INTRODUCTION

In recent years, states and local communities across the country have implemented Screening, Brief Intervention, and Referral to Treatment (SBIRT) for adults, and increasingly adolescents, in a range of settings with largely promising but varied results. While much of the activity related to SBIRT has occurred on the state level and within individual pilot sites, increasingly counties and cities are exploring their role in strengthening screening and early intervention approaches to help address substance use disorders in their community. Baltimore is a prominent example of how one city has become an early innovator in developing an effective implementation model to integrate SBIRT into a wide range of practice settings for adults and adolescents, including Federally Qualified Health Centers (FQHCs); primary care offices; schools; inpatient nursing and emergency departments of an urban hospital; a nursing home; and Planned Parenthood.

The experience in Baltimore represents an approach that local jurisdictions can learn from and adapt to successfully integrate SBIRT into a continuum of care to address the public health crisis of substance abuse. Baltimore, like most other jurisdictions, introduced SBIRT in the adult population and achieved good results. Their success serving the adult populations across a diverse set of venues led to several pilot programs exclusively serving youth. Baltimore’s implementation approach for integration of SBIRT into routine practice proved effective for use even in settings outside the primary care office, such as schools, yet despite a number of lessons learned, questions and challenges remain for those in the field about how to significantly expand SBIRT for adolescents. The following brief highlights Baltimore’s experience and describes how it can inform implementation work at the state and local level across the country.

The Substance Abuse and Mental Health Services Administration (SAMHSA) defines SBIRT as a comprehensive, integrated, public health approach to the delivery of early intervention and treatment services for individuals with risky alcohol and drug use, and the timely referral to more intensive treatment for those with substance use disorders. The comprehensive SBIRT model that has emerged for use with adults and has been endorsed by SAMHSA includes the following:

- It is Brief, typically 5-10 minute brief interventions and five to twelve sessions for brief treatment
- Screening is Universal
- One or more specific behaviors related to risky alcohol and drug use are targeted
- The services occur in a public health non-substance abuse treatment setting
- It is comprehensive, comprised of screening, brief intervention/treatment, and referral to treatment

Strong research or experiential evidence supports the model's effectiveness for adults and is increasingly promising for adolescents. The emerging evidence on the potential benefits of SBIRT for adolescents has led both the American Academy of Pediatrics and the American Medical Association to recommend that youth aged 11 years and older should be screened for alcohol and drug use at each annual preventive health visit.
PILOTING SBIRT: IMPLEMENTATION FOR ADULTS IN BALTIMORE FQHC’S

The magnitude of the substance abuse problem in Baltimore is well-documented; for years it has struggled with one of the highest rates of heroin addiction in the nation. As a result local policymakers, substance abuse and health practitioners, funders and advocates have worked hard to improve public health responses. Increasingly, these stakeholders have worked together to explore innovative approaches to expand partnerships between the health care and substance abuse services systems. The most significant of these partnerships in recent years has been the Baltimore Buprenorphine Initiative (BBI).

The BBI was established in 2006 with funding support from the Open Society Institute-Baltimore (OSI-B) to expand the continuum of care for opioid treatment at Federally Qualified Health Centers (FQHC’s). A key goal and indicator of success of the BBI was the engagement of primary care doctors in their patient’s addiction treatment. Giving the primary care providers such a significant role in addressing addiction necessitated a paradigm shift in the management of addiction treatment. Some primary care providers were initially reluctant to accept individuals with substance use disorders, but with training and experience, the reluctance dissipated. Treatment and primary care for these individuals became a routine part of their caseloads and within three years, physicians at most FQHCs had completed the required training and integrated individuals with substance use disorders into their primary care practice. Given this shift in attitude among the primary care providers and success in engaging them in partnerships with addiction service providers, OSI-B and The Mosaic Group, a Baltimore-based management consulting firm that specializes in public health and human services strategies, agreed that timing was right to introduce SBIRT into four of the BBI continuing care health center partners to further the integration of behavioral health services into somatic care settings.

As a precursor to the SBIRT pilot, Mosaic Group researched SBIRT models used in other states, including several that were awarded SAMHSA funding, and found that the typical program operated within an FQHC or community health center utilizing health educators to conduct screenings, interventions, and referrals. In many sites this approach had the unintended consequence of creating a separate delivery system specifically for SBIRT that was not integrated into routine practice. While the approach was successful in delivering services, it required alternative funding to maintain the program once SAMHSA funding ended. As a result, after years of work, many jurisdictions had an SBIRT model that was not fully integrated into the care delivery practices and difficult to sustain without additional funding. Given that SBIRT is intended to be an approach that is incorporated into routine care, significant attention needs to be given to how implementation efforts can successfully accomplish that goal.

Development of an Integrated Care Model
Drawing upon the experiences of other communities, the Baltimore implementers chose to develop an integrated model that would make SBIRT part of routine service delivery. The initial pilot started with four FQHCs, representing different areas of the city. The sites, Total Health Care, East Baltimore Medical Center, Family Health Centers of Baltimore, and Chase Brexton Health Care, were selected for their records of success in implementing BBI and their potential as "early wins" for SBIRT given their strong expressed interest in expanding substance abuse services in primary care. The process in each of the sites started with the development of
customized implementation plans utilizing the principles of NIATx\textsuperscript{1}, a process improvement model designed specifically for behavioral health care settings. Applying the NIATx approach helped the sites identify changes in practice that needed to occur in order to incorporate SBIRT into the unique operating procedures and workflows of each site.

Although customized implementation plans were designed for each site, the planning and development process was identical for all. Before work could begin, the first step was to secure the commitment of the Chief Executive Officer and Medical Director, largely by making the case that the site would see improvements in their business bottom line as the result of improved overall patient outcomes resulting from the SBIRT intervention. Each pilot site identified an interdisciplinary team who would work with the consultants from Mosaic Group to analyze work flow, identify options for implementing SBIRT, define roles, prepare protocols, create instruments to support implementation, establish referral systems, and formally endorse the plan. At most sites, certified medical assistants (CMAs) were trained to screen all patients at every appointment, just as they took other vital signs such as blood pressure and heart rate. Primary care providers learned to conduct brief interventions appropriate to the patients' SBIRT screening scores. If behavioral health services were recommended, and if those services were available in the same facility, patient care staff provided a "warm hand-off" to treatment, including taking the patient to the service, ensuring appointments were made, and answering the patient's questions.

Accurate data collection and analysis were vital to maintaining work flow and documenting outcomes for on-going quality improvement. The consultants worked with three information technology (IT) vendors serving the four pilot sites to integrate the screening and referral process into the electronic medical record (EMR). The time required to customize clinical-decision support processes and forms was significant. However, the effort was invaluable in creating IT systems that would methodically track progress, identify problems, provide feedback, identify additional training needs, and guide refinements to the protocols and processes.

Outcomes and Lessons Learned
SBIRT implementation at the four pilot sites was an unequivocal success. The services were integrated into routine service delivery in a manner that minimized costs and improved outcomes for the practice and for the patients. Based upon the success of the "early adopters," all four FQHCs have chosen to expand SBIRT services to all of their locations, funded by small grants of $8,000. Three additional FQHCs were approached about initiating programs and experienced little resistance from staff or providers. The most recent adopters are Greater Baden Health System in southern Maryland, Baltimore Medical Systems in East Baltimore, and Park West Health Systems in West Baltimore. To date, nearly every health center has fully integrated SBIRT as a routine part of care. In addition, SBIRT services have been developed and implemented in three new settings in Baltimore City: Bon Secours Hospital in their emergency department and inpatient nursing units; Planned Parenthood; and a nursing home.

As a result of the success with the health center pilots, Baltimore City Health Department invited Mosaic Group to work with the Baltimore City Public Schools (BCPS) to introduce SBIRT in

\textsuperscript{1} NIATX, formerly the acronym for Network for the Improvement of Addiction Treatment, is part of the University of Wisconsin–Madison's Center for Health Enhancement Systems Studies (CHESS). More information is found at http://www.niatx.net
several city high schools. That experience in addition to pilot work in several other sites for adolescents is reviewed in the following section.

PILOTING SBIRT FOR USE WITH ADOLESCENTS IN SCHOOLS AND OTHER SETTINGS

Mosaic Group conducted extensive research to identify promising practices and model programs that had successfully adopted the SBIRT practice for adolescents as a routine part of care in primary care and other settings. They found limited applications designed specifically for adolescents, although the evidence suggests that brief interventions are effective with that population. Gaps in the literature such as inadequate statistical power, need for longer-term follow-ups, and limited testing in diverse service delivery settings reveals a need for further randomized controlled trials\(^2\), one of which is currently being conducted in Baltimore. And while there was some research, Mosaic Group leaders did not find many examples of SBIRT targeting adolescents being widely used in practice settings outside well-funded studies. However, several states have taken the lead in planning and piloting the expansion of SBIRT to include adolescents, including New York, Massachusetts, New Mexico, North Carolina and New Hampshire.

Example: Baltimore City Public Schools SBIRT Pilot

Of the programs that have been implemented in various sites for adolescents, a majority operate within school-based health centers (SBHCs); as a result, only students who self-refer to the centers for illness, medication management, sports physicals, and other medical purposes are screened. Baltimore leaders were interested in developing a universal screening approach to ensure all students were screened, and as a result, a significant focus of the pilot was developing an approach that would reach as many students as possible in the school setting.

At the outset meetings were conducted with school officials to discuss SBIRT and gain support for piloting the program. The six high schools that were selected for the pilot had the highest percentages of students with disciplinary actions related to substance use, and several were identified by the city as being on their ‘persistently dangerous’ list and were dealing with multiple challenges. Although the selected schools did have SBHCs, the consultants recommended an alternative approach that would utilize the Student Support Teams (SSTs) in each school, thus potentially reaching more students than just those who sought services at the SBHCs.

Building on lessons learned from the FQHC adult pilot programs, the BCPS initiative began with a principals' meeting for the six selected high schools to ensure senior leadership support and to clarify that the new initiative was being led at the local school level, not from the district/central office level. Once committed, each school-based leader developed an interdisciplinary team to design an approach unique to the culture and program offerings of the school. These teams included counselors, social workers, and psychologists who were part of the SSTs, as well as the school nurse and nurse practitioner from the SBHCs in the participating schools. Using the same process for planning that was effective in the health center initiative, consultants worked with school staff to conduct walk-throughs and develop flow charts unique to each school, then

develop systems and protocols that would integrate SBIRT with existing school operations and procedures. For example, protocols were designed to dictate that only students seeking college and other support services from guidance counselors would be screened rather than those students who only came to the office to pick up a college application. The team decided that all students with an Individual Education Plan (IEP) would receive a screening and brief intervention by each member of the SST and the results would be discussed as a routine part of the regular IEP meetings. The schools also engaged Behavioral Health System Baltimore (formerly Baltimore Substance Abuse Systems) to ensure that substance abuse counselors were available in each school to provide treatment, assuring that the SBHC staff and SST members walked the student to the treatment program office to support a warm hand-off.

Four of the six schools who expressed initial interest completed the SBIRT pilot. Three of the schools decided not to fully implement the pilot given a number of leadership changes that occurred at the start of the planning process precluding the school principal’s full commitment to the project. Within the four participating schools, forty percent (40%) of students screened positive, and the majority wanted to talk to a counselor about their substance use. Despite this success, the BCPS pilot sites encountered several challenges which can inform work in schools in other sites.

- The SSTs did not feel empowered by their supervisors in the central office to make SBIRT a priority. As a result, without ongoing engagement from leadership and ongoing training, the other competing priorities of an urban school district such as attendance, grades, violence, and homelessness, quickly took precedence.
- Documentation was maintained on paper due to confidentiality issues, thus creating a cumbersome process for follow-up and evaluation.
- Parents/guardians were not notified in advance of the new screening process and given the opportunity to opt out.
- Funding was reduced for SBHC’s and the health department determined that SBIRT was no longer feasible to continue given the perceived additional time staff needed to spend to deliver brief interventions.

The experience validated that the SBHC setting seemed to be the most effective location to deliver the SBIRT services given the competing priorities and lack of leadership support from central office, the entity responsible for funding and managing the SST team. In addition to identifying several challenges, the pilots revealed important lessons about implementing SBIRT in a school setting, which are discussed in more detail later in the brief. Importantly, and consistent with other SBIRT studies, it demonstrated that young people were willing to talk about their substance use, indicated by the high response rate among those who were screened, which offers promise of success when the challenges are adequately addressed.

**Example: Federally Qualified Health Center Adolescent SBIRT Pilot**

A second adolescent pilot is currently underway at Total Health Care, one of the early adopters of the adult SBIRT program. With funding from the National Institute of Drug Abuse, the Friends Research Institute is conducting randomized trials to compare two strategies for SBIRT delivery: the Generalist Strategy, in which the primary care provider delivers the brief intervention; and the Specialist Strategy, in which the brief interventions are delivered by behavioral health counselors. Seven sites have been randomly assigned to implement adolescent SBIRT using either the Generalist or Specialist strategy.

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3 Two of the schools decided not to fully implement the pilot given a number of leadership changes that occurred at the start of the planning process precluding the school principal’s full commitment to the project.
Outcomes, including penetration, costs/cost-effectiveness, acceptability, timeliness, fidelity/adherence, and patient satisfaction, will be assessed during the 18-month period using a combination of encounter data, provider and patient surveys, and qualitative interviews. After 18 months, all training and technical support activities will cease for 12 months in order to measure relative sustainability. The study is expected to be completed by June 2015.

Example: Adolescent SBIRT Programs in Non-health Care Settings
Baltimore has begun expanding SBIRT to non-traditional settings that serve adolescent populations, although not always exclusively. Planned Parenthood has implemented the program in their flagship city location in an effort to address the high rates of drugs and alcohol use among their patients contributing to unintended pregnancies and lack of compliance with regular use of contraception. Discussions are underway regarding the feasibility of establishing screenings and brief interventions in settings such as recreation centers, athletic leagues, or after-school programs. Advocates believe that any setting in which adolescents form relationships with trusted adults has potential for implementation of SBIRT.

MOVING TOWARDS A MODEL IMPLEMENTATION PROCESS FOR SBIRT

The SBIRT programs implemented for both adult and adolescent populations in Baltimore have created a body of evidence for an effective planning and implementation process that can be applied in different settings, from healthcare delivery systems to public schools, for a variety of audiences, with modest investment. The critical success factor is integration of the screening and brief intervention into the routines of the setting, rather than creating a separate service. Making screening the "fifth vital sign" at every medical visit and brief intervention part of the routine conversation with providers or counselors serves to normalize the questions and institutionalize the program, a core goal of SBIRT. Baltimore’s experience implementing SBIRT in a variety of settings has resulted in a set of strategies that have been integral to their success with SBIRT implementation and are echoed by findings in many other SBIRT implementation pilots:

1. **Gain commitment from leadership:** Secure commitment from the chief executive officer by focusing on organizational goals and making the business case for the value in implementing SBIRT. For example, gains in efficiency, cost effectiveness, and participant outcomes add value in the perspective of executive leadership, while also comporting with new payment models being introduced as part of the Affordable Care Act (ACA). In addition to the CEO, healthcare settings should engage clinical leadership to address changes in practice and gain provider support. Finally, state level policymakers such as the state Medicaid Director may also need to be engaged in order to address reimbursement and billing issues.

2. **Form a multidisciplinary SBIRT team:** Ensuring the key people have a seat at the table to provide their expertise to the planning and implementation process is essential and will increase the likelihood that SBIRT related changes will be sustained. The composition of the team will vary according to the setting but is likely to include administrators, behavioral health practitioners, clinical support staff, front-office personnel, and IT staff or others responsible for outcomes tracking.

3. **Document work flow and responsibilities:** Conducting a comprehensive walk-through of each implementation site to document the work flow, patient flow, and staff
responsibilities using an external consultant helps provide a fresh perspective on the daily work and encourages staff to consider multiple options for integration. Flow charts of the workplace are a useful tool for the SBIRT team to make changes as necessary to achieve consensus.

4. **Develop an operational plan:** Analyzing the work flow and creating implementation plans to fully integrate SBIRT into the operations of the setting increases the likelihood that the approach is detailed from every operational perspective. The initial planning phase also should incorporate both short and long term goals to secure billing and reimbursement, when applicable.

5. **Develop a protocol that formalizes the organizational approach to practice standards:** Developing protocols for every stage of the implementation plan, including service delivery and documentation and decision support, defined in tandem with leaders and the team is important. The protocol should assist practitioners in handling different scenarios based upon outcomes of the screenings, interventions and referrals. Once consensus is achieved, each member of the SBIRT team can sign off to signal their commitment.

6. **Train and retrain:** Customized training is critical for all staff responsible for the screenings and brief interventions. Depending upon the environment, responsible personnel may be CMAs, physicians, nurses, counselors, social workers, SBHC staff, SST staff, or other behavioral health staff. As performance monitoring dictates, retraining in specific skill sets may be necessary as is a commitment to training new staff. Once SBIRT is institutionalized, formal training may be replaced or complemented by on-the-job instruction and effective supervision.

7. **Develop customized tools and instruments:** A variety of decision support tools can guide staff through the phases of implementation. Instruments that have proven beneficial include a pocket-sized "readiness ruler"; a laminated exam room sheet with guidelines for interpreting the screening results and image of the standard drink chart for patient education; and scripts and scenarios to help providers offer the most appropriate interventions and responses to patient questions. In the school settings, promotional campaigns to prepare and engage students in the screenings included posters and wrist bands.

8. **Document services and track outcomes:** IT staff should be engaged in developing processes and instruments to facilitate implementation of the protocols in a rapid, standardized manner. Whereas paper checklists permit staff to omit key data, materially deviating from the established guidelines, electronic records can contain automatic triggers that force staff to follow the protocol. They can also help institutionalize and sustain a new practice or service. In a healthcare setting, the EMR was the most effective tool for tracking screening results and service delivery. In the school setting, confidentiality issues necessitated use of paper documents. However, further exploration of the feasibility of electronic recordkeeping in the schools should be considered.

9. **Monitor and analyze data:** Continual monitoring of new procedures, outcomes, protocols and delivery methods calls for careful measuring and recalibrating. To ensure continuous quality improvement, organizations must define critical measurements, determine the
source of the data, and identify the frequency of measurement. Databases, software programs, and other tools can facilitate tracking and analyzing data on work flow, referrals, treatment admissions, patient outcomes, and other measures that can document improved patient outcomes and lowered costs.

10. **Provide continuous feedback:** Using the NIATx model for process improvement, provide feedback for the SBIRT planning team on a monthly basis regarding numbers of encounters, screening scores, interventions, types of referrals, and other data. Engage in a conversation about the meaning of the data, what is working well, and where improvement is needed. Continue the feedback for at least six months, until the practices are fully integrated into routine operations.

**LESSONS LEARNED THROUGH ADOLESCENT PILOTS**

In addition to the implementation strategies highlighted in the previous section, Baltimore's experience with SBIRT implementation for adolescents in a variety of settings yielded lessons that should be of interest to other communities as they seek to expand prevention and early intervention approaches to address substance use among youth. Utilizing SBIRT for an adolescent population posed some unique challenges when compared to the adult population that need to be remedied, but also revealed some promising opportunities.

- **Use a standard implementation model for adults and adolescents that customizes a protocol to the operational needs and demands of the setting.** The implementation process described above was successful with both populations in a variety of settings. The implementation plan must be customized to each unique setting, but the same process should be used. Adequate resources - time, personnel and funds - are critical. Baltimore's experience indicated that start-up and full implementation requires nine to 12 months of focused commitment to make SBIRT a routine and effective part of the practice. Employing an experienced external consultant to drive the process and provide feedback will increase the probability of success.

- **Reach youth before substance use progresses to more frequent or serious use:** SBIRT proved to be an effective tool for identifying young people before their substance use progressed to more frequent or serious use. Screeners discovered that marijuana was the drug of choice for most of the BCPS teens; those who had already transitioned to heroin or cocaine were probably already known to the system. Therefore, SBIRT offered an opportunity to intervene. By asking the same questions on a regular basis, and using effective motivational interviewing techniques, school personnel were able to weave the topic of drug use into conversations about grades, attendance, and other issues of importance. The recent move to decriminalize marijuana may be perceived by youth as tacit approval for use of the drug, thus challenges remain as to how to optimally communicate brief interventions with these adolescents.

- **Provide a safe environment to encourage conversation:** Contrary to expectations, adolescents were willing to admit their drug use. While the number who admitted use may have been suppressed by fear of punishment from parents, school officials, or law enforcement, pilot sites found that the SBHCs or counselors' offices were perceived as
safe environments for discussion. School personnel also found that engaging the students in the campaign through posters, wrist bands, and events positively influenced their candor. SBIRT made it OK to talk about using drugs. Initial skepticism from some leaders about the use of SBIRT was replaced with support once the initiative was implemented but this will be an ongoing issue to be tackled as SBIRT is expanded in non-traditional settings.

- **Use negotiating skills to achieve results with adolescents:** Adolescents do not respond well to an all-or-nothing approach. Adults typically communicate an abstinence-only approach, but "stop using drugs or else" was not an effective strategy with the youth. Through training on motivational interviewing, staff learned negotiation skills and the value of behavioral contracts in changing behavior. For example, if the adolescent reports smoking marijuana twice a week, a negotiated agreement might be to reduce use to once each week. A simple contract, signed by both parties, was used to reinforce the agreement. This different attitude and thus approach about achieving behavior change related to drug and alcohol use in adolescents may not be a shared among the range of professionals that work in settings where SBIRT can be utilized. SBIRT advocates need to discuss and identify effective ways to introduce these interventions among more traditional practitioners that work with adolescents.

- **Ensure on-site treatment options:** Providing integrated treatment resources on site was critical to ensure follow-through with referrals. The "warm hand-off" was a more effective connection than sending the referral orders home to the parent. On-site treatment may also circumvent the need for parent notification, thus potentially increasing adolescent willingness to discuss their drug use. Health centers, schools and other settings that serve youth may be ideal for screening and brief intervention, but careful thought must be given to how to most effectively provide a seamless transition to more specialized services and ideally co-locate treatment services.

- **Develop strategies for working with parents:** In a health center, screening and brief intervention must be conducted without the parents in the room, potentially affecting workflow. In the BCPS pilots, parents were not advised of the SBIRT screening in advance and some were not pleased to learn about it from their children. Because it is so difficult to get every child to return a consent form signed by his or her parent/guardian, it is recommended that guardians be offered the chance to opt out of the screenings. How to accommodate the workflow and communication challenges related to parents across settings continues to require new ideas and processes.

- **Seek universal screenings in schools:** SBHCs were effective settings for reaching adolescents. The screenings and brief interventions could be easily integrated into every visit. However, because SBHCs see only youth who are self-referred for physicals or other reasons, they failed to achieve the universal screening that is a hallmark of SBIRT. Discussion among the range of professionals committed to advancing school health and academic achievement about how to reach higher numbers of students in the school setting is warranted.
• **Consider non-healthcare settings:** Expansion of SBIRT to non-traditional settings should be explored in an effort to reach more adolescents. Any setting in which young people form relationships with trusted adults has potential for implementation. Opportunities may include athletic programs, after-school programs, drop-in centers for court-involved youth, or juvenile detention centers. The greatest challenge will be referral to treatment; without a warm hand-off to on-site treatment, youth may not follow through.

• **Identify the appropriate screening instrument for youth ages 12-24:** CRAFFT, developed by Children's Hospital of Boston, is a six-question screening tool for youth under the age of 21. Several other instruments are used for adults. Staff managing programs serving youth between ages 17 and 21 found that the CRAFFT was not always appropriate for their population and that the adult screens may have been a better option. Further research should be considered to determine the most effective tool for both adolescents and older youth.

CONCLUSION: CONSIDERATIONS FOR FUTURE APPLICATIONS WITH ADOLESCENTS

Baltimore’s experience implementing SBIRT is important because it demonstrates how a local community can take a leadership role, and with a modest investment, change policy and practice to begin to address substance use among young people and create a ripple effect that leads to lasting change. Baltimore is just one of several successful innovators and implementers in SBIRT and their work underscores many lessons that have been learned in sites across the country. Baltimore's efforts to implement SBIRT across diverse settings, including hospitals, emergency rooms, community-based medical centers, and Planned Parenthood, are particularly exciting because they yielded an effective and efficient implementation process that integrates services into the daily routine of the provider. That same implementation process proved effective in developing youth-serving pilot programs within the Baltimore City Public Schools, programs inclusive of adolescents in medical settings and Planned Parenthood, and continues to inform work with a pilot program for youth within an FQHC which will reveal additional information on successful implementation models. While there is a significant amount of knowledge and learning that needs to occur to develop a consensus for the most effective SBIRT approaches for adolescents, it is clear that early adopters like Baltimore and others are leading the way and providing valuable lessons for communities across the country.