

NATIONAL ADVISORY COUNCIL CONCEPT CLEARANCE

Date of Council: September 2020

Title of Initiative: School-Based Health Centers (SBHCs): A Promising Health Services Model for Advancing Health Equity

Author(s): Beda Jean-Francois, Ph.D., Larissa Avilés-Santa, M.D., M.P.H., Jennifer Alvidrez, Ph.D. and Courtney Aklin, Ph.D.

Objective(s): The proposed initiative will support research that investigates the effectiveness of school-based health centers (SBHCs) as a health services care delivery model to address the needs of youth from populations experiencing health disparities (hence, vulnerable youth), including those at higher risk for poor health outcomes, such as sexual and gender minorities.

Background: About 11.9 million children in the United States live in poverty; nearly 73 percent of them are children of color.¹ Both child poverty and minority status are associated with numerous adverse health outcomes throughout the life course.² Minority youth from impoverished backgrounds have, for example, higher rates of exposure to trauma; greater incidence of mental health disorders, asthma, obesity, and substance use; and are less likely to have a regular source of health care and access to mental health services.^{2,3-9} Thus, given the vulnerability of disadvantaged youth for greater health risks, the negative consequences of fragmented care received by this population, and the lack of pediatric or adult care models to adequately address their unique developmental needs, SBHCs have been recommended as a safety net care delivery model for youth who are uninsured, underinsured, or who do not have access to a consistent source of health care.^{4; 10-13}

Previous Studies and Research Gaps: The evidence base regarding the impact of SBHCs on health outcomes is complex given the diversity in health outcomes evaluated, the array of services offered at SBHCs, and the characteristics of schools and youth served.¹¹⁻¹⁴ For example, a systematic review by CDC's Community Preventive Services Task Force of 46 evaluated studies published through July 2014 of onsite SBHCs that served urban, low income, and racial/ethnic minority high school students, concluded that the use of SBHCs was associated with improved educational and health-related outcomes, and can be a means for advancing health equity.¹¹ The review specifically found that educational benefits linked with SBHCs included reductions in rates of school suspension or high school non-completion, and increases in GPA and grade promotion. As for health-related outcomes, the review found increases in recommended immunizations and preventive services; reductions in emergency department visits and hospital utilization; reductions in asthma symptoms and incidents; a small increase in the proportion of students who reported a regular source of health care; small positive effects on mental health (MH) status; and increased contraceptive use among females. The task force noted that a meta-analysis was not possible given the heterogeneity of study designs and the small number of studies per outcome. Other limitations of the review included the lack of clarity of whether users and non-users or SBHC sites and non-SBHC sites were comparable, and that SBHC effects might have been underestimated or overestimated because the evaluator did not obtain baseline data.

Likewise, results from a systematic review of 23 research studies published between 1990 and 2014 on the delivery of MH services in SBHCs in elementary, middle, and high school students, indicated that students who demonstrated high risk behaviors or had complex MH challenges such as suicide, depression, and difficulty with sleep were more likely to seek services at the SBHCs than students with either public health insurance or no health insurance.¹⁴ Availability of MH services across research sites was not consistent, and delivery of these services varied from medical providers to social workers or psychologists. The authors further noted the lack of robust studies to test the efficacy or effectiveness of MH services within SBHCs, as most of the studies reviewed were descriptive, and very few were conducted with elementary and middle school students.¹⁴ Thus, although findings provide support for the promise of SBHCs to increase access to health care, improve health outcomes, and reduce health disparities and medical costs for vulnerable youth¹⁰⁻¹⁵, there are gaps that warrant further investigation to help determine if SBHCs can be adopted as a best practice care model to address the health services needs of high risk vulnerable youth (e.g., sexual and gender minority youth, immigrant youth) and if so, can SBHCs, given their availability and accessibility to students, be effective sites of intervention to address disparities in chronic conditions, and behavioral, oral, and reproductive health to improve outcomes for this population.

Currently, the NIH portfolio listed no FOAs addressing SBHCs. Although several grants can be found concerning interventions at schools, five grants specifically focus on SBHCs. Of the five grants (two R01s by the National Institute on Drug Abuse (NIDA), one R21 by NIMHD, one R01 by NIMHD, and one R44 by NIDA), three projects funded by NIDA are interventions at SBHCs. They are evaluating the viability of the substance use intervention (SBIRT) in SBHCs, universal HIV testing for high risk youth, and the use of a web-based interactive adolescent screening and tobacco counseling tool. The NIMHD R21 grant is testing sleep and mind-body intervention with urban Black and Hispanic youth at two SBHC sites. The NIMHD R01 grant is the one project found to examine how SBHCs increase access to health care. This is a relevant question to begin building the evidence for whether SBHCs are a valid health services care model to address the health disparities of vulnerable youth.

Description of Initiative: This initiative will support multidisciplinary research that investigates the effectiveness of SBHCs as a health services care delivery model to manage and prevent chronic illnesses (e.g., asthma, HIV, obesity, depression, substance use disorders) that disproportionately burden vulnerable youth, including those at higher risk for poor health outcomes. Rigorous studies are needed to determine how SBHCs are functioning to provide access to care, the combination of services that work best in SBHCs, the utilization patterns (e.g., care coordination within the health system) associated with SBHCs, and the quality metrics that are relevant for gauging the effectiveness of SBHCs to address the health disparities of vulnerable youth. Robust studies about the mechanisms by which SBHCs engage at-risk vulnerable youth to improve health outcomes are also needed.¹⁶⁻¹⁷ Research to evaluate SBHCs as a viable health care access model for vulnerable youth will also need to consider how SBHCs may complement (or reduce) the use of other services. This is especially relevant given the increased sponsorship of SBHCs by Federally Qualified Health Centers (FQHCs). The FQHC and SBHC pairing will need to be investigated to determine impact on primary care and

behavioral outcomes for vulnerable at-risk youth (and their families), as well as how SBHCs can affect FQHCs' ability to address the health service needs of communities.¹⁰ Research projects can consist of impact evaluations, implementation studies, observational studies, and cluster randomized trials to assess impact of SBHCs nationally and/or regionally, and to delineate what aspects of SBHCs are particularly effective. Research collaboratives across multiple SBHC sites and/or with the U.S. Department of Education can allow for testing of different SBHC models and provide a comprehensive understanding of the link between health and educational outcomes.

Potential topics include, but are not limited to:

- What are the contributing mechanisms (e.g., school connectedness, combination of services, staffing models) that can explain the association of SBHCs to improvements in health and education outcomes for vulnerable youth?
- What is the differential impact of SBHCs on high risk adolescent subgroups (e.g., sexual and gender minority youth, immigrant youth, American Indian/Alaska Native youth)?
- What added value will the growing sponsorship of SBHCs by FQHCs bring to systems of care for vulnerable youth? What intergenerational health outcomes can be examined, given that families of vulnerable youth can also access SBHCs?
- How do vulnerable youth receive integrated mental health care from different providers at SBHCs?
- What are effective implementation models of SBHCs for vulnerable youth in rural areas?
- What is the impact (including unintended consequences) of telehealth on SBHCs for vulnerable youth?
- How can SBHCs respond to the long-term health needs (e.g., trauma) of vulnerable youth affected by COVID-19? What safeguards will need to be considered for vulnerable youth once school closings are lifted?

References

1. The State of America's Children 2020. Children's Defense Fund. <https://www.childrensdefense.org/the-state-of-americas-children-2020/>
2. AAP Council on Community Pediatrics. Poverty and child health in the United States. *Pediatrics*. 2016; 137 (4): e20160339.
3. Dougherty D, Chen X, Gray DT, Simon AE. Child and adolescent health care quality and disparities; are we making progress? *Academic Pediatrics*. 2014; 14:137-148.
4. Diaz A, Peake K. Principles of adolescent-and young adult friendly care: Contributions to reducing health disparities and increasing health equity. In Bogard K, Murry V, and Alexander C, eds. 2017. Perspectives on health equity and social determinants of Health. Washington, DC: National Academy of Medicine.
5. Hales CM, Carroll MD, Fryar CD, Ogden CL. Prevalence of obesity among adults and youth: United States, 2015-2016. NCHS data brief, no 288. Hyattsville, MD: National Center for Health Statistics. 2017.
6. Ruiz LD, Zuelch ML, Dimitratos SM, Scherr RE. Adolescent obesity: Diet quality, psychosocial health, and cardiometabolic risk factors. *Nutrients*. 2020, 12, 43; doi:10.3390/nu12010043.
7. The National Institute for Health Care Management (NIHCM) Foundation. Data Insights. Youth mental health: Trends and outlook. January 2020.
8. Cohen RA, Terlizzi EP, and Martinez ME. Health insurance coverage: Early release of estimates from the National Health Interview Survey, 2018. National Center for Health Statistics. May 2019. Available from <https://www.cdc.gov/nchs/nhis/releases.htm>.
9. Fairbrother G, Dougherty D, Pradhananga R, Simpson LA. Road to the future: Priorities for child health services research. *Academic Pediatrics*. 2017; 17:814-824.
10. Love HE, Schlitt J, Soleimanpour S, Panchal N, and Behr C. Twenty years of school-based health care growth and expansion. *Health Affairs*. 2019; 28(5); 755-764.
11. Knopf JA, Finnie RKC, Peng Y, Hahn RA, Truman BI, et al. School-based health centers to advance health equity: A community guide systematic review. *Am J Prev Med*. 2016; 51(1);114-126.
12. Ran T, Chattopadhyay S, Hahn RA, and the Community Preventive Services Task Force. Economic evaluation of school-based health centers: A community guide systematic review. *Am J Prev Med*. 2016; 51(1): 129-138.
13. American Academy of Pediatrics. Policy Statement. School-based health centers and pediatric practice. *Pediatrics*. 2012; 129 (2): 387-393.
14. Bains RM, Diallo AF. Mental health services in SBHCs: systematic review. *The Journal of School Nursing*. 2016; 32(1):8-19.
15. Love H, Soleimanpour S, Panchal N, Schlitt J, Behr C, Even M. (2018). 2016-17 national School-Based Health Care Census Report. School-Based Health Alliance. Washington, D.C.
16. Bersamin M, Coulter RWS, Gaarde J, Garbers S, Mair C, and Santelli J. School based health centers and school connectedness. *J Sch Health*. 2019; 89(1):11-19.
17. Centers for Disease Control and Prevention. Atlanta, GA: US Department of Health and Human Services; 2009. School connectedness: Strategies for increasing protective factors among youth.
18. Rundle AG, Park Y, Herbstman JB, Kinsey EW and WangYC. COVID-19 related school closings and risk of weight gain among children. Doi:10.1002/OBY.22813.