


Examining School Based Health Service Utilization Among Marginalized Youth in Connecticut During COVID

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Abstract

Purpose: This study examines how the coronavirus disease 2019 (COVID-19) is affecting utilization of medical and behavioral health services through school based health centers (SBHC s).

Methods: We leveraged the electronic health records from one of the largest sponsors of SBHCs in the country, and tested differences in SBHC utilization with chi-square tests one year prior to the pandemic (pre-pandemic: March 2019-February 2020) compared to one year into the pandemic period (March 2020-February 2021).

Results: A significant difference in SBHC utilization was found between pre-pandemic and pandemic periods ($P < .001$). 63.5% of SBHC patients accessed medical services pre-pandemic compared to 51.2% during the pandemic. In contrast, 36.5% of SBHC patients accessed behavioral services pre-pandemic compared to 48.8% during the pandemic, representing a 12.3% increase in SBHC behavioral service utilization since the pandemic.

Conclusions: SBHCs may serve as an invaluable means of ensuring youth, particularly those from disadvantaged communities, have access to needed behavioral health services during the current public health crisis.

Keywords

school-based health centers, federally qualified health center, health care access, health service utilization, marginalized youth, COVID-19

What Do We Already Know About This Topic?

School based health centers serve as the primary, and often, sole source of healthcare for youth from underserved communities.

How Does Your Research Contribute to the Field?

Understand how school based health center utilization, inclusive of medical and behavioral health services, by disadvantaged youth has changed during the pandemic.

What Are Your Research's Implications Towards Theory, Practice, or Policy?

Underscores importance of school based health centers in providing behavioral health services to underserved youth, particularly during the pandemic and co-occurring mental health crisis.

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Introduction

Youth in the U.S. experience many disparities in healthcare access and outcomes.¹⁻⁴ Black, Indigenous, and People of Color (BIPOC) youth and youth from disadvantaged communities in particular, continue to experience longstanding challenges to accessing routine and preventive services.^{5,6} In addition, most recent national surveillance data found an increasing percentage of youth feeling sad or hopeless for at least two weeks that impaired their ability to engage in usual activities.⁷ More specifically, the percentage of youth who seriously considered suicide or made a suicide plan increased significantly among disadvantaged and underserved communities in the last decade.⁸ The pervasiveness of adverse childhood experiences (ACEs, eg, physical, emotional, or sexual abuse; poverty; parental absence, incarceration, or addiction), along with increased incidents of community trauma (eg, mass shootings, natural/manmade disasters) are also taking a toll on youth across the U.S.⁹

Additionally, it is important to highlight the significant disparities in youth mental health outcomes. For example, 1 in 6 youth in the U.S. have diagnosed with mental health disorders. The rates are even higher for low-income youth and youth of color (17.8% to 34.4%).¹⁰ Similarly, approximately one quarter of youth in the U.S. have experienced two or more ACEs, with a higher rate for low-income youth and youth of color (30.7%).¹¹ There is strong evidence suggesting that low-income youth of color have the highest rates of unmet need for mental health services.^{7,12} The social and economic repercussions of the current COVID-19 pandemic, including major academic disruptions, heightened food insecurity, and household income loss and stress, have both shed light on and exacerbated existing health disparities among youth of color and their families who have been hardest hit by the pandemic.¹³ In addition, strategies to slow the spread of COVID-19 will compound longstanding underlying health and racial disparities.¹⁴

There is a growing body of research supporting the role of school based health centers (SBHCs) in promoting health care access and improving health outcomes among underserved youth. SBHCs have been associated with increased primary care services, increased mental health-seeking behavior, decreased alcohol and substance use, as well as reduced school suspensions and increased graduation rates.¹⁵⁻²⁰ Moreover, SBHCs have been maintained their service delivery amid COVID-19 pandemic challenges.^{21,22}

According to the School-Based Health Alliance's most recent census, more than 2500 SBHCs provide health care services access to over six million youth across the U.S., and are more likely to be located in communities with higher percentages of youth of color, and low socioeconomic status.²³ SBHCs are organized through school, community, and health provider relationships, and provide services in accordance with state and local laws.²⁴ SBHCs are increasingly sponsored and operated by Federally Qualified Health Centers (FQHCs).²³ FQHCs are able to provide financial sustainability

for SBHCs by having Federal funding from the Health Resources and Services Administration (HRSA),²⁵ as well as reimbursement incentives by serving patient populations who are eligible for Medicaid or Child Health Insurance Program (CHIP).²⁶ Moreover, FQHC sponsorship of SBHCs has been shown to be a viable means of expanding access in schools with predominantly low-income, BIPOC student populations.²⁷

Nonetheless, with policies affecting school closures and the pivot to remote learning and telehealth, less is known about health care access and utilization through SBHCs during the pandemic. To our knowledge, this is the first study to examine changes in SBHC access and utilization among underserved youth during COVID.

Methods

Data

Data was extracted from all electronic health records at SBHCs sponsored by Community Health Center, Inc (CHC), a large FQHC in Connecticut and one of the largest sponsors of SBHCs in the U.S. CHC sponsors over 180 SBHCs across the state, serving the healthcare needs of over 17 000 students annually.²⁸ The demographics of the sample population managed through CHC-sponsored SBHCs is generally representative of those seen at SBHCs across the country given the focus on schools with a significant percentage of students with low SES. For the purposes of this study, we classified data one year prior to COVID (March 2019-February 2020) as *pre-pandemic*, and one year since the inception of COVID (March 2020 –February 2021) as *pandemic*. This study has been reviewed and deemed exempt by the Community Health Center, Inc Institutional Review Board.

Measures

A descriptive and outcome measures were briefly described in [Table 1](#).

Analysis

We tested differences in SBHC utilization during pre-pandemic and pandemic periods with chi-square tests. Descriptive data were also compared in the analyses. An alpha value of *P* less than .05 was used to consider the statistical significance. All data were analyzed using SPSS (version 27).

Results

[Table 2](#) shows the prevalence of age, gender, race/ethnicity, insurance, and service utilization during pre-pandemic and pandemic. Sample characteristics of the SBHC population pre-pandemic and during the pandemic are largely the same with a couple of exceptions, including a two-fold increase in

Table 1. Sample characteristics and outcome measures.

Measures*	Definitions
Age	Age of school based health center (SBHC) patients SBHC patients were categorized into three age groups: <ul style="list-style-type: none"> • 5-11 (aged between 5 and 11 years): • 12-14 (aged between 12 and 14 years) • 15-18 (aged between 15 and 18 years)
Gender	Gender refers to sex (male or female) assignment to a child at birth: <ul style="list-style-type: none"> • Male • Female
Race and ethnicity	Race and ethnicity are identified by the caregivers/parents and classified based on the office of management and budget (cite) as follows: <ul style="list-style-type: none"> • American Indian/Alaska Native • Asian • Black/African American • More than one race (multiracial) • Other • Total Native Hawaiian/Other Pacific Islander (Native Hawaiian or other pacific Islander) • Undetermined/Refused to report race (undetermined, undetermined hispanic, undetermined white hispanic, undetermined black hispanic, unreported, unknown, state prohibited, None, patient declined) • White
Insurance	Health insurance status Insurance were grouped as follows: <ul style="list-style-type: none"> • Medicaid • Private • No insurance • Unknown
Service utilization	Service utilization refers to patients' utilization of school-based health services (medical or behavioral health-related visits) and grouped into two: <ul style="list-style-type: none"> • Patients who had a medical or behavioral health-related visit through a SBHC during pre-pandemic • Patients who had a medical or behavioral health-related visit through a SBHC during pandemic

*These measures were selected as part of the routine clinical care.

patients ages 5-11 (29.0% vs 56.0%, $P < .001$) and a moderate, yet notable increase in patients enrolled in Medicaid (54.0% vs 58.8%, $P < .001$). The ratio of male and female patients was relatively equal. About a quarter of the sample self-identified as BIPOC, though race data was not reported by a third of the population.

A significant difference in SBHC service utilization was found between pre-pandemic and pandemic periods ($P < .001$). 63.5% of SBHC patients accessed medical services pre-pandemic compared to 51.2% during the pandemic, a 12.3% decrease in SBHC use for medical purposes. In contrast, 36.5% of SBHC patients accessed behavioral services pre-pandemic compared to 48.8% during the pandemic, representing a 12.3% increase in SBHC behavioral service utilization since the pandemic (Figure 1).

Discussion

Our study is the first to examine changes in SBHC utilization during COVID. Moreover, our study contributes to the existing literature supporting the unique role of FQHCs in expanding SBHCs and subsequently, promoting access in underserved communities.²³ Data suggest that utilization of

behavioral health services through SBHCs has increased during the pandemic, which is consistent with the growing body of literature regarding the mental health crisis that the pediatric population is experiencing related to the pandemic.^{13,29,30}

There are several limitations worth noting. Our sample of SBHCs are sponsored by a relatively large FQHC in Connecticut that has been sponsoring SBHCs for over two decades, and had the reimbursement incentives, infrastructure, and capabilities to transition to telehealth early in the pandemic; thus, findings from this study may not necessarily be reflective of other SBHCs that lacked the resources to continue to provide health care services during the pandemic, or are in the early stages of implementation. Also, we lacked race/ethnicity data for a third of our sample, which makes it challenging to draw any conclusions regarding changes in health care utilization by race/ethnicity since the pandemic. Lastly, while the current study incorporate SBHC-level and patient-level data, additional familial- and communal-level factors may influence SBHC utilization, which were not accounted for here.

Despite these limitations, our study highlights the potential for SBHCs to promote health service access and

Table 2. Sample characteristics during pre-pandemic (March 2019-February 2020) and pandemic (March 2020-February 2021) periods.

	Pre-pandemic n (%)	Pandemic n (%)	Chi-Square χ^2	P Value
Age				
5-11	2105 (29%)	2675 (56%)	138.52	<.001
12-14	1860 (25.7%)	1671 (23.8%)		
15-18	3286 (45.3%)	2667 (38%)		
Gender				
Male	3444 (47.5%)	3343 (47.7%)	.042	.837
Female	3807 (52.5%)	3670 (52.3%)		
Race/Ethnicity				
American Indian/Alaska Native	25 (.3%)	21 (.3%)	44.39	<.001
Asian	120 (1.7%)	101 (1.4%)		
Black/African american	1263 (17.4%)	1015 (14.5%)		
More than one race	31 (.4%)	33 (.5%)		
Other	509 (7%)	406 (5.8%)		
Total Native Hawaiian/Other pacific Islander	13 (.2%)	4 (.1%)		
Undetermined/Refused to report race	2253 (31.1%)	2367 (33.8%)		
White	3037 (41.9%)	3066 (43.7%)		
Insurance				
Medicaid	3915 (54%)	4127 (58.8%)	56.30	<.001
Private	2226 (30.7%)	2084 (29.7%)		
No insurance	1097 (15.1%)	790 (11.3%)		
Unknown	13 (.2%)	12 (.2%)		
Service utilization				
Medical	4604 (63.5%)	3593 (51.2%)	219.27	<.001
Behavioral	2647 (36.5%)	3420 (48.8%)		

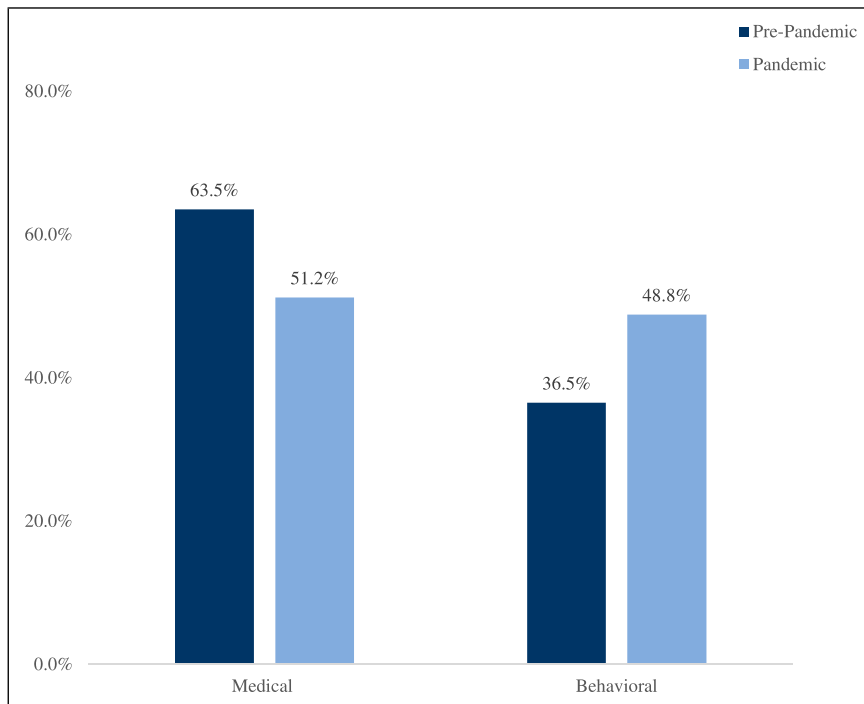


Figure 1. School based health utilization of medical and behavioral services in pre-pandemic (March 2019-February 2020) and pandemic (March 2020-February 2021) periods.

utilization among underserved youth, including during public health emergencies. Future research should continue to explore the role of SBHCs in addressing unmet needs among underserved youth, including youth not explicitly examined in this study (eg, sexual minority, undocumented youth).

Implications for Practice And/Or Policy

The social and economic repercussions of COVID-19, alongside political and racial strife, have exacerbated the existing mental health challenges that youth have been facing prior to the pandemic. SBHCs appear to be effective service delivery system in preventing mental health problems, especially for youth of color and their families with barriers to health care access.³⁰ For that reason, SBHCs can serve as a viable means of ensuring youth, particularly those from underserved communities, have access to needed mental health services, thereby mitigating future strain on the health care system.

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Declaration of Conflicting Interests

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