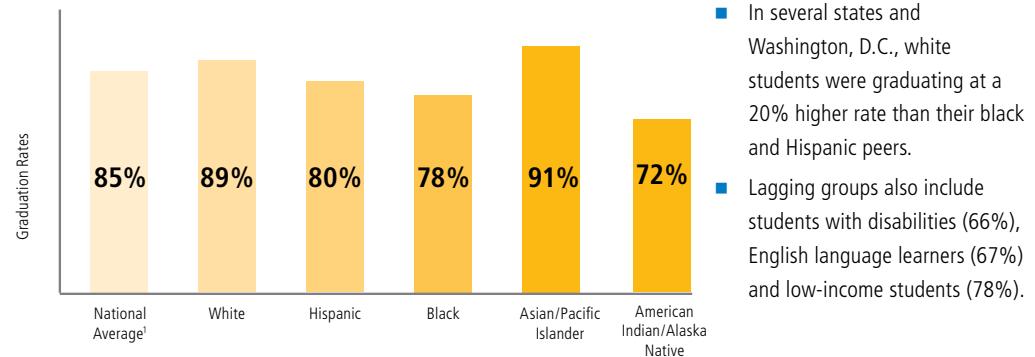
STUDENTS MOST AT RISK OF NOT GRADUATING

Students subjected to harsher punishment and bullying at school:

- **Black boys:** 8% of student body; 25% of out-of-school suspensions.⁶
- **Black students:** 15% of student body; 31% of arrests or police referrals.⁶
- **Students with disabilities:** 12% of student body; 26% of out-of-school suspensions.⁶
- **Lesbian, gay and bisexual students:** 2x more bullied, miss school for safety concerns and report feeling "sad or hopeless." 4x more suicide attempts.⁷
- Nearly 9 in 10 **transgender students** report experiencing verbal harassment, and over half have been physically harassed because of their gender expression.^{4,8}

We never know the whole story of why a student decides to drop out. What we do know is that it is easier for a student to be pushed out of school than to remove the odds that are stacked against his or her graduating from high school on time. Some of these odds are food insecurity, exposure to trauma and violence, and substandard living conditions. When left unmanaged over a prolonged period of time, these conditions cause students to experience chronic stress, which can lead to suicidal thoughts and disengagement from school and lead to the life-altering decision of dropping out. The pathways to and consequences of dropping out perpetuate an insidious cycle of poverty, disparities and entrenched inequities that underscore why graduation has become a public health priority.^{1,2}

Achievement Gap: 2016–17 Graduation Disparities^{3–5}



¹ Includes other race/ethnicity categories not separately shown.

Note: When disaggregated, stark disparities in graduation rates exist among members of the same racial/ethnic group.

The Program to Improve Graduation is bridging gaps in knowledge and practice for school-linked professionals to act as key ambassadors in advancing health and educational equity to prevent dropout and improve graduation rates. Grounded in the social-ecological model, the program facilitates the integration of essential public health services in schools and adjoining SBHCs to remove schoolwide barriers to health and learning. Delivered in two phases, the program consists of an online series, capacity-building assistance (CBA), followed by practice-enhancing technical assistance (TA). CBA is designed to deepen participants' understanding of topics including the social determinants of health, high school graduation as a public health priority, adolescent neuroscience and the impact of chronic stress on learning and behavior, and the value of strategic partnerships with students and communities to advance shared

goals. TA follows with guidance and resources for school and community teams to identify and respond to the root causes of issues facing their students at the schoolwide and systems levels. TA offers half-day professional development workshops on motivational interviewing in partnership with Possibilities for Change, LLC and chronic stress in partnership with the Center for Health and Health Care in Schools. Needs assessments developed and delivered in the program include RAAPS-PH in partnership with Possibilities for Change, LLC, discussion groups with students and school-linked professionals, and school-community environmental scans.

Before the program, participating schools were not routinely assessing the prevalence of health, social, behavioral and academic risk factors affecting their entire student bodies. Through the needs assessments, schools found that over one-quarter of their students experience stress-inducing circumstances and mental health symptoms. Key examples include feeling hopeless, neglected, misunderstood, unsafe and fearful in the school and community and having issues with anger, aggression and suicidal ideation. Armed with this information and the intensive technical assistance provided by CSHE, schools became better equipped to focus on population-level prevention and intervention.

This report describes how more than 600 professionals across 15 schools, SBHCs, local health departments, community organizations and other agencies are key ambassadors in advancing health and educational equity for over 15,000 students in urban communities.

Their progress in institutionalizing practice and policy changes that reduce the impact of graduation barriers represents varying degrees of success along a continuum — from paradigm shifts among staff, to visible and palpable changes within the school building, to direct impacts on students inside and outside of the classroom.

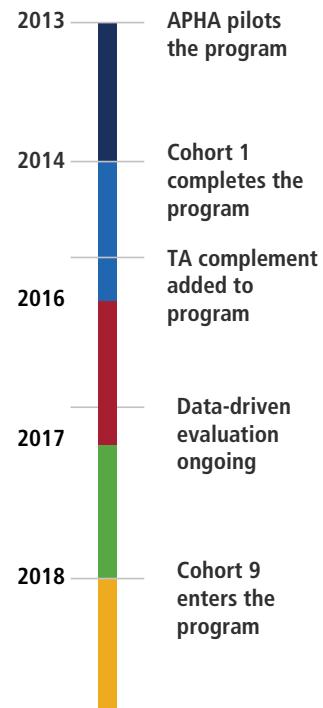
By creating a pipeline of school-linked professionals with competencies in public health across the country, the program offers a model for improving graduation rates in America and preventing marginalized populations from persisting in deleterious cycles of social, economic and health hardships.

Evolution of our program

The Program to Improve Graduation grew out of prototype projects to achieve health quality and equity and prevent dropout among vulnerable populations through an expanded model for school-based health care. This early work yielded a range of findings and lessons learned, essentially identifying SBHCs as key ambassadors to coordinate resources to meet students' nonacademic needs. However, they would need intensive support to effect outcomes beyond individual and clinical encounters.

Informed by the results of this earlier work, and with funding leveraged across multiple philanthropic and governmental agencies, CSHE's professional development program emerged.

The program uses the social-ecological model as a framework for building capacity within schools to remove schoolwide barriers to health and learning. Capacity is strengthened through the integration of essential public health services in school settings — such as strategic collaboration between SBHCs, schools, their systems and communities — to institutionalize practice and policy changes that ultimately prevent dropout.

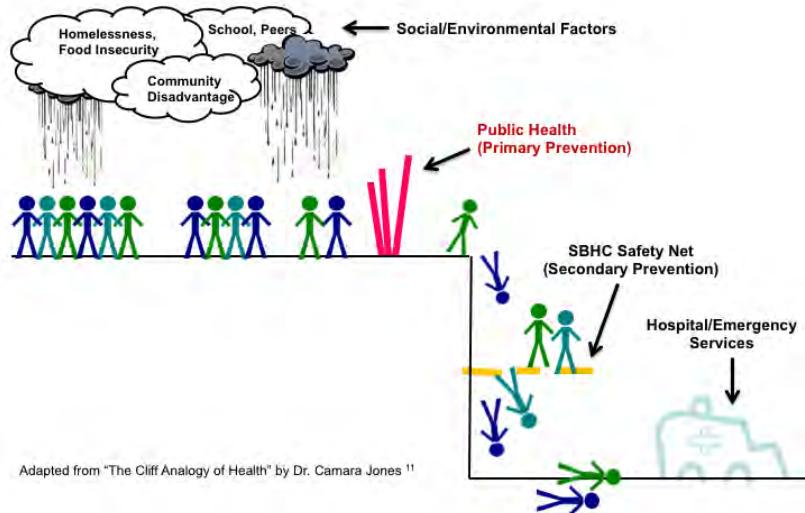


Key Findings—Prototype Projects

- Youth can be powerful agents of change when they are equipped and empowered to do so.
- When local community members are informed and equipped, they will mobilize and advance systemic change within and on behalf of their communities.
- Improving the nation's health disparities requires integrating multiculturalism throughout the work.
- SBHCs are not necessarily equipped to expand beyond clinic-based primary care to intentionally implement systems-level strategies. Therefore, SBHCs should possess a range of proficiencies and skills to facilitate the integration of public health paradigms in traditional school and clinic settings.
- School-linked resource teams composed of experts (in fields such as health care, education, community engagement, leadership development, multiculturalism and evaluation) are necessary to drive transformation.

Funded by the W.K. Kellogg Foundation and the Kresge Foundation.

Moving Beyond Individual Encounters: A Schoolwide Response

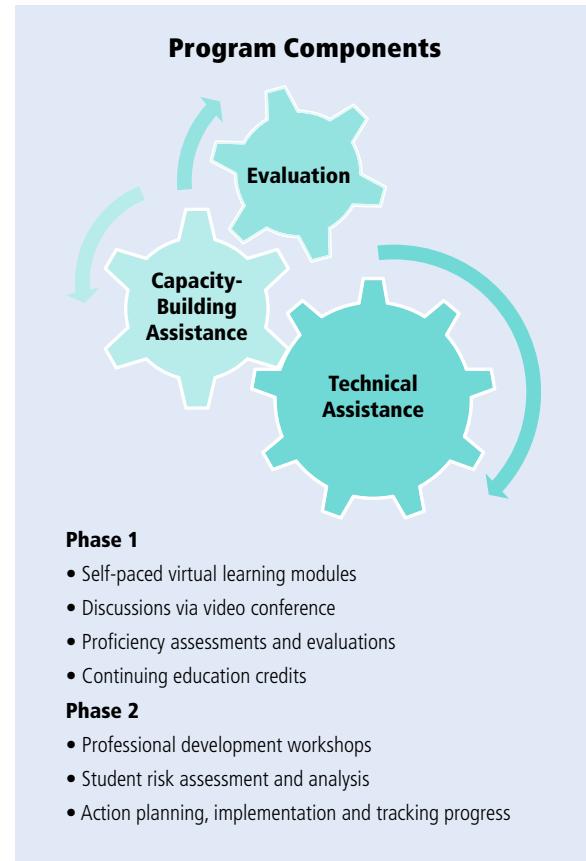


Our Approach

Program components

The Program to Improve Graduation is delivered in two phases. Phase 1, CBA, provides over 20 hours of self-paced learning modules to deepen participants' understanding of key topics including the social determinants of health, adolescent neuroscience and the impact of chronic stress on learning and behavior, using population needs assessments to inform strategy and practice, and strategic partnerships (including those with youth) for advancing shared goals. Each module is followed by a facilitated video conference, proficiency assessment, and feedback evaluation as prerequisites for continuing education credits. During phase 2, TA teams receive guidance and resources to implement what they've learned in phase 1 and ultimately respond to the root causes of issues facing their students at the schoolwide and systems levels. The needs assessments^a included in the program are RAAPS-PH, grade and gender-specific discussion groups with students and other discussions with staff, and community environmental scans. This phase also offers half-day professional development workshops: (1) Managing Chronic Stress in Urban Minority Youth (for all school staff); and (2) Improving Staff-Student Interaction in Challenging Environments (motivational interviewing).

To foster small-group learning and allow for midcourse enhancements, the program is delivered in successive cohorts of up to three school teams at a time. The teams generally include a school principal (and/or designated liaison), the SBHC manager, an SBHC sponsoring organization administrator, and one or more appointed school or clinic staff members. Additionally, strategic partners from community agencies are involved in meetings and activities at program sites.



Program strategy

To operationalize the program's framework for success, participating school-linked teams are coached to devise and implement a three-level strategy for change in phase 2.

Individual and small-group level	Schoolwide level*	Systems level*
Approaches that impact individuals and groups, inside and outside of clinical settings.	Approaches that impact the entire student population.	Approaches that initiate the revision or creation of policies and practices in the clinic, school, school district, community and beyond.

* While RAAPS-PH enables authorized clinic and school personnel to intervene when imminent threats to individual students arise (i.e., suicidal ideation), the program prioritizes the use of aggregated outcomes from RAAPS-PH and other assessments to inform schoolwide and systems changes in policy and practice.

^a Quantitative assessment versions: (1) Rapid Assessment for Adolescent Preventive Services–Public Health (RAAPS-PH), for middle school and high school–age students; (2) Rapid Assessment for Adolescent Preventive Services–Older Child (RAAPS-OC), for upper elementary school–age students; and (3) Rapid Assessment for Adolescent Preventive Services –Older Child Public Health (RAAPS-OCPH). Other data are from environmental scans of school-level or related information and trends (i.e., school attendance, suspensions, expulsions, and graduation rates; Youth Risk Behavior Surveillance System (YRBSS), community data; and existing policies and practices).

Over the long term, with each strategy level acting in unison, schools can expect to accomplish the following:



Increase attendance rates



Reduce health risks



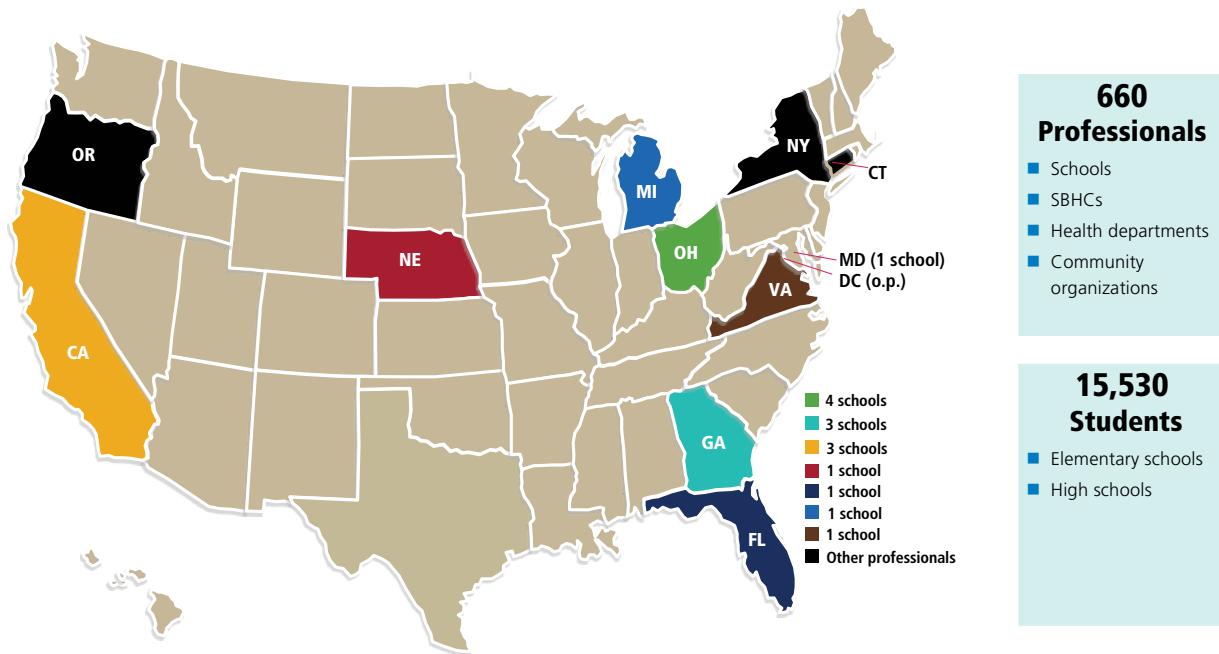
Decrease suspension/expulsion rates



Increase graduation and health outcomes schoolwide

Program reach

To usher in a new group of schools working upstream to improve health and educational equity among students of color, CSHE's program has reached over 600 professionals across 15 schools, SBHCs, health departments, community organizations and other agencies, which together have responsibility for over 15,000 students, spanning 12 states.



Program implementation analysis

Guided by the program's strategy and using data from participant surveys, this section assesses the fidelity with which the program was implemented and the overall strengths and weaknesses of its components. As detailed in the "Our Impact" section that follows, the data generally show that most respondents appreciated the overall method used to facilitate the professional development activities. Most felt the information provided in phase 1 offered new ways of thinking about practice, while some thought it did not always provide new material. Still, few respondents offered suggestions for overall improvement, aside from increasing opportunities for practical application of concepts, in-person interaction and peer exchanges.

Nearly all respondents felt that phase 2 was "somewhat important" (66.6%) or "very important — we couldn't have made the strides we did without it" (22.2%) for integrating public health in school settings beyond what phase 1 provided. The process to influence a paradigm shift among participants was demanding but critical to advancing equity in the schools. To create this shift in school culture, participants were encouraged to establish collaborative partnerships within and outside of the school walls for a broader impact beyond reactive and one-time interventions.

"[The training] was a little like drinking from a fire hose, a lot of new information for me and the team. It [was] greatly helpful to verse me in overall public health in a school-based setting and what population health looks like ... and what [people] are really struggling with across the country in trying to make this work." — Interview respondent

Overall, CSHE's investment focused heavily on helping the schools incorporate public health services (i.e., utilizing population needs assessments to inform strategy and practice and establishing strategic partnerships to advance shared goals) into their practices, which ultimately enabled them to devise three-level strategies for change.

Collaborative partnerships

The program's focus on strengthening cross-sector partnerships to address schoolwide health and educational success addresses a key lesson learned from CSHE's prototype projects. Overall, relationship development is a priority and requires sufficient time. The Program to Improve Graduation has evolved into a promising model for schools and their allies to interrupt conditions that cause students to drop out of school early. Given the complexities of institutionalizing policies and practices that impact population health in school settings, participants benefited from the strategic support that CSHE and other partners provided to help manage the scope and scale of transformation. Despite local expertise and readiness, prior to the program, neither the educators, the SBHC providers nor community partners were equipped to move beyond silos or individual-level wraparound service delivery to *collaboratively* advance systems change.

Collaboration was most successful in schools and SBHCs led by proactive and visionary administrators, with unwavering support from their colleagues and community partners. This led to significant progress despite unavoidable setbacks.

To the extent possible, CSHE made several adjustments to the program's delivery during the earliest cohorts to ensure that significant resources were invested in strengthening school, SBHC and community collaboration. For instance, the program's recruitment and participation requirements changed to engage key stakeholders across sectors beginning with phase 1. With the first cohort, SBHC providers were invited to participate in advance of their education partners because of their availability and the likelihood that they could bring others on board given their orientation to the concept of health and education as two sides of the same coin. However, this method proved to be less than ideal, often resulting in CBA teams composed solely of health professionals and possibly contributing to inconsistencies in team members' understanding of program expectations, their ability to transfer concepts into practice and SBHC burnout. Under the revised process, cross-disciplinary partnerships were put in place before changes in practice had the chance to be met with resistance or challenges.

Capacity-building assistance incorporated various learning tools to encourage regular engagement across the roles held by participants in the program. Most SBHC participants said they had not considered participating in school staff meetings regularly or inviting school personnel to their meetings before they completed the module on partnerships.

TA expanded participants' views so that they now consider nontraditional partners who can support them in advocating for additional social services within the school building as well as new ways to expand the scope of existing resources to include public health services for dropout prevention. Generally, CSHE and the program participants benefited from a reciprocal relationship of feedback, adaptation, growth and improvement. One of the most highly rated elements of the program: opportunities for in-person engagement through professional development workshops, site visits and supplemental professional conferences. CSHE's frequent coaching, on-site technical strategizing (to generate ideas and solve problems) and ongoing reinforcement of skills were essential in schools' progress, particularly in settings where local coordination was not strong before the program.



Overall, relationship development is a priority and requires sufficient time. Given the complexities of institutionalizing policies and practices that impact population health in school settings, participants benefited from the strategic support that CSHE and other partners provided to help manage the scope and scale of transformation.

Over the course of technical assistance , school-linked teams tested CSHE's theory about the value of strategically communicating and collaborating to effectively implement the changes they were seeking. They realized that they could reach more students by leveraging resources from public health agencies, hospitals, food banks, colleges and others.

Ultimately, the schools are making significant strides in their efforts, but the need for stable local coordination remains. Even with CSHE's support and that of various community partners, advancing equity in school settings is an intricate feat that requires consistent coordination for managing fundamental activities like monitoring risks and mobilizing partners for action. Program participants often expressed how difficult it was to assess population needs and to design and evaluate systems-focused interventions while juggling their daily work. This sentiment was more pronounced at program sites where school administrators were not consistently engaged or where local capacity for community-engaged school structures did not already exist.

Challenges

The project's timeline — and in some cases the quality of outcomes — often suffered palpable setbacks due to the level of commitment and follow-through required of school-linked teams and the resources available locally or from CSHE.

Despite local enthusiasm and endorsements from stakeholders during the initial site visits, the following challenges were present to varying degrees across all sites:

- School leadership turnover and inconsistent engagement
- School scheduling conflicts
- School and/or other policy restrictions
- Limited perspectives
- Limited resources

School leadership turnover and inconsistent engagement. Successful implementation of program concepts was linked to strategic leadership from education administrators and their systems. In addition, mounting evidence has indicated that traversing the program's levels of impact (individual, schoolwide and systems) is possible only with school principals' active involvement and, at minimum, passive buy-in from the district. In some cases, unreliable or nonexistent support from school leadership led to burnout and feelings of defeat among other team members. For instance, some teams felt that they were juggling competing priorities due to misalignment of the program's activities across school and clinic settings. Furthermore, some were less likely to effectively engage and galvanize youth as champions in this work when they felt burned out or short on time. Put simply, this work needs a commitment from the top down to execute a shared vision for student success in urban settings. In some cases, lack of such a commitment caused early withdrawal from the program.

School scheduling conflicts. Active involvement of school and/or district leadership may have helped avert scheduling setbacks with key program activities such as the schoolwide professional development workshop on chronic stress and administration of RAAPS-PH. In addition to the anticipated uncertainty associated with school settings, scheduling the activities was nearly — and in some cases literally — impossible. As a result, some schools opted out of the chronic stress workshop, making it difficult to ensure continuity and follow-through with essential activities. To avoid scheduling-related

challenges, participants suggested that scheduling requests be made at least one year prior to implementation or when the district calendar is being developed.

School and/or other policy restrictions. Despite the fact that student information was aggregated, de-identified and to be used for the purpose of informing schoolwide action plans, various concerns and setbacks surrounded accessing student records and administering RAAPS-PH. Several schools were unable to proceed beyond phase 1 due to such restrictions. In two other cases, because the restrictions were beyond the control of program participants, CSHE had to alter the program's delivery to maintain partnerships and ensure that youth would benefit from some level of integration. For instance, against CSHE's advice, these schools elected to remove student identifiers from the assessment to accommodate district concerns. This alteration diminished the team's ability to use the survey to its full capacity and may have affected the team's ability to intervene with students facing imminent threats (e.g., suicidal ideation).^b

Limited perspectives. In the worst cases, challenges were compounded when teams were inconsistent in their understanding of the distinctions between "individual and small-group interventions" and "systems-level strategies" for health and, ultimately, high school graduation. These teams withdrew from the program before they could fully grasp the shift in thinking that other participants experienced.

Limited resources. The youth discussion groups varied widely in delivery and scope despite CSHE's best efforts to streamline this component through intensive training and written guidance. CSHE efforts were often insufficient in the absence of local facilitators who met its criteria to support delivery and analysis and resource support beyond distributing food and gift cards to students. In addition, because other factors posed significant delays to the project's timeline, there was not always enough time for schools to implement the groups consistently. As a result, data collection was not always consistent and reliable.

Alternative deliveries

Funding provided by Kaiser Permanente (KP) and the District of Columbia Department of Health (DCDOH) allowed CSHE to expand the program to additional schools and professionals. These alternative deliveries often occurred concurrently with the traditional model described above.

KP. In 2015, KP funded CSHE to partner with the School-Based Health Alliance to deliver a condensed version of the professional development program to selected schools that were already participating, in an effort to improve students' healthy eating, active living and social-emotional health, and school employees' wellness. Although this partnership proved to be challenging, CSHE was able to work directly with four schools that ultimately completed action plans to implement multilevel strategies.

One of the valuable yet often challenging aspects of this partnership was CSHE's expeditious work to expand the focus of programmatic content to include elementary schools. This expansion required a reduction in the number of modules and related content, revisions to workshop materials, and the development of an additional public health version of the RAAPS survey for older elementary children, RAAPS-OCPH. Although most revisions were executed in time for delivery to the KP cohort, the public health version for upper elementary school-age students took more time to develop. As a result, elementary schools in the KP cohort administered the non-public health version of the survey, which omitted questions about root-cause social risks that impact health and learning. Fortunately, the public health version was available in 2016 when CSHE recruited an additional elementary school (non-KP) into the standard professional development program.

For the most part, aside from the atypical delivery to the KP cohort, schools experienced similar successes, challenges and setbacks. The extent to which CSHE was able to deliver the program as intended, and in which participating sites made significant strides in advancing the three-level approach, depended heavily on local readiness to expand beyond existing scopes of practice and existing organizational capacities and resources.

^b Fortunately, in this particular school, most RAAPS respondents were not newly identified cases of suicidal ideation. As a result, the team felt confident about continuing intervention with students who were already connected to mental health services.

DCDOH. The DCDOH project included a series of three workshops to provide SBHCs with a foundation for increasing their understanding of public health strategies that advance health and equity in the K-12 population. This delivery reflects CSHE's solution in accommodating the revised requirements of DCDOH following a series of challenges in implementing the program to scale. Part I was titled Advancing Population Health and Equity in Schools; Part II, Managing Stress in Urban Minority Youth Workshop for School Staff; and Part III, Improving Staff-Student Interaction in Challenging Environments.^c The evaluations from each workshop were overwhelmingly positive. All participants rated the workshops as a productive use of their time and reported increased knowledge of public health and schoolwide strategies to advance health and academic success for their students. Many of the participants asked for additional training and/or technical assistance on assessing schoolwide needs, conducting action planning and implementing strategies to address social determinants of health at their schools. There was a high demand from workshop participants for more intensive training and complete implementation of CSHE's program in their schools.

^c Parts I, II, III were modified in content and delivery specifically for the DCDOH project.

Our Impact

Evaluation methodology

JFM Consulting Group conducted a mixed-methods evaluation of the professional development program designed and offered by CSHE. The evaluation included data from the following sources: (1) assessments: RAAPS-PH, youth discussion groups, environmental scans; (2) action plans: school-specific, focused on priority needs assessment findings; (3) proficiency assessments: measure participant mastery of core concepts in CBA; (4) evaluation surveys: explore participants' experiences and retainment of concepts at least six months after their initial engagement; (5) workshop surveys: assess the value and impact of professional development workshops; and (6) interviews: conducted with school, health center, and CSHE staff to gain greater insight regarding the data collected from other sources and ascertain lessons learned from project implementation including technical assistance provided to school teams.



Evaluation questions

The following questions guided the evaluation of the five-year impact of the program:

1. What progress have the schools made in integrating public health services for dropout prevention as a result of participating in the program? What changes have the schools made? How sustainable are these changes? How consistent are the changes with CSHE's model (i.e., what is their fidelity)?
2. What changes in policy, programs and/or practices are planned or underway to reduce chronic stress among students and staff?
3. To what extent do program participants understand and retain the components and concepts of the professional development program?
4. How do participants appraise the quality and effectiveness of the program?

Description of schools

Table 1 lists all 15 schools that participated in the program in chronological order by the year that they joined the program. Additionally, the schools are split into two groups: schools that were not funded by KP (non-KP cohort), and those funded by KP (KP cohort).

To ensure confidentiality, this report uses aggregated data and does not link specific schools and locations to outcomes. One school only completed the first phase of the program and could be represented only in the demographic and CBA-specific data. Due to the timing of the evaluation, four schools had not completed the program and could not be included in the results. Two of these schools entered the program in 2018 and were too new to be documented in a substantive way. Two others were still in the implementation phase and could be represented only in the demographic, RAAPS-PH, and discussion group data. The remaining 10 schools completed the program with action plans and intervention strategies in place, and this evaluation report documents their progress toward advancing outcomes to increase on-time high school graduation rates.

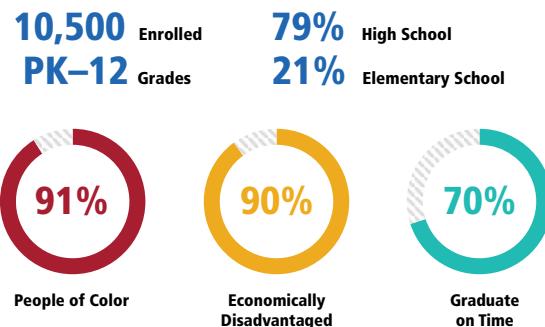
Table 1: Schools, Locations and Cohorts

School	Location Information	Program Year
Non-KP Cohort		
Aiken High School	Cincinnati, OH; Cincinnati Public School District	2015
Skyline High School	Oakland, CA; Oakland Unified School District	2015
Thomas Jefferson Senior High School	Los Angeles, CA; Los Angeles Unified School District	2015
Boulevard Elementary School	Cleveland Heights, OH; Cleveland Heights–University Heights City School District	2016
Omaha Northwest High Magnet School	Omaha, NE; Omaha Public School District	2016
Huguenot High School	Richmond, VA; Richmond Public School District	2016
Robert A. Taft Information Technology High School	Cincinnati, OH; Cincinnati Public School District	2017
Withrow University High School	Cincinnati, OH; Cincinnati Public School District	2017
Battle Creek Central High School	Battle Creek, MI; Battle Creek Public School District	2018
Jean Ribault Senior High School	Jacksonville, FL; Duval County Public School District	2018
KP Cohort		
John F. Kennedy High School	Richmond, CA; West Contra Costa Unified School District	2015
Lake Forest Elementary School	Sandy Springs, GA; Fulton County School District	2016
St. Frances Academy High School	Baltimore, MD; Alternative School	2016
Turner Elementary School	Albany, GA; Dougherty County School District	2016
Whitefoord Elementary School	Atlanta, GA; Atlanta Public School District	2016

Student demographics

Between 2015 and 2017, needs assessment data were collected from 12 of the 15 schools engaged. Among all 15, approximately 10,500 students were served across the country.

Some schools provided additional school-level data such as absenteeism and suspension rates. These data are included in vignettes, which begin on page 24.

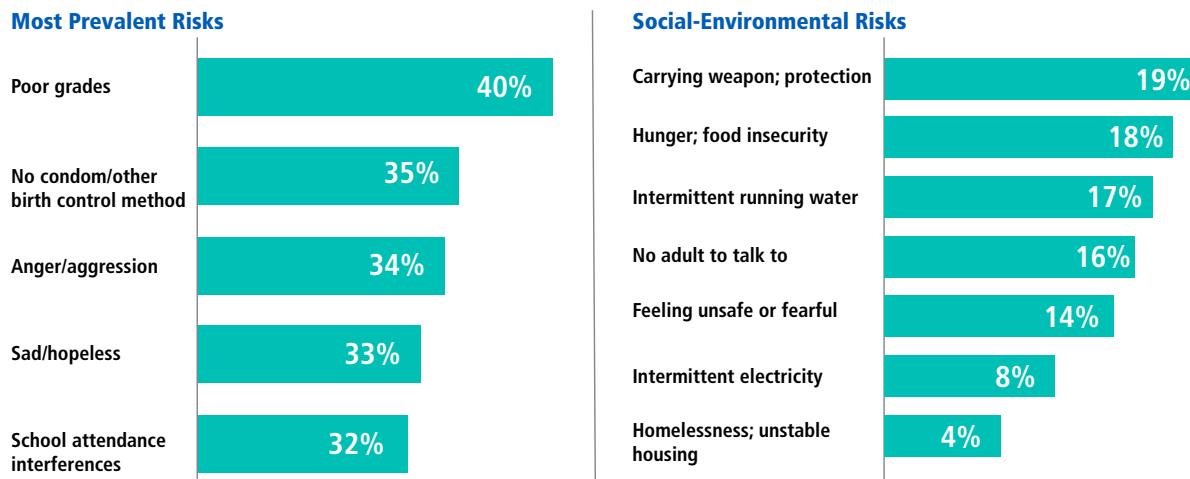


People of color: Students who identified as other than non-Hispanic white. Generally, multiple demographic trends emerged with one or two individual schools falling as outliers. Two schools had student bodies that were more diverse racially and ethnically, including greater representation of white, Native American, Asian, and multiracial students.

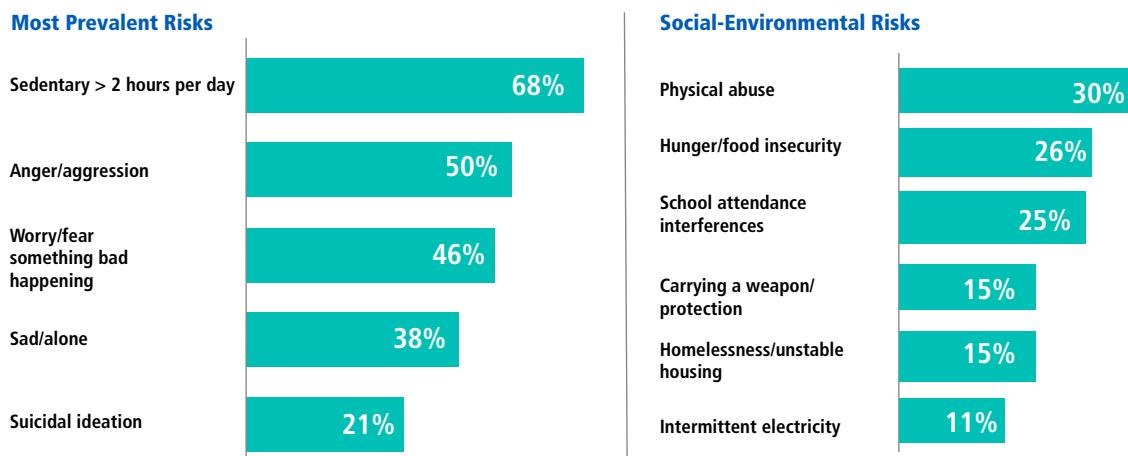
Economically disadvantaged: All but one of the schools tended to have student bodies where either 100% were eligible for free or reduced-price lunch or 70% or more were considered low socioeconomic status.

Key student risks: RAAPS

Middle/high schools. Across middle/high school respondents (eight schools), the most prevalent risks were identified. Over one-quarter of respondents indicated that they experienced school attendance interferences, felt sad or hopeless, felt angry and had issues with aggression, did not always use a condom and/or another method of birth control during sexual intercourse,^d and were not earning a C or better in all classes. Underlying these key risks and behaviors were educationally relevant social and environmental conditions that undermined student well-being, connectedness and performance in school.



Elementary schools. Across elementary school respondents (four schools), more than 60% of students reported being sedentary for more than two hours daily. Over 40% indicated that they felt angry and had issues with aggression, worried or feared that something bad would happen, and/or were worried about their body size.^e Over 30% felt sad or alone. Common educationally relevant social risks ranged in prevalence between 11% and 30%.



^d One school was an outlier, with 17% not always using protection.

^e One school was an outlier, with 28% worrying about their body size.

Key findings: student discussion groups

The stories and experiences that surround the quantitative schoolwide assessments are both compelling and alarming. Because general themes were identified in the discussion groups from both elementary and middle/high schools, the two groups are presented in this section together.

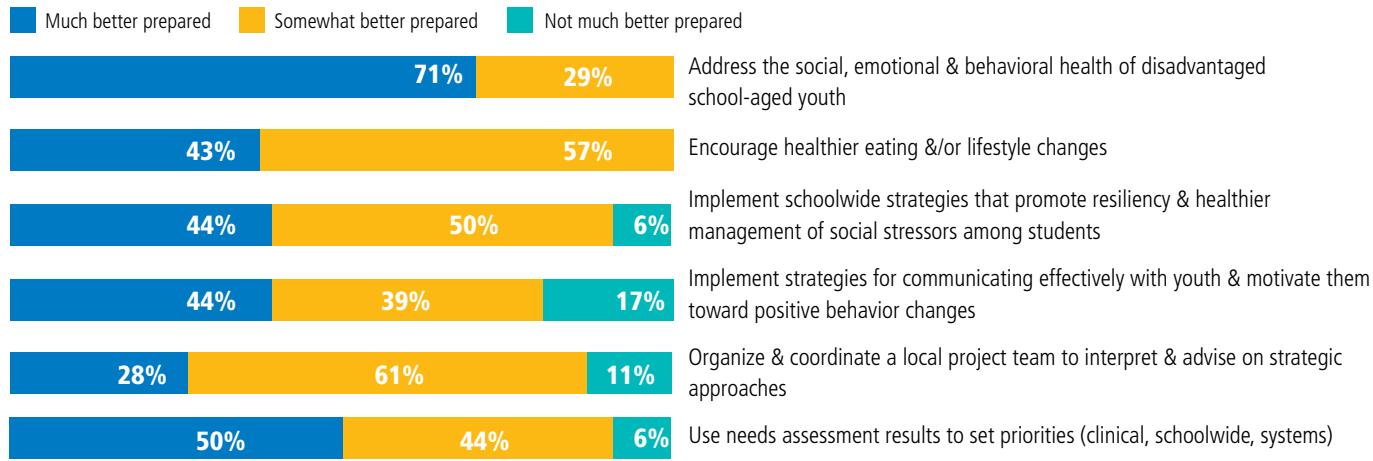
Common emerging themes	Student recommendations for improvements
<ul style="list-style-type: none">■ Feeling unsafe and fearful in school and the community■ Feeling neglected■ Burden of caretaking responsibilities (i.e., for younger siblings or elderly)■ Limited or poor-quality educational materials■ Feeling disconnected from school■ Worrying about intermittent access to basic resources such as running water and electricity■ School's limited focus on academic career counseling■ Doing homework with slow or no Wi-Fi at home■ Being tired because of having to take buses that arrive before 7a.m.	<ul style="list-style-type: none">■ Improving staff-student relationships (i.e., knowing each other personally, being kind, modeling positive behaviors)■ Improving overall school appearance (i.e., ambient lighting, student-designed murals, reliable maintenance)■ More opportunities for career and economic development■ Peer mentoring■ Time and space to calm down before escalation■ Physical activities for stress relief■ Strategies for managing stress

Progress in integrating public health in schools

Improved capacity for integration

Aggregated findings from the six-month follow-up survey suggest that program participants generally left with a firm grasp of the information presented and felt prepared to advance changes in practice. Overall, the high rate of positive responses indicates that participants were well prepared to understand why and how they should address the risk factors their students identified.

Respondent Readiness as a Result of Key CBA Topics



Note: Several limitations, including low survey response rates, prevent stronger conclusions from being made.

Ultimately, schools set a wide variety of priorities and implemented a range of responsive approaches, each based on the unique needs of the student population. Due to the dynamic nature of each school, several had initiatives and partnerships already in place when the program began. In these cases, CSHE's efforts helped to support their expansion, formalization and/or continuation. In other instances, the approaches were implemented as a direct result of CSHE's program.

The strategies imparted by the program were most impactful in schools led by transformational leaders who continue to prioritize systems thinking and multisector collaboration beyond their direct engagement with CSHE. For instance, a high school principal in Cincinnati regularly strategizes with administrators from other local school districts to understand and address the higher prevalence of behavioral disruptions among incoming middle school students. During these engagements, the principal might share lessons learned from her school's Bigs & Littles program that pairs younger and older students with similar backgrounds and experiences to increase their successful navigation of high school. The principal has also prevented suspensions and expulsions by incorporating non-punitive and upstream approaches, such as peer juries, a Chill Room, and paid community service internships for seniors not on track to graduate, into a comprehensive strategy for preventing dropout. These approaches focus on emotional regulation, relationship repair and civic engagement as alternatives to zero tolerance intervention. Likewise, leaders in Los Angeles are planting seeds for schools to consider how they can become microcosms of healthy communities to better meet the diversity of needs among students and their families with upstream approaches such as restaurant jobs for students in the cafeteria and curricula that allow students to create and manage fruit and vegetable gardens.

Below is a summary list of the priority-focused approaches in place. The vignettes, which begin on page 24, will provide fuller illustrations of school-specific achievements.

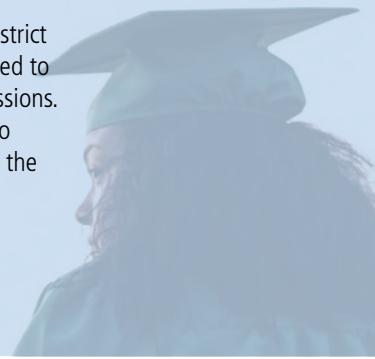
Family and Community Engagement	Social and Emotional Climate	Life Skills Development	Unmet Needs and Social Services
<ul style="list-style-type: none">• Cooking demonstrations• Healthy eating & active living education• Catalog of local community relief services	<ul style="list-style-type: none">• De-escalation room• Social & coping skills curriculum• Peer juries & mentoring• Movement breaks• Staff self-care & well-being	<ul style="list-style-type: none">• Mock interviewing• Internships• Career shadowing• Experiential learning credits• Advocacy & leadership	<ul style="list-style-type: none">• Food pantry• Clothing pantry• School garden• Free & reduced-price lunch• On-site showers & laundry facilities

Sustainability

All schools had at least one programmatic initiative that was sustainable after CSHE's intensive support ended. Sustainability was defined as having one or more of the following elements: (1) strong partnerships with external organizations; (2) engagement from stakeholders of various backgrounds; and (3) transformational changes made to the school or community infrastructure that did not necessarily require continuous financial resources. For example, one school's Chill Room room and universally accessible laundry and shower spaces represent structures that are embedded in the school's climate and will not require substantial resources for continued utilization. Other initiatives thrive on cross-sector collaborations where resources are leveraged across partners to provide students with skills that will prepare them for graduation or life thereafter.

Examples of school strategies for advancing equity

A college in Miami, Cincinnati Public School District & Cincinnati Public Health Department partnered to boost minority numbers in high-demand professions. Through continuous engagement & exposure to college-readiness initiatives and programming, the initiative aims to matriculate local high school students into the college with the full cost of attendance covered.



Students Working on Occupational Pathways (SWOOP) offers paid internships to seniors not on track to graduate. Students engage in community improvement projects that translate into graduation credits as well as credentials and skills.

Impact: ↑ attendance, graduation, confidence, youth peer mentoring & parent engagement. Community partner has access to the student talent pool & meets its organizational goal of supporting educational attainment.

Some initiatives that have the potential to increase parent engagement and address intergenerational poverty were not sustainable due to substantial financial investments. For instance, the Leadership Scholars Program was piloted at a partici-

pating high school in Cincinnati and provided parents with transportation, meals and childcare to support their engagement in life skills training activities. Ultimately, the program aimed to empower parents to become catalysts for their children to attend and graduate from college. Likewise, the food pantries established across several schools will need continuous financial support to ensure that fresh and nutritious foods are accessible to the entire student population.

Other examples of sustainability were found in schools that secured buy-in and support from students, staff, parents and/or community stakeholders. At one school, the Second Chance Breakfast Program was supported by the administration, teachers, other staff, students, parents and the school district. The program offers a breakfast break for students who are normally not hungry very early in the morning and also helps to reduce the stigma associated with school breakfast as it becomes part of the school day just like eating lunch at school. In addition, schools incorporated food pantries, student-led and peer-support strategies, and climate changes such as upgrades to the cafeteria and food menu to provide students with healthier services.

Fidelity

The most promising adoptions of the model where programmatic goals are being demonstrated as intended include schools led by proactive and visionary principals and those that entered the program with a certain level of readiness for increasing schoolwide capacity to address social barriers to graduation. In addition, these schools received unwavering support from internal and external partners, enabling them to make significant strides despite setbacks.

Schools unable to address priorities across all three program levels made successful clinic and schoolwide interventions, particularly those focused on mental and social/emotional support to individual students or to groups. For instance, several established school gardens, added social/emotional curricula, and created ongoing opportunities to recognize and celebrate students and staff.

At the systems level, policy changes were made when schools invested the time and commitment to put them in place. For example, two schools changed their policies to ensure that students eating a late breakfast would no longer be marked tardy.

At an elementary school, the fresh produce garden is beginning to address food insecurity and unhealthy dietary behaviors, while also strengthening relationships between students and staff. Among fifth graders, 78% reported that they were more likely to eat fruits and vegetables because they worked to help grow the produce, and 81% were excited to harvest the garden. Families reported positive feedback as a result of the produce being available to take home. Staff reported increased interactions with students as a result of their participation and have plans for expanding school gardens across the district. Bullying prevention initiatives like No One Eats Alone and student-engaged theatrical plays instituted at the schoolwide and systems levels in elementary schools were effective in: (1) addressing students' interpersonal and intrapersonal feelings of loneliness or isolation; (2) increasing students' communication and stress management skills; (3) reducing behavioral disruptions; and (4) reducing teachers' stress.

At another school, staff received training on how to develop stronger relationships with students and enhance their social/emotional coping skills, which led to their advocacy efforts to increase a focus on chronic stress across the district. Through these and similar efforts, all 10 showed signs of increasing capacity to deliver the program's model as intended.

Addressing chronic stress

"[Having food and washers and dryers] ... it's one less thing for these students to have to worry about. Our students come to school every day with a lot on their shoulders. ... It also helps them improve their nutrition which gets them more energy to stay present in the classroom, to stay awake. ... Our focus here [is] 100% attendance and graduation. ... [These resources] ensure that students are here and don't need to leave this building for any other reason." — School principal

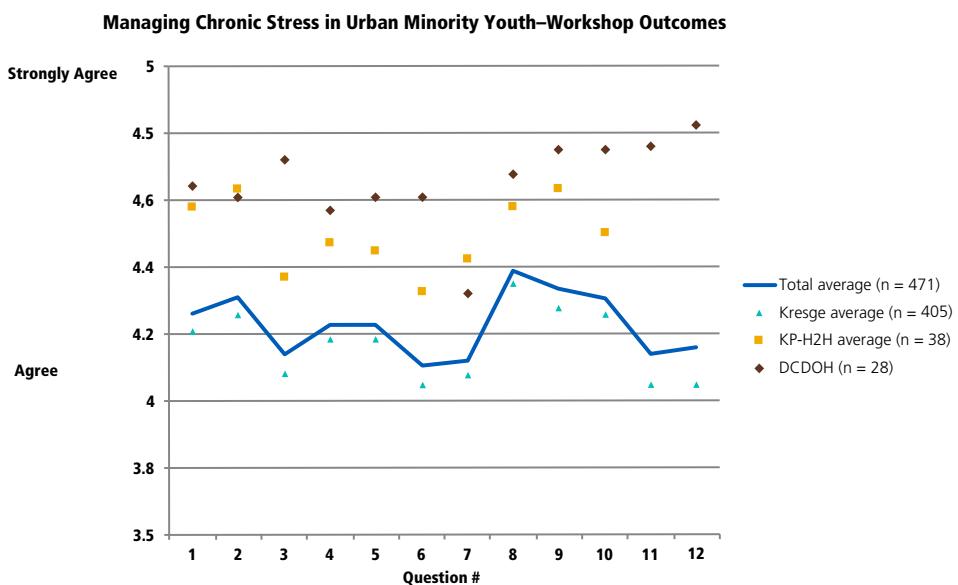
The uneven distribution of social, economic and other basic resources needed for students to thrive stems from structural racism and discrimination against non-white persons and occurs at the same time as typical adolescent stressors. This cycle deals a toxic blow to students' development in urban cities.^{9,10}

RAAPS-PH enabled schools to quantify prevailing indicators of chronic stress such as anger and aggression. The prevalence of these indicators across all schools elevated the need for a priority focus on how behavior would be addressed among youth-serving professionals accustomed to reacting to behavioral disruptions with punitive measures. The program applies findings from the latest research in adolescent neuroscience to explain how students in urban communities become chronically stressed and might behave in the classroom and school building. Through the program, participants begin to understand how prolonged exposure to inequities such as discriminatory practices, high community crime and familial financial hardship can lead to fear, anxiety and depression in students. As a result, students might exhibit an increase in impulsive or risk-taking behaviors, difficulties maintaining attention and concentration, and — particularly in boys — hostility, aggression and violence. As one high school student expressed, "We need more people to talk to [us] to see how [we] are doing. Living in poverty, [we] bottle stuff up and eventually ... explode; sometimes it's not even with the person that made [us] mad."

Remarkably, where the capacity was strongest to implement the program to scale, and RAAPS-PH was administered twice, a reduction in anger and aggression from 49% to 34% was observable over a two-year span.

Remarkably, where the capacity was strongest to implement the program to scale, one school's restorative and trauma-informed strategies (i.e., de-escalation room, peer jury program, and social/emotional curricula) contributed to a reduction in anger and aggression (from 49% to 34%) among students over a two-year span. Other schools addressed chronic stress by mediating stress-inducing factors, incorporating neuroscience into instruction strategies and screening for adverse childhood experiences. Additional approaches helped students gain employment-related skills, earn income to contribute to family finances, and complete graduation credits.

Scheduling challenges aside, the half-day workshop, which provided resources for school staff to support students in managing chronic stress, was well-received and, was a critical catalyst in shifting perspectives from "what's wrong with you?" to "what happened to you?" The workshop was delivered more than a dozen times to approximately 471 professionals, with slight variations based on the audience. Participants comprised a range of roles including school administrators (7%), medical and behavioral school personnel (17%), teachers (69%), SBHC staff (4%), and others (3%). Using a Likert-type scale where 1 = strongly disagree and 5 = strongly agree, averaged feedback responses indicate that the workshop positively impacted participants' ability to reduce the application of punitive interventions and move upstream to address the root causes of students' disruptive behaviors with restorative and social-emotional learning practices.



When the opportunity presented for participants to demonstrate what they learned in practice, two schools jumped at the chance to give students a healthy outlet for expressing difficult emotions. Through three-day creative and performing arts-focused workshops offered by CSHE, students from each school learned about music theory and song writing, which helped them produce original songs and music videos addressing social or environmental issues of their choice. At one school, the topic was generally focused on the importance of elevating the youth voice, while students at the other high school lent their voices to the movement against gun violence. Upon first meeting the student volunteers, CSHE asked them about their greatest concerns. The topics of mental health issues and gun violence in the community surfaced. Writing and performing lyrics like "Get the guns under control so all the fear can go away" and "There's no time to be silent speaking out against the violence" offered a way for the students to heal. The idea behind the program's prioritization of youth engagement as a key component for success is to build young people's sense of agency to change harmful conditions and thrive while simultaneously informing decisions that affect them. As a result of the workshops with youth, an average of 93% of all respondents ($N = 15$) agreed that the content delivered impacted them in a positive way and motivated and equipped them to continue developing their leadership skills and learning in creative ways. The remaining 7% of respondents didn't know whether the content would have an impact on their learning, leadership skills or behavior.

Mediating and Preventing Stress at a Glance



- Social and emotional learning and enrichment curricula
- "Brain breaks" to increase opportunities for students to move around or be active
- Tailored programs and practices to build self-esteem among girls
- Two to five minutes of mindfulness daily over the school intercom
- An evidence-based peer mentoring curriculum that pairs younger students in safe and supportive unions led by older peer mentors, with a heavy emphasis on students with behavioral issues
- Therapeutic drumming for male students to manage anger and elevate concentration
- Connecting parents to national network of Safe Routes to School partners
- Regular, structured social engagement events, activities and materials [i.e., balloons for students to write supportive/positive messages to honor personal losses, chili/soup cook-off, fact sheet promoting awareness of clinic mental health services, staff appreciation events (i.e., massages in clinic)]
- "Veggie U" program to teach students how to grow vegetables
- De-escalation or cool-down rooms

Retention of program concepts

Assessment data from the six-month follow-up survey indicates that most program participants were still understanding and retaining many of the components and concepts of CSHE's training series (phase 1). However, in some cases, the percentage of respondents answering correctly was below the 80% proficiency threshold.

Table 2: Retention of Key Program Concepts

Concept	Percentage Correct
Key social determinants of health	92
High school as a leading determinant of health and future outcomes	38
School-based public health prevention	100
Public health essential functions (i.e., population health, needs assessments)	75-88
Youth empowerment	96
Program levels of prevention and intervention	30
Racism as a social determinant of outcomes	100
Schoolwide and systems level initiatives	31

Participants' appraisal of program quality and effectiveness

"The support was excellent. Having APHA/CSHE investment in our program lent tremendous credibility to our efforts and ultimately got us into doors that were previously closed, helped us gain new partners ... and offered us greater opportunities to share and disseminate this work." — Program participant

Results of an online evaluation survey administered at least six months after their initial engagement show that participants appraised the quality and effectiveness of CSHE's program to be very high.

Feedback revealed four broad themes: (1) CSHE's program was very organized and well primed to support intervention teams to implement school-level changes; (2) CSHE staff provided a high level of support, connection, expertise and credibility; (3) CSHE's program transformed the way SBHCs operated and allowed them to have a greater reach and impact within the school; and (4) CSHE provided valuable information and facilitated a paradigm shift in the way that participants think about their work.

Participants were particularly positive about the impact of the focus on chronic stress. One respondent stated, "[The module] has really made me realize what an impact chronic stress and poverty have on our youth and how we can help them become successful despite the barriers they face." In addition, the workshop on motivational interviewing afforded ample opportunities for interactivity (i.e., role-playing) and problem-based learning and was rated ... "one of the best [participants had] ever attended."

Conversely, a small proportion of respondents did not feel the online module-series sessions from phase 1 were beneficial. One comment indicated, "The learning series was too much time with little, if any, benefit." Another participant gave a similar response: "A good opportunity but did not have an impact or effect change." These perspectives contrasted with most of the other comments, which indicated that participants were pleased with the quality and effectiveness of phase 1 and the overall program.

- Felt module objectives were achieved **88%-100%**
- Felt presentations provided useable ideas and/or techniques **94%-100%**
- Felt the program would improve their professional effectiveness **100%**

"Technical assistance was extremely helpful as a lot of our staff are medically trained ... providing that background and framework as well as showing how to actually plan our interventions and strategies. ... Even though we're not in the program we still continue to do it today. I would refer others to this program." — Program participant

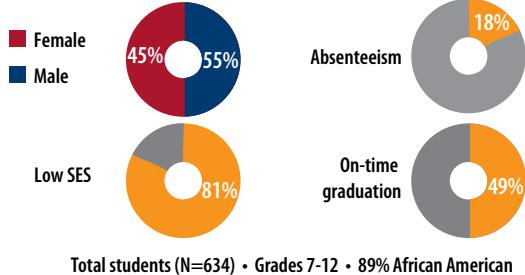


School vignettes

The following vignettes describe school-specific outcomes and strategies. Names of the schools are withheld for confidentiality.

Advancing Equity in School Settings CONNECTEDNESS MATTERS

Student Demographics



Student Risk Assessment Key Findings

	Anger/aggression	49%		Hunger/food insecurity	24%
	Risky sexual behaviors	36%		Fear/safety concerns	27%
	Hopelessness	40%		Poor academic achievement	49%
	School attendance interferences	35%		Increased likelihood of self-harm	12%

Prevention And Intervention In Action

Priorities and Goals

- Enhance social support & strengthen relationships schoolwide
- Strengthen opportunities for youth development & employment
- Address unmet needs

Snapshot of Responsive Strategies

Individual or Small Group: "Bigs & Littles" pairs younger and older students with similar backgrounds and experiences to increase successful navigation of high school

Schoolwide: Social and coping skills curriculum; Destigmatized laundry and shower facilities

Systems:

- Students Working on Occupational Pathways program—paid internship for seniors not on track to graduate, to also gain credentials & skills, and engage in community improvement projects that translate into graduation credits
- De-escalation room to prevent altercations and suspensions

Key Partners for Sustainability

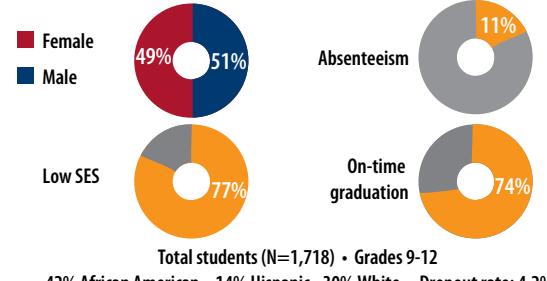
Clinicians, students, teachers, counselors, administrators, parents and Lawn Life

Indicators of Change or Impact/Outcomes

- Reduced disciplinary referrals & anger and aggression from 49% to 34% (2-yr span)
- Increased attendance rates and seniors are on track to graduate
- Improved student interactions, self-reported increases in confidence and motivation
- Increased support from community-based partners to sustain and expand approaches to additional populations
- Strengthened capacity within school district to integrate public health in schools

Advancing Equity in School Settings HUSKY EXCELLENCE

Student Demographics



Student Risk Assessment Key Findings

	Anger/aggression	27%		Hunger/food insecurity	19%
	Risky sexual behaviors	17%		Fear/safety concerns	15%
	Hopelessness	32%		Poor academic achievement	34%
	School attendance interferences	25%		Increased likelihood of self-harm	9%

Prevention And Intervention In Action

Priorities and Goals

- Support the social, emotional and behavioral health needs of youth and faculty as they navigate stressors associated with inequities
- Address unmet needs and promote opportunities for students to be social change agents

Snapshot of Responsive Strategies

Individual or Small Group: Provide group therapy peer support and therapy for social, emotional and behavioral health needs for both students and faculty

Schoolwide: Integrate curriculum to increase coping skills development, meditation, & positive relationships

Systems:

- Student-led and operated food pantry that is accessible to all students, families, and community members. Health education training provided to all student leaders
- Encouraging the development of trauma-informed schools across district

Key Partners for Sustainability

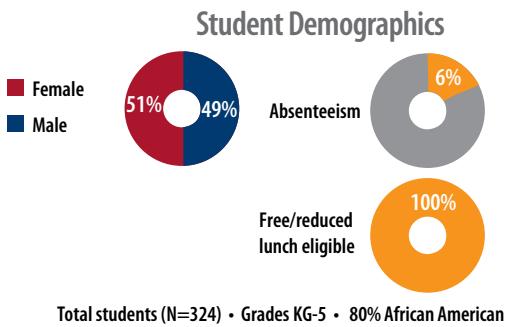
SBHC, local food bank, local family farm, FQHC, students, teachers, school staff and parents

Indicators of Change or Impact/Outcomes

- Reduced disciplinary incidents
- Self-reported increased school connectedness via students and families
- Increased ability to reduce food insecurity in school and community (food pantry and GIS mapping)
- Increased support from community-based partners to sustain and expand approaches to additional populations
- Increased allies supporting schoolwide issues

Advancing Equity in School Settings

TRANSFORMATION NOW



Student Risk Assessment Key Findings

	Anger/aggression	49%		Excessive screen time	69%
	Loneliness	32%		Hunger/food insecurity	26%
	Physically abused	31%		Fear/safety concerns	43%
	Elevated blood lead levels			Increased likelihood of self-harm	13%

Prevention And Intervention In Action

Priorities and Goals

- Increased resilience/coping strategies for students living in poverty & professionals working with chronically stressed/disadvantaged kids
- Address barriers to accessing and utilizing resources for physical activity and consumption of nutritious foods
- Address barriers to school attendance, engagement and healthy relationships

Snapshot of Responsive Strategies

Individual or Small Group: Integrated social skills development component within curriculum for 4th & 5th graders

Schoolwide:

- Integration of ambient lighting & mindfulness exercises/movement breaks
- Food pantry, cooking demonstrations and garden with fruits/veggies

Systems:

- Lead education and awareness campaign to run 1-3x per year
- Revised tardy policy; students receive pass from office and possibly breakfast upon arrival

Key Partners for Sustainability

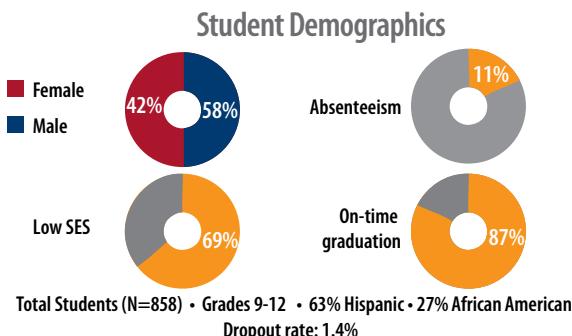
SBHC, CCF and social work counselor, Safe & Civil Schools training, food bank, Parent Teacher Association, school administrators, OPHA, Cuyahoga County Health Department, Community volunteers

Indicators of Change or Impact/Outcomes

- Shared data on pervasiveness and impact of lead poisoning (Board of Health, Department of Education/School District, etc.)
- Previously produce was served in the cafeteria; the in-house food pantry was the first time in the district that it went home to students
- Through the garden, SBHC was able to help impact all students in the school whether they utilized SBHC or not

Advancing Equity in School Settings

BREAKING SILOS



Student Risk Assessment Key Findings

	Anger/aggression	34%		Hunger/food insecurity	17%
	Risky sexual behaviors	30%		Fear/safety concerns	20%
	Hopelessness	30%		Poor academic achievement	49%
	School attendance interferences			33%	

Prevention And Intervention In Action

Priorities and Goals

- Improve health & well-being of families and students
- Improve relationships schoolwide and improve service integration/coordination

Snapshot of Responsive Strategies

Individual or Small Group:

- "Girl Talk" groups
- Harvest of the month provided fresh snacks at the health center
- Food distribution site outside health center for families in need
- Restorative Justice groups for English language learners & developers

Schoolwide:

- Nutrition education training provided to youth
- Acculturation session(s) for newly emigrated students

Key Partners for Sustainability

WCCHS, YMCAEB, WCC Food Bank, Youth Advisory Board

Indicators of Change or Impact/Outcomes

- Girl Talk groups increased female student connectedness with peers and school staff
- Boys became mentors for incoming students
- Trauma-informed support and social skills & coping training
- Decreased number of disciplinary conflicts

KP Cohort

Advancing Equity in School Settings

NO LIMITS



Prevention And Intervention In Action

Priorities and Goals

- Strengthening school connectedness and engagement
- Address unmet basic needs

Snapshot of Responsive Strategies

Individual or Small Group:

- Regular, structured social engagement

Schoolwide:

- Food bank deliveries and "J's Closet" clothing donations managed by SBHC
- Fresh fruit in classrooms

Key Partners for Sustainability

SBHC, sex education teachers, PTSA, OUSD, THAP, Alameda County Community Foodbank, COST, teachers

Indicators of Change or Impact/Outcomes

- Increased access to nutritious foods for students and families
- Increased connectedness among students and staff

Advancing Equity in School Settings

THE FUNDAMENTALS



Prevention And Intervention In Action

Priorities and Goals

- Strengthening student and adult relationships schoolwide
- Strengthening opportunities for youth development & employment
- Assess gaps in social services and resources needed and attempt to meet unmet needs

Snapshot of Responsive Strategies

Individual or Small Group:

- Lifelong Learning Program providing career skills to mental health clients
- Second Chance Breakfast Program (SCBP)

Schoolwide:

- Ongoing trauma-informed workshops for school staff to better support urban minority youth in managing stress
- International Club Buddy System, led by Juniors to assist new arrivals from other countries

Systems:

- Mock interviewing; vouchers for interview clothing; job search assistance
- Latina population-focused civic engagement awareness for students (and families)

Key Partners for Sustainability

School district students and staff, clinicians, cross-sector intervention committee, Woodbury University Architecture Department, Health Academy

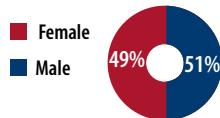
Indicators of Change or Impact/Outcomes

- After trainings teachers changed their approach to students to "what happened to you" vs. "what's wrong with you"
- SBHC switched focus from treatment-focused services to more prevention-focused interactions
- Increased attendance in association with administration's engagement and model leadership
- Increased student attendance and engagement
- SCBP program fostered an environment of trust and allowed students to tell adults when something was needed. Adults then worked to meet the needs directly or make referrals. Data showed that SCBP was increasing the number of students receiving breakfast at school

Advancing Equity in School Settings

LET'S MOVE

Student Demographics



Free/reduced lunch eligible



Total students (N=987) • Grades PK-5 • 95% Hispanic

Student Risk Assessment Key Findings

	Anger/aggression	42%		Excessive screen time	62%
	Loneliness	39%		Fear/safety concerns	49%
	Physically abused	22%			

Prevention And Intervention In Action

Priorities and Goals

- Increase physical activity
- Create a safe environment where children can learn, thrive and play without feeling anxious or fearful
- Provide increased emotional support and bullying prevention

Snapshot of Responsive Strategies

Individual or Small Group:

- Provided resources such as physical equipment, workshops, theatrical performances and books to improve physical and emotional well-being for students
- Presented an antibullying assembly that included a student-led theatrical performance

Systems:

- Instituted the schoolwide bullying-prevention program, "No One Eats Alone," run by the school district to address bullying in schools at the elementary level

Key Partners for Sustainability

School administrators, school staff, students, parents

Indicators of Change or Impact/Outcomes

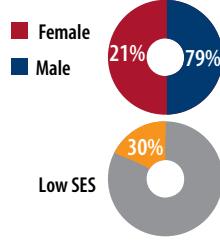
- Participants believed the school climate improved, particularly through strengthened relationships with school faculty and parents
- Collaboration schoolwide between faculty, students and parents who assisted with multilevel program implementation
- Students were responsive to the "No One Eats Alone" initiative and showed an effort to include isolated students to join them at lunch

KP Cohort

Advancing Equity in School Settings

PRIDE

Student Demographics



Absenteeism



Total students (N=200) • Grades 9-12 • 99% African American
6% Expulsions • 10% Suspensions

Student Risk Assessment Key Findings

	Anger/aggression	41%		Hunger/food insecurity	23%
	Risky sexual behaviors	57%		Fear/safety concerns	40%
	Hopelessness	37%		Poor academic achievement	27%
	School attendance interferences	29%			

Prevention And Intervention In Action

Priorities and Goals

- Increase access to and quality of nutritious foods
- Reduce risky sexual behaviors
- Reduce anger/aggression and root cause-conditions
- Improve building conditions

Snapshot of Responsive Strategies

Individual or Small Group:

African drumming circle for boys twice a week for 45 minutes

Schoolwide:

- Renovations to cafeteria and other areas in school building

Systems:

- Policy changes to improve school nutrition & lunch/breakfast services

Key Partners for Sustainability

Committee members: students, school staff, local foodbank, parents, local church, school administrators

Indicators of Change or Impact/Outcomes

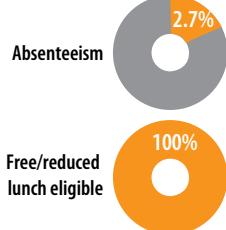
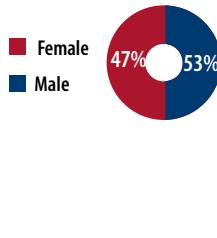
- Increased utilization of cafeteria among staff and students
- Increased nutrition education among students and their families
- Improved relationships among students and cafeteria staff
- Improved relationships and school climate
- Increased focus on learning content
- Drummers performed for assemblies, enabling the boys to get together, release their energy in positive ways, learn and share their new skills, and be mentored by the drumming teacher. The program had a "huge effect on school climate" –Teacher

KP Cohort

Advancing Equity in School Settings

HURRICANE STRONG

Student Demographics



Free/reduced
lunch eligible



Total students (N=534) • Grades PK-5 • 85% African American • Suspension rate: 0

Student Risk Assessment Key Findings

	Anger/aggression	47%		Excessive screen time	67%
	Loneliness	41%		Fear/safety concerns	49%
	Physically abused	26%		Chronic absenteeism	13%

Priorities and Goals

- Build partnerships to assure success and sustainability of the school garden
- Establish a school garden to address food insecurity, expand curriculum to educate students on proper nutrition

Snapshot of Responsive Strategies

Individual or Small Group: 5th grade teacher organized students' watering, weeding and harvesting of produce. She also mentored the students on entrepreneurial skills and hosted the farmers market with excess produce. A partnership was established, with a cohort of parents who helped lead the harvest and distribution of produce

Schoolwide:

- All 4th and 5th grade students were involved in caring for the school garden

Systems: Program sending produce home with students. Based on feedback from this program, it may be able to be expanded across the district. The site planned to present information about the project to the School Board

Key Partners for Sustainability

School administrators, school staff, students, parents, AAPHC, Dougherty County School District

Indicators of Change or Impact/Outcomes

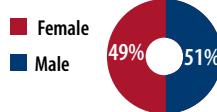
- Five planter beds were built. Teachers, parents, and a master gardener were involved in this process
- 5th graders reported: 71% have worked in the school garden; 78% were more likely to eat fruits and vegetables because they saw how they are grown; 81% were excited to harvest the garden. SBHC, school counselor, and 5th grade science teacher had much greater interaction compared to before the program. SBHC was able to be involved with primary prevention of obesity and promote a healthy lifestyle
- There is an expectation that food insecurity will be addressed through the gardening and sending of produce to students' homes

KP Cohort

Advancing Equity in School Settings

LONG WALK

Student Demographics



Free/reduced
lunch eligible



Total students (N=335) • Grades PK-5 • 74% African American • Suspension rate: 0

Student Risk Assessment Key Findings

	Anger/aggression	61%		Tardiness	74%
	Socio-emotional	41%		Physically abused	41%
	Excessive screen time	74%			

Priorities and Goals

- Increase students' ability to manage anger effectively
- Improved communication and relationships between students, teachers, and parents

Snapshot of Responsive Strategies

Individual or Small Group: Emotional Intelligence and Resilience Training assisted teachers in becoming more connected and aware of how they feel and what they think. This improved teacher-student dynamics and relationships

Schoolwide:

- Bullying Prevention Unit for 2nd – 5th graders enrolled in after school program
- Mind Yeti program equipped teachers and students with tools to ease anxiety and manage anger
- Teachers established reflective areas within classrooms for students

Key Partners for Sustainability

School administrators; school staff; students; public school district

Indicators of Change or Impact/Outcomes

- Teachers reported behavioral improvements in many students who traditionally had difficulty identifying and expressing their feelings
- Students who participated in anger management sessions learned how to identify their emotions, calm themselves, and communicate their feelings more effectively
- Students were better equipped with a variety of tools for managing stress and anger. They used these tools rather than acting out with teachers and classmates
- Teachers reported being more patient, feeling less stressed, and having the resources available to help with feelings of anxiety
- Strengthened relationships and improved school climate

KP Cohort

As a result of this work, it is clear that the actualization of longer-term impacts on student health and education requires additional time and sustained investment. Recognizing that schools are microcosms of society, all of the schools that participated aspire to create settings where education is prioritized by virtue of meeting students' health, safety, cultural and social needs.

Lessons Learned and Recommendations

Many of the key lessons learned to date center on the realities of working with public schools in high-needs communities, where staff burnout and constant turnover are the norm and resources are stretched to the limit. While some of the lessons learned have been incorporated throughout the evolution of the CSHE's work, others may be incorporated into future efforts.

Strategic involvement and buy-in from school leadership is critical for successfully integrating public health in schools for improved student outcomes. Early in the program, CSHE encountered recurring challenges across schools that were related to lacking or minimal participation in the program by school leadership. This observation ultimately led to changes in the program's requirements to help ensure early and active participation from school administrators. The type of transformation required to advance equity in schools requires everyone to be on board. Both the implementation teams and CSHE felt that program activities were executed more seamlessly when school principals and/or district leaders were involved. As one participant stated, "Perhaps consider adding a school administrator to the training so that when we get ready to implement ideas and strategies, we don't spend all of our energy trying to garner that type of support." A similar suggestion was to bring the administration into the process early so that trainings could be included in the school's master plan.

A team lead is essential to implement systems-level approaches to scale and to liaise between the school, SBHC and external partners. The impact of CSHE's program could be accelerated by including an appointed site coordinator with fewer competing demands and a skill set that includes building and maintaining strategic partnerships to effectively implement and sustain schoolwide and systems-level approaches for success.

Support for school staff health and well-being must be prioritized. Over the course the program, CSHE learned that the effects of chronic stress in underresourced communities are not limited to students. There is a wealth of literature detailing the inequitable conditions under which school staff are expected to meet or exceed rigid educational standards: overcrowded classrooms with hungry, emotionally stressed, triggered and distracted students. The schools participating in the CSHE program were no exception to this reality. The adult discussion group conducted at one participating school revealed important themes of diminished motivation, feelings of being overwhelmed and general burnout among staff. Documenting this information was eye-opening for CSHE and the schools and prompted CSHE to elevate self-care as a priority need among all participants through both the capacity-building and technical assistance phases.

Multisector partnerships are fundamental for systems change and sustainability. CSHE acknowledges the time it takes to actualize longer-term impacts and sustained investment. Change, particularly at the policy and systems levels, is incremental, and schools cannot and should not have to do it alone. As a result, building cross-sector and highly collaborative partnerships was a key strategy of the program. CSHE helped both to facilitate and to maintain partnerships between schools and their external partners. Essentially, all schools agreed that relationship building and connectedness — between staff, between staff and students, and with community partners — were important priority areas of focus.

Looking Ahead

Overall, the schools that partnered with CSHE are resilient and committed to advancing equity by ensuring their students graduate from high school despite the obstacles along the way. This was evidenced by their varied attempts to take on a complex new approach in their daily work, oftentimes without adequate support and resources.

Some schools were more primed for transformation by way of forward-thinking leaders who foster environments where continuous learning, multisector collaboration and innovations like the program's model are met with little resistance. In these settings, the reciprocal benefits (i.e., broader impacts at the population level) associated with strategically aligning partners to execute a shared vision for success outweighed concerns about trying something new. The best example is demonstrated at the high school in Cincinnati where the climate fosters service learning, student leadership and civic engagement opportunities for students. The stories about the impact of its student-led efforts such as the school that students built in a village in Largo, Sierra Leone, West Africa, and the newly established school-based coffee shop are forthcoming and worthy of recognition. For others, a small and mighty team is spurring changes in the thinking, practices, or schoolwide culture as a result of their engagement in the program.

As a result of this work, it is clear that the actualization of longer-term impacts on student health and education requires additional time and sustained investment. Recognizing that schools are microcosms of society, all of the schools that participated aspire to create settings where education is prioritized by virtue of meeting students' health, safety, cultural, and social needs. By the end of the program, a school in California agreed that it was in its purview to partner with local restaurants to institute on-site paid employment opportunities for students. In Nebraska, the school recognized that it would need to investigate community conditions to truly understand the trends in absenteeism and tardy data. GIS mapping and additional qualitative discussions will enable them to develop school policies that are informed by conditions (i.e., unsafe walking routes) that interfere with attendance.

Although the true extent of the program's impact may not be evident for years to come, the successes achieved across participating schools indicate the potential and demand for broader disruption of the dropout crisis. Ultimately, we know that schools cannot and should not shoulder this work alone.

Looking ahead, CSHE plans to further evolve its model by going beyond the school walls to strengthen school-community partnerships to improve the conditions that influence student outcomes. These efforts will be informed by the needs and priorities of schools, and they will build on the progress schools have made toward systems-level change. Further work could include developing multisector coalitions to advance community-driven, equitable and sustainable solutions for the health and well-being of students and families.

At the national level, CSHE will continue to elevate the importance of a public health role (among a network of actors) in advancing equity in school settings. Despite recognition of the connections between education and health, the two disciplines largely operate in silos at the national, state and local levels. CSHE sees promise in convening intermediary actors from public and private sectors to support schools in identifying the root causes of students' problems, developing clear and measurable prevention and intervention strategies, and using improvement cycles to adopt promising practices that strengthen the schoolwide outcomes.

Over time, by integrating essential public health services into schools, we have the potential to improve high school graduation rates among those most vulnerable to dropping out. When we prioritize educational attainment for all groups, we increase gateways towards strengthening America's social and economic well-being.

Appendix

Fundamental Program Activities — Integrating Public Health in Schools to Improve Graduation

CBA: capacity-building assistance	Orientation Module	Introduction to Program Components and Content
	Module 1	A Framework for Integrating Primary Care and Public Health
	Module 2	Chronic and Toxic Stress on the Developing Brain: Implications for Behavior, Health and Learning
	Module 3	SBHCs Beyond the Clinic
	Module 4	Using Population Data to Inform Integrated Practice
	Module 5	Aligning with School Leaders & Staff to Achieve Your Health Goals
	Module 6	Strategies for Transformation
	Module 7	Applying the Integration Framework
	Module 8/Part 1	Improving Staff-Student Interaction in Challenging Environments Module
	Module 8/Part 2	Improving Staff-Student Interaction in Challenging Environments Workshop
TA: technical assistance	Activity 1	RAAPS Setup
	Activity 2	Scan of School Records
	Activity 3	Student Needs Assessment
	Activity 4	Managing Chronic Stress in Urban Minority Youth Workshop (all school/clinic staff)
	Activity 5	Preparation for Youth Discussion Groups
	Activity 6	Conduct Youth Discussion Groups
	Activity 7	Synthesis of Findings
	Activity 8	Developing a Plan of Action
	Activity 9	6-Month CBA Follow-Up Progress Survey
	Activity 10	Implementation of the Action Plan
	Activity 11	6-Month TA Follow-Up Progress Survey

Endnotes

1. Leading Health Indicators: Social Determinants. Healthy People website. <https://www.healthypeople.gov/2020/topics-objectives/topic/Adolescent-Health/objectives#3949>. Updated June 7, 2017. Accessed June 7, 2017.
2. Addressing Social Determinants to Ensure On-Time Graduation. APHA website. <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-data-base/2017/01/13/social-determinants-and-graduation>. Published November 1, 2016.
3. U.S. Department of Education, National Center for Education Statistics. (2017). Public high school 4-year adjusted cohort graduation rate (ACGR), by race/ethnicity and selected demographic characteristics for the United States, the 50 states, and the District of Columbia: School year 2015–16.
4. DePaoli, J., Balfanz, R., Atwell, M., and Bridgeland, J. (2018). Building a Grad Nation: Progress and Challenge in Raising High School Graduation Rates. Civic Enterprises and the Everyone Graduates Center at Johns Hopkins University. <https://gradnation.americaspromise.org/2018-building-grad-nation-report>.
5. Ramakrishnan, K., & Ahmad, F. Z. (2014). State of Asian Americans and Pacific Islanders: Education (Rep.). Center for American Progress and AAPI Data. Retrieved from: <http://www.nea.org/home/15571.htm>.
6. U.S. Department of Education Office of Civil Rights. School Climate and Safety 2015-2016 (Rep.). (2018, April 24). Retrieved <https://www2.ed.gov/about/offices/list/ocr/docs/school-climate-and-safety.pdf>
7. District of Columbia: Office of the State Superintendent of Education. (2018, February 13). 2017 District of Columbia Youth Risk Behavior Survey (Rep.). Retrieved from <https://osse.dc.gov/publication/2017-yrbs-report>
8. James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anaf, M. (2016). Executive Summary of the Report of the 2015 U.S. Transgender Survey. Washington, DC: National Center for Transgender Equality.
9. Klein R, Huang D. Defining and measuring disparities, inequities, and inequalities in the Healthy People initiative. National Center for Health Statistics. Centers for Disease Control and Prevention. https://www.cdc.gov/nchs/ppt/nchs2010/41_klein.pdf.
10. U.S. Department of Health and Human Services. The Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. Phase I report: Recommendations for the framework and format of Healthy People 2020. Section IV: Advisory Committee findings and recommendations.
11. Addressing the social determinants of children's health: a cliff analogy. *J Health Care Poor Underserved*. 2009;20(4 Suppl):1-12.

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