Preventing Delinquency through Integrated Physical and Behavioral Health Screening and Services: Lessons Learned for Policy and Practice

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IT HAS BEEN well established that youth involved in the juvenile justice system have extensive trauma histories as well as unmet physical and behavioral health issues. While it is unclear what drives youth engagement in delinquent behavior, these issues tend to co-occur and interact in ways that increase the risk of juvenile justice involvement. In recent years, there has been increased attention on the development of strategies that can help prevent youth involvement in the juvenile justice system by providing at-risk youth with the necessary supports and treatment that can help ensure they are put on a path to succeed and thrive in life. One of the biggest challenges for prevention programs is identifying youth who are most in need of these services. While schools can play an important role in identifying high-risk youth, this process tends to be more reactive, only referring youth to services after they have engaged in problematic behaviors. Thus, universal screening programs in schools may be a more effective method for identifying students in need of comprehensive services to address unmet physical and behavioral health needs that can put them at risk for becoming involved in the juvenile justice system.

The main purpose of this article is to describe a pilot universal screening program that was incorporated into a school-based health clinic so that other districts that are considering using an integrated healthcare approach to address health-related risk factors for delinquency may benefit from the lessons learned through this pilot project. This article is organized into four sections. The first is a review of the literature on the relationship between physical and behavioral health and criminal justice involvement. Second, we review school-based strategies for addressing physical and behavioral health issues among the student population and gaps in current services provided by school-based health centers (SBHCs). Third, we provide a description of a pilot universal screening program developed by Health Care Integrated Services (HCIS) to identify and link students to treatment and supportive services that address through an integrated treatment model unmet physical and behavioral health needs as well as trauma associated with negative life experiences. Finally, we examine the potential challenges of this universal screening model that should be addressed in future applications of this paradigm in other school-based settings.

Health and Delinquency

Due to the high prevalence of untreated physical and behavioral health issues found in justice-involved populations, many researchers have examined how health-related issues might increase the risk of engagement in delinquent behavior and criminal justice involvement (Kort-Butler, 2017; Link, Ward, & Stansfield, 2019; Schroeder, Hill, Haynes, & Bradley, 2011). While youth with mental health disorders are overrepresented in the juvenile justice system, there is growing evidence that justice-involved individuals with mental illness tend to engage in offending behavior for the same reasons as those without mental illness (Bonta, Blais, & Wilson, 2014). Substance abuse in particular has been found to be a major risk factor for offending for those with and without mental illness (Bonta et al., 2014). Additionally, having a co-occurring substance use disorder along with another mental health disorder has been found to increase engagement in crime when compared to persons who suffer from only

one type of disorder (Baillargeon et al., 2009; Wilson, Draine, Hadley, Metraux, & Evans, 2011).

When assessing the relationship between physical health issues and offending, there is some evidence that minor health issues may have a significant influence on engagement in violent behavior (Stogner, Gibson, & Miller, 2014) and the use of illicit substances (Stogner & Gibson, 2011). Stogner and Gibson (2010) theorize that physical health issues can lead to three types of strains posited by Robert Agnew in his general strain theory (Agnew, 1992): the failure to achieve positively valued goals (e.g., losing a part in a school theater performance due to repeated health-related absences), the removal of positive stimuli (e.g., not being able to participate in recreational activities due to illness), and the introduction of negative stimuli (experiencing pain or discomfort due to illness). These health-related strains can in turn lead to negative emotions such as anger and depression, which in turn create pressure for the person to do something to address these negative emotions. The findings from the literature suggest there are hundreds of different types of coping strategies that individuals can use to alleviate the negative emotions when faced with stressors, many of which are legal (Carver, Scheier, & Weintraub, 1989). Coping strategies are typically categorized as either active or avoidant; Individuals who employ active coping strategies attempt to gain control over the stressor, while those who employ avoidant coping strategies tend to avoid, escape, or disengage from the stressor (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Studies examining coping strategies used by adolescents show that adolescents who used more active coping strategies when responding to stress are less likely to engage in offending behaviors than those who do not (Robertson, Stein, & Schaefer-Rohleder, 2010; Shulman & Cauffman, 2011). Overall, this line of research suggests that treating physical health issues that are causing a student to experience certain strains in his or her life may lead to a reduction in anger and depressive symptoms and subsequently reduce the likelihood of his or her engagement in delinquent behavior.

Improving Student Health and Behavioral Outcomes

Universal screening at school entry can be an effective way to identify students likely to develop recurrent comorbid health and behavioral issues, and would provide a basis for developing optimal targeted treatment and intervention programs. However, the majority of school-based screening programs identified in the literature tend to focus on only one behavioral health issue—specifically, identifying students with either serious mental health issues or substance misuse issues. Thus, there is a need to provide a more comprehensive screening program that can identify both unaddressed physical and behavioral health issues simultaneously. However, it is not enough to just identify these health issues. It is also necessary to ensure that students have access to services that can help them address the issues uncovered during the screening process in a timely manner.

Over the past two decades, school-based clinics have been growing in popularity and are viewed as a source for providing primary and behavioral health care to K-12 students. These clinics have been found to be proficient in increasing student access to health care services, especially in medically underserved areas (Brown & Bolen, 2003). School-based clinics have also been found to be a very effective and efficient means of addressing issues such as PTSD (Rolfsnes & Idsoe, 2011), anxiety (Mychailyszyn, Brodman, Read, & Kendall, 2012), depression (Farahmand, Grant, Polo, & Duffy, 2011), obesity (Lavelle, Mackay, & Pell, 2012), and substance use (Mitchell, Wilson, Eggers, & MacKenzie, 2012) in an easily accessible location for the students. Additionally, there is some evidence that the use of school-based services is associated with a reduction in school dropout among the highest risk students (Kerns, 2011).

There is growing recognition of the need to use a public health approach to address juvenile justice involvement that includes a combination of primary, secondary, and tertiary prevention strategies for addressing risk factors for delinquency. However, prior research suggests that just addressing the physical and behavioral health issues of at-risk youth may not be enough to reduce their involvement in delinquent behavior. For instance, Runton and Hudak (2016) found that implementing an SBHC in a Virginia School system did not have a significant impact on student's risk behaviors. Thus, while increasing access to comprehensive school-based physical and behavioral health services has been found to improve the health conditions that can interfere with learning, this may not be enough to prevent juvenile justice involvement if all of the risk factors are not adequately addressed.

SBHCs are uniquely positioned to provide a wide range of services to help address not only physical and behavioral health issues but also other risk factors for involvement in the juvenile justice system. While many SBHCs in the United States provide a wide range of physical and behavioral health services to its student population, it is unclear the extent to which these services are delivered in an integrated way. A number of studies have highlighted the fact that one condition or issue can negatively impact the recovery process of another. For instance, substance use has been found to be associated with low psychiatric medication adherence (Calhoun, 2018; Fenton, Blyler, & Heinssen, 1997) while physical health issues have been found to have an indirect effect on substance abuse treatment engagement through their impact on psychological functioning (Joe, Lehman, Rowan, Knight, & Flynn, 2019). In California there has been a big push for health systems to provide Whole Person Care (WPC) that can address the physical, mental, and social needs of an individual as part of a single care plan. In integrated health settings, collaborative care models consist of a team of primary care providers, care managers, and behavioral health specialists who work together to evaluate, treat, and monitor patient progress. Findings from a recent meta-analysis suggest that team-based collaborative care models are very effective in addressing the physical and health needs of youth (Asarnow, Rozenman, Wiblin, & Zeltzer, 2015).

HCIS Universal Screening Program

Youth residing in the Southern California city of Compton are exposed to high rates of violence and other adverse childhood events that put them at risk of developing a wide range of physical and behavioral health problems that can persist throughout life if unaddressed. Considering that Compton has been designated a medically underserved area, there are limited resources to address the multiple health care needs of the youth in this area. In 2014, HCIS implemented an integrated school-based health clinic on the grounds of a high school in Compton to provide a comprehensive response to the lack of integration of traditional primary health care, behavioral health, and social services systems in the area that tend to work independently of each other.

The HCIS vision is to create and sustain a culture of health and learning on campus

for K-12 students through the implementation of holistic models of care that uniquely integrate prevention, intervention, education, and social justice in ways that promote equity for economically disadvantaged and medically underserved youth in California. HCIS has observed that, as a result of growing up in cycles of poverty and complex trauma, students often exhibit symptoms of multiple underlying health issues, including substance abuse, suicidal ideation and other mental health disorders, cognitive impairment, and overlapping chronic physical health conditions. The cumulative impact of these issues hinders the chances for success in the classroom, thus contributing to the perpetuation of the cycle of poverty, marginalization, and juvenile justice involvement. In alignment with the evidence from the literature, HCIS realized that it is impossible to fully address one issue without addressing other issues that may be negatively impacting the healthy development of children in disadvantaged communities. To that end, HCIS has pioneered a unique program to maximize youth wellness and success in the classroom and in life based on best practices identified in the literature for delivering integrative health services.

During the 2018-2019 academic school year, HCIS received funding from the California Department of Education to improve the health and wellness of students attending the participating high school in Compton through a universal physical and behavioral health screening program. As part of this screening program, the HCIS clinic team (1) offered a comprehensive screening assessment to the entire student population to identify students with physical health issues, behavioral health issues, and current exposure to adverse experiences; (2) developed a tailored treatment and service plan that acknowledged all needs simultaneously; (3) communicated this plan to the student patients and their parents/caregivers; (4) linked the student patients to services within the school-based clinic or to an outside community provider; and (5) implemented the integrated treatment and service plan in ways that provided the continuity of care for both physical and behavioral health issues.

Prior to the grant, approximately 33 percent of the student population used clinic services to address an acute health care issue. Therefore, it was unclear to what extent other students were experiencing major physical and behavioral health issues that were interfering with their academic achievement and subsequently increasing their risk for engaging in delinquent behaviors. Thus, one of the major goals of this pilot universal screening program was to identify the full physical and behavioral health needs of the student population and to remove barriers to addressing these needs through an integrated system of care. Overall, the universal screening program was successfully implemented into HCIS's clinic practice with wide support from school staff, students, and parents. A total of 627 students participated in the universal screening program during the first five months of the grant program, with only one parent and six students choosing to opt out of the program. Furthermore, the HCIS clinical team was successful in identifying students in critical need of physical/behavioral health services. Approximately 30 percent of the students were identified as needing critical medical attention based on having a positive screen for being suicidal, a psychiatric disorder, and/or other severe health condition. Another 16 percent were identified as having a less severe health issue that was affecting their academic performance. About 44 percent of the students screened through the program had a combination of physical, psychiatric, and psychosocial issues that needed to be addressed.

Lessons Learned

While the HCIS universal screening program was successful in identifying students with unaddressed physical and behavioral health needs, HCIS staff experienced a number of challenges throughout the program. We will describe here both challenges and lessons learned from the first five months of the HCIS universal screening program. The lessons described in this article are collectively articulated by the HCIS clinical staff team, which includes the executive director of the clinic, the project director, nurse practitioners, and behavioral health specialists. Together, the team identified the following primary challenges and lessons learned from the pilot screening program, including: a) incorporating the universal screening program into the school system, b) providing an interdisciplinary team approach to treatment planning and monitoring, c) using electronic health records for patient monitoring, d) building relationships with other community providers, e) engaging students and parents/caregivers in the treatment planning process, and f) SBHCs can serve as a supplement to traditional primary care systems.

Incorporating the Universal Screening Program into the School System

Implementing a universal screening program in a high school setting can be disruptive to student learning, because clinic staff often have to pull students out of their classes to conduct the initial screening. Thus, it is important to include the school principal and any other relevant school staff in the planning phase of the program to identify classes that students can afford to miss. For this particular program, the planning committee came to the conclusion that the best time for conducting the universal screening with students would be during their physical education (P.E.) period. However, the planning team quickly learned that a substantial number of students were not taking P.E. during the grant period. Therefore the planning committee developed a decision tree to determine other classes that students can be pulled from that would not be too disruptive for the student, teacher, and fellow classmates.

Interdisciplinary Team Approach to Treatment Planning and Monitoring

Even though the primary care team and the behavioral team conducted their own screening assessments with the students, the clinic adopted a team-based collaborative care approach when determining the treatment and service plan for each student that was in line with best practices for level 5 integration as specified in the Center for Integrated Solutions' Framework for Levels of Integrated Healthcare. Specifically, since a substantial number of students were in need of both primary care and behavioral health care, it was necessary for all clinical staff to collaborate on treatment planning and monitoring for all shared patients.

Using Electronic Health Records for Patient Monitoring

When using a collaborative team-based model to deliver integrated health care services, it is important that all members of the team have current information about each patient. When dealing with over 600 patients, it can be challenging to establish the progress of each patient and whether modification of the treatment plan is needed when only using paper medical records. Thus, the digitization of electronic health records (EHRs) can help facilitate the exchange of information to support clinical activities in a fast and efficient manner. Additionally, electronic health records can help make it easier for members

of the clinic team to follow up with patients and track continuing care within the clinic as well as with providers in the community. Also the ability to create specialized reports within EHR systems can provide the clinical team with information on how well they are meeting their enrollment goals as well as uncover any emerging health trends within their patient population.

Building Relationships with Other Community Providers

An unexpected outcome of the screening program was the uncovering of an alarming number of students at the high school in need of critical mental health care. The large number of students in need of critical mental health care stretched the capacity of the clinic to be responsive to the immediate mental health needs of these critical cases. This and the fact that the HCIS clinic is only open during regular school hours made it necessary for HCIS staff to establish relationships with outside community providers. This can help ensure that the students with critical health needs always have a place to go after school, during holidays, and vacations. However, there is a risk that some of the students' health and social needs go unaddressed when relying too heavily on outside providers to provide some of the services included in a patient's treatment plan. Developing a Memorandum of Understanding with these outside providers can help reduce some of this risk. Additionally, school-based clinic staff need to also be proactive in following up with their student patients to ensure they are getting the treatment they need and developing alternative plans when gaps in service are discovered. In medically underserved areas such as Compton, finding alternative providers in the area may be challenging. In these situations, telehealth providers might be able to fulfill any gaps in services.

Engaging Students and Parents/ Caregivers in the Treatment Process

The process of family and adolescent participation in the care and follow up of the students begins with parental consent. When a condition or concern is discovered through the screening, assessment, and evaluation process, a follow-up referral is initiated. The referral process begins with the adolescent being given a consent form to have their parents sign so the HCIS clinical team can initiate the referral process. Adolescents who do not return the consent form are brought back to the clinic and reminded that they need to have their parent/guardian sign the consent and return it to clinic. If there is a concern that the adolescent needs further medical care and evaluation, then a notice is sent to the parents to inform them of this finding and to ensure that they are advised of the importance to have follow-up medical evaluation or specialty consultation. The notice also invites parents to contact the clinic to discuss their child's needs and any other information they will need to make an informed decision about their child's health care.

SBHCs Can Serve as a Supplement to Traditional Primary Care Systems

The importance of universal behavioral health screenings and physical exams conducted in the school-based health setting has allowed the clinical staffing to discover conditions that are either missed by students' regular health care providers or had developed between office visits. For those students who never received regular episodic care, the school-based health setting made these critical care discoveries for the first time. The HCIS clinical team has found that even though some students have received immediate referral to their own primary care provider for treatment, most have returned to the HCIS clinic for monitoring of specific conditions and reported never receiving a follow-up from their perspective providers. The use of the HCIS clinic for follow-up care has been largely due to underlying issues such as transportation barriers that make it difficult for them to get to their personal primary doctor or their parents/caregivers being unable to take time off from work to take them to follow-up appointments.

Conclusion

The lessons learned that are presented in this article are designed to assist other school-based clinics in their planning and implementation of a similar universal screening program. We recognize that this is not a formal process evaluation, but, given the innovative nature of the screening program to address a current gap in treatment services provided in medically underserved areas, we feel that there is valuable insight to be gained from the clinic's experiences with providing integrated screening and treatment in a high school setting. We recommend that additional school districts consider adopting a public health approach to addressing delinquency and juvenile justice involvement by implementing an integrated school-based universal screening program for all K-12 students in their district.

References

Agnew, R. (1992). Foundation for general strain theory of crime and delinquency. *Criminology*, *30*(1), 47–88.

Asarnow, J. R., Rozenman, M., Wiblin, J., & Zeltzer, L. (2015). Integrated medical-behavioral care compared with usual primary care for child and adolescent behavioral health: A Meta-analysis. *JAMA Pediatrics*, *169*(10), 929. https://doi.org/10.1001/jamapediatrics.2015.1141

Baillargeon, J., Williams, B., Mellow, J., Harzke, A. J., Hoge, S., Baillargeon, G., & Greifinger, R. (2009). Parole revocation among prison inmates with psychiatric and substance use disorders. *Psychiatric Services*, *60*(11). https://doi.org/10.1176/appi.ps.60.11.1516

Bonta, J., Blais, J., & Wilson, H. A. (2014). A theoretically informed meta-analysis of the risk for general and violent recidivism for mentally disordered offenders. *Aggression and Violent Behavior*, *19*(3), 278–287. https://doi.org/10.1016/j.avb.2014.04.014

Brown, M. B., & Bolen, L. M. (2003). School-based health centers: Strategies for meeting the physical and mental health needs of children and families. *Psychology in the Schools*, *40*(3), 279–287. https://doi.org/10.1002/pits.10084

Calhoun, S. (2018). The clinician-patient working alliance: Is it a significant predictor of psychiatric medication adherence in a sample of recently released parolees? *Journal of Forensic Psychiatry and Psychology*, *29*(5), 782–793.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, *56*(2), 267–283. https://doi.org/10.1037/0022-3514.56.2.267

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, *127*(1), 87–127. https://doi.org/10.1037/0033-2909.127.1.87

Farahmand, F. K., Grant, K. E., Polo, A. J., & Duffy, S. N. (2011). School-based mental health and behavioral programs for low-income, urban youth: A systematic and meta-analytic review. *Clinical Psychology: Science and Practice*, *18*(4), 372–390. https://doi.org/10.1111/j.1468-2850.2011.01265.x

Fenton, W. S., Blyler, C. R., & Heinssen, R. K. (1997). Determinants of medication compliance in schizophrenia: Empirical and clinical findings. *Schizophrenia Bulletin*, *23*(4), 637–651. https://doi.org/10.1093/

schbul/23.4.637

Joe, G. W., Lehman, W. E. K., Rowan, G. A., Knight, K., & Flynn, P. M. (2019). The role of physical and psychological health problems in the drug use treatment process. *Journal of Substance Abuse Treatment*, *102*, 23–32. https://doi.org/10.1016/j.jsat.2019.03.011

Kerns, S. E. U. (2011). Adolescent use of school-based health centers and high school dropout. *Archives of Pediatrics & Adolescent Medicine*, *165*(7), 617. https://doi.org/10.1001/archpediatrics.2011.10

Kort-Butler, L. A. (2017). Health-related strains and subsequent delinquency and marijuana use. *Youth & Society*, *49*(8), 1077–1103. https://doi.org/10.1177/0044118X15578436

Lavelle, H. V., Mackay, D. F., & Pell, J. P. (2012). Systematic review and meta-analysis of school-based interventions to reduce body mass index. *Journal of Public Health*, *34*(3), 360–369. https://doi.org/10.1093/pubmed/fdr116

Link, N. W., Ward, J. T., & Stansfield, R. (2019). Consequences of mental and physical health for reentry and recidivism: Toward a health-based model of desistance. *Criminology*, 1745-9125.12213. https://doi.org/10.1111/1745-9125.12213

Mitchell, O., Wilson, D. B., Eggers, A., & MacKenzie, D. L. (2012). Assessing the effectiveness of drug courts on recidivism: A meta-analytic review of traditional and non-traditional drug courts. *Journal of Criminal Justice*, *40*(1), 60–71. https://doi.org/10.1016/j.jcrimjus.2011.11.009

Mychailyszyn, M. P., Brodman, D. M., Read, K. L., & Kendall, P. C. (2012). Cognitive-behavioral school-based interventions for anxious and depressed youth: A meta-analysis of outcomes. *Clinical Psychology: Science and Practice*, *19*(2), 129–153. https://doi.org/10.1111/j.1468-2850.2012.01279.x

Robertson, A. R., Stein, J. A., & Schaefer-Rohleder, L. (2010). Effects of Hurricane Katrina and other adverse life events on adolescent female offenders: A test of general strain theory. *Journal of Research in Crime and Delinquency*, *47*(4), 469–495. https://doi.org/10.1177/0022427810375577

Rolfsnes, E. S., & Idsoe, T. (2011). School-based intervention programs for PTSD symptoms: A review and meta-analysis. *Journal of Traumatic Stress*, *24*(2), 155–165. https://doi.org/10.1002/jts.20622

Runton, N. G., & Hudak, R. P. (2016). The influence of school-based health centers on adolescents' youth risk behaviors. *Journal of Pediatric Health Care*, *30*(3), e1–e9. https://doi.org/10.1016/j.pedhc.2015.07.005

Schroeder, R. D., Hill, T. D., Haynes, S. H., & Bradley, C. (2011). Physical health and crime among low-income urban women: An application of general strain theory. *Journal of Criminal Justice*, *39*(1), 21–29. https://doi.org/10.1016/j.jcrimjus.2010.09.009

Shulman, E. P., & Cauffman, E. (2011). Coping while incarcerated: A study of male juvenile offenders. *Journal of Research on Adolescence*, *21*(4), 818–826. https://doi.org/10.1111/j.1532-7795.2011.00740.x

Stogner, J., & Gibson, C. L. (2010). Healthy, wealthy, and wise: Incorporating health issues as a source of strain in Agnew's general strain theory. *Journal of Criminal Justice*, *38*(6), 1150–1159. https://doi.org/10.1016/j.jcrimjus.2010.09.003

Stogner, J., & Gibson, C. L. (2011). The influence of health strain on the initiation and frequency of substance use in a national sample of adolescents. *Journal of Drug Issues*, *41*(1), 69–93. https://doi.org/10.1177/002204261104100104

Stogner, J., Gibson, C. L., & Miller, J. M. (2014). Examining the reciprocal nature of the health-violence relationship: Results from a nationally representative sample. *Justice Quarterly*, *31*(3), 473–499. https://doi.org/10.1080/07418825.2012.723029

Wilson, A. B., Draine, J., Hadley, T., Metraux, S., & Evans, A. (2011). Examining the impact of mental illness and substance use on recidivism in a county jail. *International Journal of Law and Psychiatry*, *34*(4), 264–268. https://doi.org/10.1016/j.ijlp.2011.07.004