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**Advancing Quality Interventions for Adolescents Who Use, Abuse or are
Dependent upon Alcohol and Other Drugs**

Narrowing the Pipeline to Adult Substance Abuse Treatment Services

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Introduction

Adolescence is a developmental period of growth and great potential, but it is also a time of risk-taking and experimentation including the use of alcohol and other drugs (AOD). While AOD use is a normative behavior among American teenagers, and in many ways a rite of passage to adulthood, not all youth emerge from experimentation unharmed: currently there are 1.7 million youth in this country struggling with a diagnosable substance use disorder SUD;⁴. And unfortunately, the number of teenagers choosing to experiment is on the rise. The most recent 5-year AOD use trends among teens have shown increases in current and past year substance use^{9,10}. In fact, during the year 2011 more than 1.65 million adolescents were new initiators of substance use⁴. The *increasing incidence and prevalence of substance use among American adolescents* is distressing as youth are 5 times more likely to develop an SUD compared to adults^{11,12}. This disease can (and frequently does) follow them for life. More than 90% of adults suffering from addiction meet diagnostic criteria before the age of 22 years. This is a particularly poignant and under-recognized statistic with great prevention implications. Adolescence is THE at-risk period for substance use disorders (SUD). In fact, only about 10% of substance dependence cases occur after adolescence. Thus, successful efforts to prevent or delay substance use during adolescence will clearly be the best, most economical and most enduring way to reduce the many public health and public safety threats associated with AOD abuse and dependence.

There is a price to pay for not providing effective preventive care - an inevitable increase in the need for addiction treatment. But again, the treatment situation is very much like the prevention situation. Today, the number of youth in need of varying levels of treatment is staggering: less than 10% of adolescents with the most serious and complex of the substance use disorders – dependence or addiction – receive any type of care. But while treatment capacity must be expanded – expansion of care is not the only problem. The treatment system for adolescents in America is antiquated: it has not kept pace with numerous scientific advances. Scientific evidence clearly indicates the need to identify and treat this disease (or its pre-disease state) as early as possible, and the need to treat the full expression of the disease within a chronic medical condition model^{13,14}. Despite this knowledge, the treatment of adolescent substance abuse relies primarily on acute care services with little emphasis upon the continuing care monitoring and supportive services needed to manage any chronic illness.

In the text that follows you will see that research has already paved the way for better, more efficient and more attractive adolescent prevention and treatment. The costs of NOT improving and expanding these services are significant and growing every year. There is new legislation promoting insurance coverage for the millions of adolescents not previously covered – and for diseases like substance use disorders that have never been covered. Finally, there is emerging awareness that adolescent substance use is a national crisis that can and must be addressed. The evidence is clear that adolescent substance *use can* be prevented; *abuse can* be identified and reduced; and even serious *dependence* or *addiction* can be treated.

The Time to Act is Now

We are at a watershed moment in our history when the possibility of real synergy and subsequent change can occur regarding the treatment of adolescent substance abuse. The advent of legislative changes (Affordable Care Act – ACA & Parity Act) and infusion of new clinical science and treatment advances can, and should, propel us to bring about positive change. They represent unique and time sensitive opportunities to improve the service landscape and create downstream cost-offsets. ***If we are to reduce the burden of SUD, the most humane and cost-effective time to focus our efforts is during adolescence, the developmental stage SUD so frequently presents.*** This paper will provide:

- 1) a brief summary of the seriousness of adolescent substance abuse in individual and financial terms;
- 2) a brief overview of the current adolescent substance abuse treatment (SAT) system; and
- 3) essential ways to address substance use problems:
 - a. before they manifest as a full-blown disease;
 - b. during their acute expression; and
 - c. when they coalesce and persist resulting in a chronic condition.

Included are actionable recommendations within *Call to Action* categories to advance innovative and comprehensive pre-disease (tertiary and indicated prevention) and disease management approaches to bring about multi-sector changes to improve care. You will see that there are many calls to action, not only because there is a lot to do, but also so *you can identify what is most important to you and then begin to work*. Over the next few months, TRI will do the same.

Part 1: The Individual, Societal and Financial Consequences of Adolescent Alcohol or Drug Use and Substance Use Disorders

It can be said that the US public has become much more tolerant of substance use in society. Currently, 28 states now support “medical marijuana,” and two states have legalized the sale and use of marijuana (for adults). Each year at prom time, there are scores of families that provide alcohol to their underage children under the view that they will be safe in those surroundings and they will learn responsible drinking. With this as background, we are frequently asked: “Is adolescent substance abuse that big of a deal when adolescents ‘just’ drink and smoke weed?” There are two lines of research that can be used to answer this question.

First, alcohol and marijuana are not benign substances, particularly on the developing adolescent brain. Marijuana, alcohol and all other drugs of abuse adversely affect brain development and maturation in the areas related to motivation, memory and learning, and inhibition See ⁹ for a review of this literature . Alcohol has more significant and more enduring effects on memory among adolescents than in adults. Compared with adults, adolescents show reduced sensitivity to alcohol’s motor-impairing and sedative effects. This reduced sensitivity impacts alcohol consumption (e.g., when a person does not stop drinking voluntarily, eventually they will become so incapacitated that they cannot continue to drink even if they want to) and may help explain the developmental phenomenon of why adolescents are able to drink larger amounts of alcohol in one sitting. In fact, more than 90% of adolescent alcohol use is binge drinking (greater than 5 drinks). Not surprisingly, adolescents have an increased risk of alcohol poisoning. Frequent, heavy alcohol consumption, reduced sensitivity to the physiological processes that help to limit drinking, and increased vulnerability of the developing brain to alcohol’s many harmful effects are just three of many factors that can combine to result in cognitive deficits and other problems that persist far beyond adolescence, and even death ¹⁵⁻¹⁷.

In terms of marijuana, adolescent marijuana use significantly increases the risks for impaired respiratory function, cardiovascular disease, precancerous cells and psychotic symptoms ¹⁸. This latter finding is alarming for there is evidence to suggest a causal link between early marijuana use and the onset of schizophrenia ^{19, 20}. Marijuana use among adolescents is not always confined to weekends or special occasions: roughly one in fifteen high school seniors are a daily, or near-daily, marijuana users ¹⁰.

Some adults have argued that “marijuana is safer than alcohol” suggesting that smoking marijuana may be a safer alternative to drinking alcohol. But marijuana is only one of the many drugs concurrently used by adolescents; and use of marijuana appears to increase the risk of other illicit drug use ¹⁸. In fact, while alcohol and marijuana remain the major substances used by this age group, an adolescent’s drug of choice is typically “the drug that is available”. It is not surprising then that national surveys find that high school seniors report lifetime use of prescription drugs [narcotic and stimulant (21%)], Amphetamines (12%), Hallucinogens (12%), narcotics other than heroin (e.g., Vicodin, OxyContin - 8%), Ecstasy (8%), and Cocaine (5%). Given that these youth are still in school, use statistics undoubtedly underestimate teenage drug use. Further, in addition to the more “traditional illicit drugs”, adolescents are now even

purposely seeking out new “designer” or “synthetic” drugs for cheap and legal highs (before the compound is banned) as well as clean urines (many drug tests cannot keep up with changing compounds). These designer drugs (e.g., K2, Spice, Ivory Wave, Vanilla Sky) can cause very serious side effects including recurrent acute kidney injury²¹, intense psychosis/delirium²²⁻²⁴, and overdose and death²⁵⁻²⁷.

Skeptics will counter that these national statistics do not apply to suburban teenagers, but assumptions of a “safer” suburban population are wrong. The Manhattan Institute for Policy Research, using national data, found that drug use of suburban adolescents equals and even exceeds drug use of urban adolescents²⁸. Research by staff within the Treatment Research Institute (TRI) confirms this: urban adolescents in our current research project report use of marijuana only while suburban adolescents rattle off a surprising number of drugs used. The pharmacological properties of the full range of synthetic and non-synthetic drugs coupled with a growing brain make substance use of any kind particularly dangerous for teenagers. In fact, regardless of the specific AOD, the progression from use to abuse to dependence regardless of drug type can be fast and the fallouts severe. Moreover, the earlier the drug use, the greater the likelihood that an SUD will occur.

Because a SUD is a progressive disease, when untreated or under-treated, *the costs compound over a lifetime*. It is estimated that SUDs cost the United States \$468 billion each year²⁹. *Given that SUD often has its origins in adolescence, it is not surprising that these costs are driven by those who began use in their youth*⁹. The significant individual costs (e.g., violence, high school dropout) and accompanying financial costs limit the quality of life for the youth, their family, their community/neighborhood, and society.

At the individual level, SUD is strongly associated with the three leading causes of death among youth: accidents, homicide and suicide³⁰ and significantly contributes to unwanted pregnancy, school dropout, violence, and delinquency³¹. Since the brain continues to develop through age 25, it is not surprising that substance use during the formative years results in meaningful and often long-term consequences on brain development, brain functioning, and IQ^{11, 32-34}. It also directly contributes to the development of a host of chronic medical conditions including but not limited to asthma, depression, sexually transmitted infections and HIV^{9, 35}, and increases the risk for psychosis³⁶. SUD’s association with those and other medical conditions such as liver problems and breast disease leads to early mortality^{37, 38}. In addition to these medical and psychiatric consequences, the disease of SUD itself, as well as its sequelae, results in multiple short- and long-term functional deficits across numerous life domains (e.g., relational, educational, vocational, financial). In fact, a recent study found that adolescent drug use was predictive of these adverse outcomes out to 50 years of age³⁹.

At the societal level, the short- and long-term costs of adolescent substance use are enormous. Given that those who begin use prior to age 15 are five times more likely to have an SUD later in life¹¹, the personal and public health burdens and their associated costs can follow substance abusing adolescents throughout their lifetime.

Accidents and unintentional injury, sexually transmitted and other infectious diseases, child abuse and neglect, crime, homelessness, and unemployment are just some of the societal problems brought about by substance abuse^{31, 35, 40-43}. Furthermore, health, social and safety problems extend to family members (and peers) and occur among families regardless of socioeconomic status with substantial and widespread impact. For example, family members of substance abusing individuals have increased risks of physical illness, financial problems, legal difficulties, decreased marital satisfaction, domestic violence, interpersonal conflict, impairment in psychological and interpersonal functioning, and stress^{5, 39, 44-53}.

This brief review illustrates that the impact of SUD is pervasive especially during adolescence. To the question: “Is adolescent substance abuse that big of a deal when they “just” drink and smoke weed?” – The answer is a resounding “Yes, use and abuse of substances by American teenagers *is* a big deal.”

The consequences of SUDs in youth are significant, cumulative, and far-reaching in individual and financial terms. SUD is a disease that is routinely associated with a costly combination of social, physical, mental, and public health problems.

Part 2: The Current Adolescent Substance Abuse Treatment System

At first glance, the current adolescent treatment system for substance use disorders appears to embody a full continuum of care that includes prevention, early intervention, formal treatment and continuing care services. Unfortunately, the current adolescent SAT system includes limited amounts of prevention, early intervention, and continuing care services. Instead, resources are concentrated on treatment of some of the emergent physiological symptoms of the illness (withdrawal, physiological stabilization) and usually in acute-care settings such as hospitals or residential programs. Moreover, because of the historical stigma attached to this disorder, reimbursement for care among both adolescents and adults has been restricted to just those adolescents who are already “in deep” with severe substance use and often associated juvenile justice and/or mental and physical health problems.

Decades of clinical research have shown that prevention, early intervention for emerging substance “use”, and continuing care following formal treatment – are important for an effective public health oriented approach to controlling substance use disorders among adolescents - but are too often overlooked. There is again, a price to pay for failing to offer effective, accessible prevention and early intervention services. Too often, clear warning signs that an SUD is in the making frequently go un-noticed (e.g., binge drinking and drug use pictures posted on social media, drop in grades, change in friend), in part because there have not been accessible early intervention services to address this emerging use. For those who have a SUD, research shows that there is no reliable cure, thus a fixed period of protected hospital or residential care is not by itself likely to arrest use and promote healthy adjustment. Like any other chronic illness that can be managed but not cured – substance use disorders will require a significant period of continued monitoring and supports. Again, these post-treatment services are rarely available in adequate quantity or quality to forestall a relapse.

Research-Tested Clinical Practices that are Effective and Cost-Efficient in Treating this Disease

Based upon work by Drug Strategies⁵⁴ and by TRI⁵⁵, there are 10 broad principles with 64 corresponding discreet practices that have strong support in the literature as being associated with reductions in substance use and co-occurring problems among adolescents with SUDs (see Appendix A). There are also evidence based *treatments* (EBTs) for adolescent substance abusers. Family-based (e.g., multi-dimensional family therapy, functional family therapy), psychosocial based (e.g., cognitive behavioral therapy, motivational enhancement therapy), pharmacotherapies and integrative models (CBT/MET) have all been shown to reduce AOD use among teenagers.

This substantial body of evidence – culled from both reviews of empirical research and the informed clinical views of experts in the field of adolescent treatment - demonstrates that providing adequate and appropriate EBPs and EBTs for SUD can improve not only substance use outcomes (e.g., reduce alcohol or other drug use) but also can positively impact a variety of quality of life domains (e.g., interpersonal functioning) see⁵⁶. Put very simply, treatment programs that offer more of these EBPs to their adolescent patients have better outcomes. In a

related manner, SAT treatment can lessen the rate, duration and intensity of many health and behavioral health problems and consequently cut or at least control the growth of overall health care costs⁵⁷. Societal costs can also be lessened by increases in productivity (e.g., academic success) and reductions in public health threats, etc.⁵⁷.

Alarming, adolescent substance abuse treatment is severely underperforming in quality as measured in at least four ways. First, there is not enough attention to the early stages of SUD. Currently, youth with low levels AOD use are grouped with youth with high levels of AOD use. While the topic of “deviancy training” is controversial, there is evidence to suggest that youth forge new friendships within these groups⁵⁸. Infrequent users become more frequent users as a result. Second, there may not be enough treatment programs specializing in adolescent SUD. Adolescent-specific programs are necessary given developmental challenges and the need to separate youth with SUD from adults with SUD. Third, the underutilization of evidence-based practices (EBPs) within specialty care is pervasive, which affects the quality and effectiveness of treatment. Fourth, treatment operates within an acute versus chronic disease model, the most likely reason for lack of continuing care services a staple of disease management for any other chronic disease. The alleged treatment gap, the underutilization of EBPs, and the acute versus chronic disease focus deserve more explanation and are briefly addressed below. Early intervention and continuing care are examined in detail in Section 3.

“Alleged” Treatment Gap

The limited number of adolescent SAT programs coupled with under-utilization and the variations in care and quality of those that do exist renders many youth unable to benefit from any type of care. For example, work by Knudsen et al.⁵⁹ analyzing data from the 2003 National Survey of Substance Abuse Treatment Services (N-SSATS) reported that of the roughly 13,600 SAT programs in the country, only 52% admitted adolescent clients, and only 32% offered “programs or groups” specially designed for adolescents. This situation is even worse today as less than 30% of addiction treatment programs in this country now offer special programming for adolescents⁶⁰. Among adults alcohol and drug use disorders have the lowest level of treatment penetration (or put differently the largest treatment gap) of any disease⁶¹: less than 10% of affected individuals receive any kind of care. The gap is even worse among adolescents with substance use disorders: only 8.4% of the 1.7 million youth in need of treatment ever received it at a specialty clinic⁴. This is typically referred to as the treatment gap, yet our experience shows significant under-utilization of the specialty programs that do exist⁶². Lack of identification or minimization of the adolescent substance abuse problem, grouping of low level users with high level users, and mixing younger teens with older teens [especially a young girl (e.g., age 14) and older boy (age 18)] undoubtedly contribute to under-utilization. As we work to improve the system and solidify a real continuum of care, we will have a much better idea of whether demand for treatment really exceeds availability as suggested by the “treatment gap”.

Community Programs Lack a Range Of Services Deemed Effective

While an inadequate quantity of adolescent programs may be a problem, there is also great variability in the amount and quality of the treatment practices within adolescent programs - making a bad situation even worse^{54, 59, 63-67}. In a study of 144 “highly regarded” adolescent

treatment programs throughout the country, only about half of 45 existing evidence-based practice were offered (mean 23, mode 22)⁵⁴; and there was essentially no change in a one year follow-up⁶⁸. Mark et al.⁶⁵ also showed wide variability in the availability of commonly accepted components of effective adolescent treatment such as a comprehensive admission assessment, individualized treatment plans and engagement of parents in treatment and discharge planning in a different set of community programs.

Regardless of program type, program cost, or data collection method, very similar results are found. That is, modest (at best) levels of evidence-based practices are available in community programs^{54, 59, 65, 67-70}. In other words, the majority of adolescent substance abuse treatment programs in this country offer very few of the clinical and social support services that have been demonstrated to be effective. Without an adolescent-appropriate, treatment offering evidence based practices and continuing care and support beyond the acute phase of the illness, relapse and re-treatment are essentially assured. With every failed treatment attempt there is both loss of hope and a greater amount of wasted healthcare expense – as well as other expenses outside healthcare (e.g. courts, schools, communities). This is a costly and truly inefficient use of public health resources⁷¹.

Acute Versus Chronic Care

It bears repeating that the current treatment system is focused on acute care, and even this care is restricted to predominately deep-end populations (e.g., adolescents already involved with the juvenile justice system, adolescents who meet dependence diagnostic criteria). This is in direct contrast to informed public health approaches to other chronic conditions. There is no other chronic disease where such an ill-fated approach to prevention and treatment is standard practice.

Consider this scenario: A patient with a family history of heart disease is overweight, has high blood pressure, and high cholesterol. Neither nutrition counseling, nor an exercise program, nor medication are discussed or prescribed. The patient suffers a heart attack, is treated on an outpatient basis (they must have at least one more heart attack to be hospitalized), and suffers another attack. Then the patient is hospitalized and receives few evidence based treatments or practices. Upon discharge, the patient returns home without medication, a continuing care plan, or a follow-up appointment. The patient does not see a medical professional until their next heart attack and the same inadequate process is repeated.

This treatment approach would never be tolerated in physical medicine and it should never be tolerated in the treatment of substance use disorders – particularly adolescent substance use disorders. The good news is that there are ways to address limitations of adolescent SAT at every point in the continuum. We have the knowledge: we need the will, the policies, and the resources to do so. To this end, part 3 of this paper calls the reader to action. As mentioned above, TRI purposely delineated many calls to action so that you can choose areas most important to you and begin your work. Over the next few months, TRI will do the same.

Part 3: A New Way to View and Treat Adolescent AOD Use and SUD

Where to Start

It is easy to become paralyzed in the face of discouraging information and the already large and growing size of the problem. We cannot afford inaction: too much is at stake and too much is changing. While the adolescent SAT system is problematic, it can be improved if we coordinate our efforts. Consequently, TRI has developed concrete action steps that, when used collaboratively by parents, providers, researchers, insurers, and other funders, should begin to bring about needed change for youth at risk for a SUD, using AOD, abusing or dependent on AOD, and recovering from a SUD. Attention needs to be paid to youth in all these stages.

We will cover the following topics and provide concrete “action points” that can be used as we collaboratively work to eliminate the pipeline to adult substance abuse treatment services and create positive life opportunities for the youth of America:

- 1) Screening
- 2) Wellness as prevention
- 3) Early levels of care
- 4) Quality treatment
- 5) Continuing care

Narrowing the Pipeline to Adult Substance Abuse Treatment Services through Adolescent Screening

SUD is a non-discriminatory disease. It affects boys and girls, the young and the old, all races and all ethnicities. It can be found in rural, suburban and urban America and among people from all socio-economic levels. As indicated in the work presented thus far, substance use disorders have an “at risk period” and that is adolescence. The substance use problems are ubiquitous in all the settings where adolescents are found: schools, pediatric healthcare settings, juvenile justice facilities, etc. But it can be prevented and early use can be halted before it becomes addiction – *but there have to be structures in place to provide early detection and appropriate, non-punitive intervention.* Thus, screening for risk factors or early disease presence is one of the first lines of defense. In fact, substance use screening should be part of all wellness screens as this can have direct impact on healthy living. While adolescents should be screened within all treatment and social services systems that they come in contact with (e.g., foster care system, juvenile justice system), there are two locations where large numbers of “general population” youth can be found: medical settings (e.g., primary care facilities) and schools.

Screening in Medical Settings

Screening, Brief Intervention and Referral to Treatment (SBIRT) is a scientifically validated, nationally recognized approach to screening for and addressing AOD problems within medical settings. It is endorsed by National Institute of Alcohol Abuse and Alcoholism (NIAAA), the National Institute on Drug Abuse (NIDA), the Substance Abuse and Mental Health Services Administration (SAMHSA), and perhaps most importantly by the American Academy of Pediatrics See ^{72, 73} and the American Medical Association (AMA) within AMA’s Guidelines for

Adolescent Preventive Services. It is not endorsed, however, by the US Preventative Services Task Force for adolescents (it is endorsed for adults) due to lack of evidence. This is unfortunate as there is a growing body of solid scientific evidence demonstrating SBIRT's efficacy in reducing adolescent AOD use⁷⁴⁻⁷⁹ perhaps because it incorporates principles and techniques (e.g., motivational interviewing) that are by themselves effective and applicable to this developmental stage⁸⁰. Because endorsement by the US Preventative Services Task Force is instrumental in garnering service coverage within private and public insurers such as the State Children's Health Insurance Program (CHIP), lack of endorsement will render the provision of AOD screenings and counseling services within primary care and other medical settings for adolescents less than ideal.

A second problem is that adolescents who screen positive or show early signs of substance use problems rarely receive recommended levels of preventive care through primary care visits^{81, 82}. Lack of reimbursement for such services is a crucial barrier, but reimbursement issues should change under the ACA as *private plans* will be required to cover services recommended by the *Bright Futures Guidelines, USPTSF, and ACIP*. These include selective screenings and counseling for drug and tobacco use and healthy eating⁷² in addition to screenings for depression, diabetes, cholesterol, obesity, HIV and sexually transmitted infections. Adolescents enrolled in Medicaid will get these services through the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program through age 21. Adolescents enrolled in CHIP, however, may be unable to access this range of services.

Screening in Schools

If one is looking to increase the reach of SUD screenings to identify and appropriately intervene with youth with AOD risk factors, youth who have begun to use AOD, or youth who show signs of AOD dependence, schools are a logical location to implement SBIRT-type protocols. Perhaps more than any other institution, schools see large numbers of adolescents each day. There are also special aspects of the school setting which could support the widespread use of SBIRT.

Schools that are fortunate to have a School-Based Health Center (SBHC) are in excellent positions to screen large numbers of adolescents for AOD risks, AOD use, and SUD during routine appointments and care. Offering population-based services, they are a "normalized" part of the school community, de-stigmatizing SBHC visits and assuring anonymity for the specific service received. Research to date shows SBHCs increase access to behavioral health services and reduce traditional barriers to care such as funding, stigma, and confidentiality concerns⁸³.⁸⁴ SBHCs also help reduce emergency room visits while increasing school attendance and student achievement^{85, 86}. Importantly with regard to SBIRT, SBHCs have ready access to teens which facilitates follow-up, case management and the delivery of preventative care and brief interventions^{83, 84}.

Currently there are roughly 1,930 SBHCs in 50 states, with the majority (82.7%) serving at least one adolescent grade of 6 or higher⁸⁷. SBHCs typically fall into one of three service categories: 1) Primary Care (staffed by a primary care provider such as a nurse practitioner, physician assistant, or physician); 2) Primary Care & Mental Health (staffed by a primary care provider in

partnership with a mental health professional such as a licensed clinical social worker, psychologist, or substance abuse counselor); and 3) Primary Care & Mental Health Plus (primary care and mental health staff are joined by other provider types to complement the health care team such as a health educator, oral health provider, social service, case manager, and/or a nutritionist)⁸⁸. Many SBHCs provide access to mental health (70.8%) and oral health (15.9%) providers on-site and some even employ their own clinical support staff (85.8%), health educator (16%), and/or a nutritionist (10.7%)⁸⁸. In terms of AOD specifically, more than half of SBHCs provide substance abuse counseling (53.2%) with nearly 1 in 10 (9.6%) having a trained alcohol and drug counselor on staff⁸⁸. Given that such a school-based system exists, serves large numbers of youth, and has been shown to reduce health care costs and improve educational outcomes, it makes sense to support the universal implementation of SBIRT principles and procedures into SBHCs. Routinely incorporating AOD screening and other services into various SBHC's protocols is a much needed and clearly doable step in expanding prevention, early intervention and treatment.

While the inclusion of educational SBIRT-type services would clearly have the best fit within SBHCs, we cannot ignore students in schools without them. To this end, TRI researchers have developed a school-based screening and intervention model that shows real promise. We have demonstrated in early pilot work that educational SBIRT programs can be incorporated into schools without SBHCs provided that an AOD counselor from a local treatment provider works within the school⁸⁹. Results to date show that in an evaluation of 248 students randomly approached to participate; 100% accepted the screening and 42% of them (n=105) reporting substance use (compared with 28% reported in the standard state, anonymous surveys in these schools). Importantly, 99% of positively screened students voluntarily accepted one motivational counseling session and 68% returned for additional counseling sessions – all held during non-academic class times. These services fit well into the school prevention curriculum and did not interfere with academic activities. While more work is clearly needed, *our service model may become another avenue for early identification of and intervention with AOD risks, use, and SUD for students attending schools without SBHCs.*

It is clear that the research on SBIRT and the future increase of dependent coverage for a variety of medical and behavioral screenings holds great promise: early risk and use can be identified and stopped in its tracks, reducing the likelihood of a future SUD. There are, however, 5 primary challenges that could negatively impact SBIRT services: 1) workforce supply; 2) lack of knowledge of available intervention and treatment services; 3) variable and often inadequate quality of services that do exist; 4) adolescent confidentiality as it pertains to billing practices and co-pays; and 5) funding for SBHCs.

At a most basic level, there are not enough adolescent health specialists (466 certificates in adolescent medicine obtained between 1996 and 2005) to meet the needs of the estimated 40 million adolescents in this country⁹⁰. The situation does not show signs of improvements as only 12% of pediatric residency training programs have an approved fellowship in Adolescent Medicine⁹⁰. It is not surprising then that the American Board of Pediatrics found that only 17% of pediatricians think they are well trained to care for adolescents⁹⁰. Workforce supply and

preparedness are perhaps even more discouraging when one considers screening for and addressing adolescent AOD. First, physicians often feel unprepared to introduce preventative health content such as tobacco and injury prevention. More specifically, over half (56%) of healthcare providers feel unprepared (and uncomfortable) to discuss adolescent AOD issues generally and less than half stay current on AOD health related literature⁸⁰. Furthermore, many feel unprepared to address an adolescent patient after a positive screening for drugs, behavioral, or reproductive issues⁹¹. The situation in the addiction education of nurses is equally problematic. Despite their perceived importance of this clinical area by nurses themselves, they report a dearth of addiction education within their nursing curriculum. Among 213 surveyed advanced nurse practitioners, less than 3 hours of addictions education was received in their graduate programs⁹².

Second, there are essentially no objective resources to assist parents or other payers in the identification of those SAT programs that are appropriate, effective and of high quality for adolescents once need for treatment is established⁵⁵. This is especially important as, thirdly, treatment programs are variable and often inadequate in the quality of care that they provide. It is not surprising that comprehensive adolescent substance abuse prevention services are rare when a provider does not have the resources or confidence in the system to make a quality referral. Lack of treatment information in general, and comparative information in particular, creates inefficiencies in care. If a medical provider has to struggle to make a referral, they have been shown to just skip the screening process completely⁹³. Thus, many youth in need are not treated early, their substance use and other problems escalate, and more intensive and expensive care is needed than would not have been the case otherwise.

Fourth, adolescents covered within commercial insurance plans face unique financial and confidentiality challenges. While adolescents as young as 14 can consent to SUD treatment without parental consent or knowledge (and we have found that many do so and refuse to provide consent for parental discussions), co-pays for specialty care under private insurance arrangements coupled with billing codes identifying type of services rendered may prevent many youth from seeking care in the first place (this should end in 2014 under ACA). Finally, SBHC legislation introduced by Congresswoman Capps (CA-24) in 2009, and included in the 2010 Affordable Care Act, is set to expire at the end of 2014 if not reauthorized. This is the only source of federal funding dedicated to the operations of SBHCs.

All of these barriers must be overcome to provide more effective school-based (and healthcare office based) prevention and early intervention. Yet despite these multiple barriers, all schools regardless of whether a SBHC exists or not would do well to consider allotting some funds for SBIRT. The evidence suggests that implementing a tailored SBIRT protocol is feasible and can be effective, resulting in numerous and long lasting benefits.

This all can change when we include addiction education within medical and educational trainings, work with the *US Preventative Services Task Force* to identify (and study) what is needed for SBIRT endorsement for adolescents, employ screenings that adolescents will complete, and adopt a consumer guide approach to resource identification for use by referral

practitioners, and address confidentiality issues within electronic health records and explanation of benefits summaries. The following Call to Action provides a pathway to address each issue.

CALL TO ACTION: What To Do About Workforce Issues

Increase the number of health care and educational professionals experienced in identifying AOD and its risk factors and in treating adolescents in general and those with AOD issues in particular by

- Sponsoring expert-led webinars on how to talk with adolescents about sensitive topics including substance use, the various ways in which screening can take place, and how to respond to a positive screen
- Working with licensing bodies to require that a certain amount of continuing education credits relate to **adolescent** substance abuse topics for renewal of certifications and licenses
- Developing **adolescent** substance abuse-focused coursework for use in medical and graduate schools
- Developing **adolescent** substance abuse-focused cases for use during licensing exams and continuing education credits
- Requiring pediatric, primary care and family practice residency programs (at a minimum) to include rotations in **adolescent** substance abuse medicine and treatment
- Requiring psychologist, social worker, and guidance counselor practicum placements to include exposure to **adolescent** substance abuse treatment
- Requiring nursing, physician assistant and medical assistant programs to include **adolescent** substance abuse-focused coursework, expanding the numbers of nurses who become a Certified Addictions Registered Nurse (CARN) or a Certified Addictions Registered Nurse - Advanced Practice, (CARN-AP), and expanding the number of Family Nurse Practitioner Programs that not only included specialty courses in addiction nursing (see Finnell, 2004) but include specialty courses in adolescent addiction nursing
- Requiring student teaching of middle and high school to include exposure to adolescent substance abuse topics

Treatment Research Institute's Current Impact

Creation of Standard Medical Case Illustrating Substance Use Problems: Among the more important adjuncts to course work in medical education are “medical cases” designed to illustrate the presentation, diagnosis and management of common, significant illnesses and conditions. There have never been standard cases illustrating clinical presentation and

management of alcohol, opioid or marijuana problems. TRI is creating three such cases, which will be reviewed by a board of medical experts and then distributed by a national company that now services 130 of the 164 US medical schools (approximately 15,000 students per year).

Creation of an Online, Elective Medical Course: Working with a panel of 15 medical school deans and teaching faculty TRI has created a web-based course for second or third year students comprised of 12 video modules, each devoted to an important topic in alcohol and other substance use disorders. Each of these modules is presented by the topic expert and include engaging graphics and reference material. These modules can be used together as a course, or as stand-alone segments that are part of other medical courses.

CALL TO ACTION: What To Do About Resource Information

Ensure objective information on the range and quality of treatment services that exists is widely available.

- As described on page 17, work with state agencies, insurance companies, and communities to support the development of geographic-specific or insurance plan-specific Consumer Guides to Adolescent SAT that:
 - Displays the availability and quality of those EDPs shown to be effective;
 - Identifies how to match what a youth needs with what is available
 - Educates on how to advocate for services needed that are not available or reimbursed.

Streamline processes within Medicaid to increase accessibility of funds earmarked for EPSDT. Educate providers, parents, adolescents about availability for substance use disorders.

CALL TO ACTION: What To Do About Adolescent SBIRT'S Lack of Support by the US Preventative Services Task Force

Encourage the US Preventative Services Task Force to support SBIRT by:

- Providing them with all newly-acquired research information needed for their support
- Encouraging funders to fund secondary data analysis where data exists to address what they view as gaps in evidence
- Encouraging funders to fund studies necessary to address what they view as gaps in evidence

Treatment Research Institute's Current Impact

A structured path to inform and guide consumers: TRI is developing a *Consumer Guide to Adolescent Treatment*, an objective, research-derived comparative guide to compare outcome-related clinical services and practices among addiction treatment programs within a geographic area. Program results are displayed in a transparent, comparative and intuitively understandable manner on a website (release in 2014) that offers a structured path to inform and guide consumers on adolescent treatments offered in the Philadelphia area. Resources are also available to help consumers better understand “what to look for” in quality addiction treatment and how to match the services available in a program with an adolescents particular needs.

CALL TO ACTION: What To Do About Confidentiality and Explanation of Benefits Statements

- Clarify and educate primary care, family practice, and pediatric practices as well as electronic health record vendors, youth and families about federal confidentiality laws as well as those that govern their individual state
- Have providers adopt formal confidentiality procedures with the adolescent
- Work with health care practices, electronic health record vendors, and policy experts to design appropriate and legal ways to segment information in the patient record
- Work with insurers, states, and policy experts to exclude information about sensitive services (e.g., AOD, sexual health) from Explanation of Benefits statements balancing a parent's need to know with a youth's right to privacy

CALL TO ACTION: What To Do About School Based Services

Work to ensure widespread penetration of SBHCs that include AOD services through the public school systems of this country through:

- Garnering the political environment and political support that are fundamental to the sustainability of SBHCs.
- Supporting the Rep. Lois Capps' (CA-24) School-Based Health Centers Act, legislation that would provide continued federal support (with expansion dollars) for critical, high-quality comprehensive health care, mental health care and social services at School-Based Health Centers across the country. SBHC legislation introduced by Congresswoman Capps in 2009 and included in the 2010 Affordable Care Act, is set to expire at the end of 2014 if not reauthorized. This is the only source of federal resources dedicated to the operations of SBHCs.
- Urge the Robert Wood Johnson Foundation to develop toolkits that delineate , the long-term financing policies required to sustain school-based health centers through mixed financing strategies involving federal, state and local sources in both the private and public sectors that were identified through their Center for Health and Health Care in Schools.
- Work with school boards to allot funding for educational SBIRT-services and/or utilize SAP teams to do so.
- Urge others working in this area to develop toolkits based upon other generalizable financing strategies for use by others (e.g., third party reimbursements).

Treatment Research Institute's Current Impact

School-based SBIRT as a Compliment to Pediatrician SBIRT: TRI has developed a standardized prevention and early intervention protocol, tailored to different school settings and to different age groups. This approach combines techniques used in adolescent risk assessment and public health messaging to create a combined prevention/early intervention program that is effective, sustainable and comports with student curricula and teaching operations. The program has been approved for Medicaid funding in most states and can be delivered at least annually throughout the middle and high school years.

Narrowing the Pipeline to Adult Substance Abuse Treatment Services through Adolescent Wellness Programs

Wellness is a proactive and preventative approach devised to produce ideal levels of emotional, social, and physical health. Wellness encompasses the individual in their entirety, recognizing that everything they do has a direct impact on health (and therefor health care costs). Accordingly, a focus on wellness has grown rapidly in recent years as has the utilization of payer wellness programs. These programs result in improved health outcomes and real time cost savings^{94, 95}. Unfortunately, wellness has predominately concentrated on adults in preventing adult disease (e.g., diabetes II, heart disease) with relatively little attention to childhood diseases. This may be due in part to the fact that many wellness programs (e.g., stress management, exercise, smoking cessation programs) are covered within employer-based commercial insurance plans. Generally offered to employees only, there is recent evidence that some programs are being expanded to spouses (and to a limited degree to dependents) among larger employment firms⁹⁶.

Clearly wellness for all youth is ideal and has the potential for maximum impact on long term health and related costs. Hundreds of billions of dollars are spent annually to treat preventable diseases. Far too often health care in general, and behavioral health care in particular, focuses more on treating disease than preventing it. This is a backward tactic: preventing disease is not only the most common-sense approach to improve health, but it is also the most cost-effective. Importantly, the ACA has numerous provisions to encourage prevention/wellness and public health. These include: the Prevention and Public Health Fund (\$15 billion dollars) to support screenings, prevention, wellness, and public health activities; no-cost preventive health services within health plans subject to the ACA; and the National Prevention and Health Promotion Strategy that includes building healthy and safe communities, expanding prevention/wellness in clinical and community settings, empowering people to make healthy choices, and eliminating health disparities. Prevention of AOD through wellness programs fits into each one of these ACA provisions.

For employers who will be required to offer no-cost preventative health services, an obesity-focused toolkit offered by National Business Group on Health - one of many toolkits offered by the group -^{1, 97} could serve as an educational and benefit design model as it pertains to AOD. The existing obesity-focused toolkit helps employers to best utilize physicians and health plans to ensure that children who are obese receive the care they need. Employers are informed of current best practices, treatment guidelines and performance standards so that they are well informed when developing their company health plans. An analogous adolescent addiction-specific toolkit could: 1) inform employers of the prevalence and costs of addiction; and 2) guide them to select benefits packages that use evidence-based treatment practices that will best help their employee's dependents (and in the long-term, help shape the addiction treatment field). A toolkit like this should encourage a full continuum of AOD care as well as overall wellness type services including prevention and recovery support. Given that each state has received Prevention and Public Health Fund dollars and that there is a national wellness strategy, our

field must work to ensure that children and youth are at the forefront and that AOD prevention/wellness are included in state plans and the federal strategy.

This can change when we work with public and private payers to include wellness programs for youth and when we know the research on the effects of family AOD use on employee behavior and employer bottom lines. The following Call to Action provides a pathway to address this issue.

CALL TO ACTION: Work with Public and Private Payers to Include Comprehensive Wellness Programs for Youth Particularly Those at-risk for SUD

- Work with the National Business Group on Health to add AOD to their benefit design toolkit.
- Urge others working in this area to develop toolkits based upon other generalizable financing strategies for use by others (e.g., third party reimbursements).
- Work to make sure adolescent AOD prevention/wellness programs are specifically included in state plans that receive dollars through the Prevention and Public Health Fund.
- Work to make sure adolescent AOD prevention/wellness is specifically addressed (and not just mentioned under a mental health component) within the National Prevention and Health Promotion Strategy

CALL TO ACTION: When You Work with Employers to Include Comprehensive Wellness coverage for Dependents, Particularly Those at-risk for SUD, Know These Facts Because So Much is About the Company Bottom Line

A small number of conditions account for the vast majority of employer-related and health care costs and that two of these (depression and stress) result from adolescent SUD. Consequently, preventing substance use from happening and intervening early when it does occur can minimize or offset not only health care costs for the individual with SUD but also those for their family members and their employers.

- Caring for a special needs or medically ill child has consistently been shown to increase stress, depression, and health risks, reduce workplace productivity and performance, and increase absenteeism and job turnover ^{1,2}.
- Caring for a family member (all ages) with SUD has been shown to increase family member insurance costs as a result of more psychiatric and medical conditions in the family when compared to families without an SUD member ³ and when compared to families with a member who has diabetes or asthma ⁵.
- Caring for a child with an SUD undermines parental wellbeing and mental health including somatic and social stress, depression, anxiety, fear of danger, guilt, anger and despair ⁶⁻⁸.
- AOD treatment reduces medical costs for family members in general ³ and depression and stress for individual and family-based interventions for adolescent SUD specifically ⁷.

Narrowing the Pipeline to Adult Substance Abuse Treatment Services through Early Intervention Services (i.e., ASAM .5 Level-of-Care)

Intervention services that work to address early signs of behavioral health risks and problems before youth meet criteria for a DSM diagnosis (i.e., preclinical levels of service) is a critical piece in diverting youth from an addiction career. Yet, these early services frequently tend to be overlooked and non-reimbursable within current financing systems and funding streams. This situation exists despite the fact that the provision of these services, before the need for formal treatment presents, has the potential to significantly and positively impact the individual and overall cost effectiveness of care ⁹⁸. This level of service is essential not only because early intervention forestalls addiction, but also because not all adolescents who have experienced serious consequences as a result of substance use will meet diagnostic criteria for a SUD ⁹⁹. Called diagnostic orphans, these youth present with serious use patterns and problems that require treatment ^{99, 100}, but with symptom constellations that do not meet a specific diagnosis. Similar findings appear in the mental health literature where symptoms may be at a sub-threshold diagnostic level but serious functional impairment exists nonetheless ¹⁰¹. Early intervention can minimize utilization of restrictive high cost residential/inpatient SAT programs, increase the probability of a positive outcome, and potentially arrest the development of an addiction career thereby reducing downstream costs.

While this early intervention level exists and has been operationalized, and professionally vetted criteria exists to determine an individual's eligibility (ASAM, .5 level of care), it is not reimbursed or funded well or often. Under ACA there is the real potential that dollars can be made available through the Block Grant if we work to make sure treatment cost savings are used in this way. Currently, block grant dollars are used to pay for treatment for the uninsured. This pool of uninsured individuals should technically decrease through Medicaid and employer-based health care expansion. Consequently, these treatment dollars could be re-directed to fund early intervention services. This will help to make early intervention more widely available and accessed, not an underutilized service that exists largely in theory and practice.

The mental health system is light years ahead with the Early Detection and Intervention for the Prevention of Psychosis Program (EDIPPP) ¹⁰². EDIPPP trains the medical and educational community to recognize warning signs and “quickly” refer young people for screening, early intervention and treatment. Early results show reduced rates of hospitalizations and psychotic episodes as well as improved school and job attendance. Substance Use needs an EDIPPP-type program,

This can change when we work to re-allocate Block Grant dollars that are saved from health care expansion to early intervention services, perform financial mapping (see section 4) to ascertain other areas where dollars could be re-allocated to early intervention, work closely with the American Academy of Pediatrics, and adopt an EDIPPP-approach and examine its potential to rapidly treat (and impact) early signs of SUD. The following Call to Action provides a pathway to address each issue.

CALL TO ACTION: Work to Re-allocate Block Grant savings to Reimbursement / Funding for Early Intervention Services.

- Work with state and local governments to identify the number of uninsured individuals who have the potential for insurance through Medicaid or private expansion
- Work with treatment providers to rapidly assist individuals with insurance applications to insure all eligible are enrolled
- Identify real (and potential) cost-savings and develop policies to re-allocate those dollars for early intervention

CALL TO ACTION: Perform Financial Mapping

- Develop an Oversight Committee to address financing issues by identifying all potential funding streams and identifying where in a state's portfolio dollars could be diverted (over and above Block Grant Dollars)
- Identify real (and potential) cost-savings and develop policies to re-allocate those dollars for early intervention

CALL TO ACTION: Collaborate with the American Academy of Pediatrics to:

- identify what aspects of Bright Futures address early intervention of AOD use
- ascertain what if any gaps exists beyond Bright Futures requirements
- clearly specify any additional services that would need to be included and work with the Academy to incorporate these services in policy an during implementation
- Identify real (and potential) cost-savings and develop policies to re-allocate those dollars for early intervention

CALL TO ACTION: Create an EDIPPP approach to early intervention for adolescent SUD and examine it for feasibility and effectiveness

Treatment Research Institute's Current Impact

TRI's Parent Translational Research Center, in collaboration with the University of Minnesota and the Minneapolis Public School District, has adapted a motivational counseling intervention for parents. This intervention offers parents structured, professional training and supervised practice sessions that enable them to talk to their teens about alcohol and drug use without anger and frustration, motivate their teens to accept the dangers of substance use, and jointly create a plan to reduce and eliminate it. This work will help parents and other adults to recognize and address early stage substance use before it becomes addiction. By acquiring new and more effective talking, problem-solving, motivating and monitoring skills, parents will have far greater ability to reduce risky behaviors and instill healthy choices.

A Note on Youth's Parents' Who Have an SUD

While every adolescent should be screened, and wellness and early intervention delivered, particular attention should be given to one of the most at-risk groups of youth in America: those youth who have a parent or guardian with a SUD. A family history of SUD is one of the strongest risk factors for the development of a SUD due to genetic and biological risk as well as environmental exposure. Due to the solid evidence of this risk, which spans decades of addiction research, and the fact that one in five youth grows up in a household where someone has an SUD, it is negligent to not provide a range of screenings, wellness, and early intervention services for this population in a sensitive and non-stigmatizing way.

Narrowing the Pipeline to Adult Substance Abuse Treatment Services through the Provision (and Transparency) of Quality Adolescent Substance Abuse Treatment

Performance measurement, i.e., data reflecting quality of care, has become a field unto itself emanating from the push to improve the quality of and bring accountability to medical care. This makes sense and has research support. An extensive systematic review of what works in adolescent SUD treatment found is that *treatment for SUD is most effective when it is of high quality and when evidence-based treatments and practices (EBTs/EBPs) are delivered well*¹⁰³. Consequently, one would think that quality indicators are commonplace in adolescent SAT because quality is critical to money well spent, youth well cared for, and outcomes appropriately realized. This is not the case. Unlike medical care where hospital performance data and physician-rating websites (e.g., *Healthgrades*) are relatively easy to find, in behavioral health care such data are virtually non-existent. In fact, less than 5% of the National Quality Forum's list of over 650 vetted indicators specifically relate to treatment of mental health and substance use conditions¹⁰⁴. Moreover, it is unfortunately the case throughout medical and behavioral

health care, that children and youth have repeatedly been left out of the discussion. While section 2701 of the ACA has stimulated quality measurement activities and an initial core set of 51 measures even includes 11 that focus on mental health and substance use disorders, ***these pertain only to Medicaid-eligible adults***. Once again, children and youth are neglected.

When children and youth do become part of these broader healthcare discussions, mental health and substance use disorders are typically overlooked. For example, the CHIPRA Reauthorization Act of 2009 called for healthcare quality measures to be used in Medicaid and CHIP programs¹⁰⁵. In 2010, the Pediatric Quality Measures Program was launched through 7 Centers of Excellence funded with \$55 million and 10 state-level demonstration projects for \$100 million^{106, 107}. ***Content gaps were identified early on: mental health and substance abuse measures were missing from this work***¹⁰⁶. This is particularly problematic as sample practice parameters and quality indicators for both mental health and substance use conditions exist^{54, 55, 108, 109}. Regrettably, these measures have had little penetration in real-world work to date. Work within CHIPRA is underway to address this, but leadership and coordination of efforts are lacking. Also, once these issues are addressed and CHIPRA includes behavioral health specific indicators, there are virtually no vehicles to disseminate performance information to the public.

While everyone would agree that high-quality services are important, many may question why publicly reporting performance is necessary. At a most basic level, publicly reported performance stimulates quality improvements¹¹⁰. Informed consumers are essential to improving quality and costs of services, particularly in healthcare¹¹¹⁻¹¹³. In this regard, there is sparse scientific, comparative, consumer-oriented information regarding adolescent SAT. Given the seminal work of Drug Strategies and subsequent work of TRI in this area, we have the tools to obtain accurate, comparative information on the quality of SAT. TRI has developed a transportable protocol to measure the quality of SAT. This protocol includes a full list of those broad principals and discrete practices (all with operationalized definitions) associated with positive outcomes among substance-abusing teens. This carefully constructed listing based on research findings and expert consensus comes to life with instrumentation to measure the availability and receipt of these quality practices from the program director's perspective, from an audit of actual program data and materials, and from the adolescent patient's report. A standardized scoring protocol using these data results in quality ratings. Finally, this information is displayed in a web-based *Consumer Guide to Adolescent Substance Abuse Treatment* using a recognizable and intuitive format. This kind of consumer information can immediately inform and direct an individual consumer's purchase, create greater efficiency within healthcare, and increase the chances that a young person arrives at an appropriate treatment door at an earlier stage in their disease. Over time, receipt of treatment that is related to the patient's problems/needs and is of higher quality should result in more success and ultimately less treatment and associated costs. The pipeline to adult services will have been narrowed. At another level, programs can advocate for dollars to support EBPs they cannot offer due to budget constraints, and purchasers can see areas where funding limits should be reconsidered.

This can change when we work to bring the treatment of adolescent SUD into the mainstream of healthcare quality improvement efforts. The following Call to Action provides the pathway to do just that.

CALL TO ACTION: Bring Treatment of Adolescent SUD into the Mainstream of Healthcare Quality Improvement.

- Work to ensure that the 51 quality measures within the ACA are expanded to include children- and youth-specific substance use (and mental health) measures. So as not to re-invent the wheel, adopt from the list TRI has scientifically generated.
- Work to ensure that CHIPRA measures are expanded to include substance use (and mental health) measures. So as not to re-invent the wheel, adopt from the list TRI has scientifically generated.
- Provide consumers with comparative information that is important to them as they choose among SAT programs to maximize the chance of achieving a positive outcome for a teenager.
- Provide funding for supervision and coaching in service settings to improve implementation of evidence-based adolescent interventions.
- Increase the investment in implementation and implementation research to make effective use of evidence-based interventions to better understand what interventions can reach large number of people, be adopted by different settings, be implemented with fidelity by different types of staff, and produce lasting effects at reasonable cost.

Narrowing the Pipeline to Adult Substance Abuse Treatment Services through Innovative Approaches to Adolescent Continuing Care

Research from 29 unique treatments samples (yielding 489 effect size estimates) is clear: adolescents exhibit significant reductions in substance use shortly after the end of treatment ¹⁰³. Observed reductions are strongest for those youth completing treatment and for programs that provide quality treatment and implement evidence-based practices well. Family therapy and *multi-service packages* yield greater reductions in overall substance use than most other types of treatment. Despite the fact that treatment works, gains significantly diminish post-treatment: between 66% - 79% of youth return to substance use and this is generally seen within 3-6 months after care ¹¹⁴⁻¹¹⁶. For youth with co-morbid conditions, median survival time to relapse

(i.e., first use after 7 days of non-use) is just 19 days or slightly under 3 weeks¹¹⁷. When relapse occurs, youth typically return to the original treatment program and receive the same treatment. In fairness to treatment, the services that are offered in January should not be expected to last – on their own – forever. Driven by research supporting the view that addiction is similar to other chronic conditions (e.g., asthma, hypertension, type-2 diabetes), continuing care and monitoring are needed to sustain treatment gains^{13, 14}. For adolescents, continuing care in programs/ services with a youth development focus can address post-treatment environmental (e.g., lack of recovery support, poor parenting) and developmental (e.g., getting a driver's license) factors that influence relapse and the progression of substance involvement over time¹⁵. It can also include skill and competency development, a hallmark of youth development programs. These skills and competencies can compete with the risks to return to drug use, and drug use itself. In fact, there is a growing literature illustrating the protective effect of continuing care on longer-term rates of abstinence among those who receive it^{118, 119}. For adolescents, there are three approaches to the traditional continuing care paradigm (e.g., step-down treatment) that have yet to truly penetrate the field: recovery high schools (and soon thereafter sober college housing), youth development programs such as Adolescent Community Reinforcement Approach (A-CRA) and Alternative Peer Groups (APG), and technology check-ins. Each can help youth with different challenges and needs, in different ways. But all can add substantially to the sparse continuing care that is currently in place.

Emerging research indicates that attending a recovery school for at least three months enabled students to maintain sobriety for an average of 8 times longer than before they attended a sober school. In addition, a decrease in negative feelings, problems with the law, and urge to use, as well as an increased interest in school, work, family and friends were documented¹²⁰. We are all aware of the positive outcomes of sobriety and abstinence and staying in school: fewer arrests, fewer out-of-home placements, and fewer re-admissions to expensive levels of care. We know there are clear cost-savings of a continuum of care, but cost savings rarely sway decision makers any more. So what about potential revenue? What would happen if kids stayed clean and stayed in school and graduated? In addition to the human capital that results from high school graduation, it is estimated that if we could cut the Pennsylvania drop-out rate in half, Pennsylvania would see \$132 million dollars in increased earnings, \$97 million in increased spending, \$36 million dollars in increased investments, \$ 8.2 million in increased auto sales, and \$15 million in tax revenue¹²¹. In other words, ***continuing care is not only good for an individual, continuing care is good for the economy.***

Continuing care through youth development is realized through Alternative Peer Groups APG,¹²² and the Adolescent Community Reinforcement Approach (A-CRA, Godley, A-CRA,¹²³. Both approaches recognize that for recovery to have a chance, recovery has to be fun and youth must be able to remain a teen. They understand that peer relationships are as important to recovery as they are to the initiation and continued support of AOD use. Skill building activities are fun and challenging with a focus on healthy decision making and how to have fun without AOD. Both promote positive peer relationships and improved relationships with family and use real life opportunities for learning. This focus cannot be underestimated given the importance of peer group influences and beginning of identity development, key issues within this

developmental period. Self-identification as a teenager rather than as an addict is key for health living and a positive sense of self. A-CRA has also been paired with Assertive Continuing Care ACC; ^{124, 125}) wherein linkages to continuing care are shifted from the youth to a case manager and support services for continuing care participation provided. All report positive outcomes; ACC has only been examined post-residential care.

Finally the use of technology as a continuing care approach with adolescents has received little attention in the literature despite the prominence of technology in an adolescent's life. One proof of concept showed acceptability and feasibility ¹²⁶ but this is a wide open and necessary area for development. McKay et al.'s ¹²⁷ telephone follow-ups, Dennis and Scott's recovery check-ups ¹²⁸, and Cacciola et al.'s clinical monitoring ¹²⁹ should be reviewed for possible adaptation and examination for the relapse prevention arsenal called continuing care.

This can change when we educate funders about the importance of continuing care, address the financing issues associated with continuing care and address program-specific barriers for each continuing care approach. The following Call to Action provides a pathway to address this issue.

CALL TO ACTION: Utilize Continuing Care Approaches Matched to the Needs of the Teenager to sustain benefits from index treatments and maintain long-term recovery

Identifying Potential Dollars for Continuing Care: Work with the oversight committee (identified in the early intervention section) to re-allocate a portion of identified dollars to youth development based continuing care models.

Funding Continuing Care: Work to: 1) increase the proportion of health insurance plans providing coverage for treatment of adolescent substance use disorders at parity with services provided for other chronic diseases; and 2) increase budgetary support for treatments that include a strong focus on recovery support and relapse prevention.

Continuing Care through Youth Development, A-CRA, and APGs: Identify and map youth development programs in a target geographical area for use as stand-alone or adjunct continuing care approaches embedded within A-CRA and APG approaches.

Continuing Care through Technology: Explore the role of technology in the delivery of continuing care with adolescents. While adult models exist and modification can be explored, work with Young People in Recovery to identify what would resonate with youth and develop those tools accordingly.

Continuing Care through Recovery High Schools: Work to address the financing mechanisms by having educational dollars follow the child, addressing funding based on enrollment (a Catch-22 since most recovery schools or programs have limited numbers of students by design and there is no timetable as to when a student will arrive or leave), tackling the potential problems if an educational classification were to be denoted for youth in recovery so special education dollars could be allotted (e.g., required recovery school attendance by youth who don't want to be there, stigma).

Making Continuing Care a Part of Standard Care: Work to broaden the understanding of substance use problems to include multiple episodes of care and ongoing recovery management support as a standard of care.

Financing the System

While financing the system deserves a paper in its own right, no one plan will work for all state systems. While there are a variety of funding streams that could be tapped or reorganized to better address adolescent substance abuse, individual states (and advocates for adolescents) must first understand their financial portfolio that is (or could be available) for such. To do this, Cavanaugh¹³⁰ describes “financial mapping”, a process of identifying public funds that are expended on a yearly basis to address an issue. A comprehensive scan of resources including those that are available but are un- or under-utilized begins the process. Spending and utilization practices are then identified across agencies and funding streams. The results provide an x-ray of the system (in this case resources directed at addressing AOD use, abuse, dependence) for realignment of funding streams and structures. The work culminates in a comprehensive financial plan that effectively and efficiently coordinates funds to assure a continuum of care. With leadership, legislative and judicial support, and trust and buy-in from all agencies involved, financial mapping has the ability to not only improve access and expand service capacity but to also address gaps in the continuum of services. If done well, it can simplify the contracting process, improve accountability, promote common outcomes, and reduce duplication of services.

Conclusion

We are at a watershed moment in the substance abuse field. Treatment and policies are poised to be positively transformed in the coming years by both the current state of scientific knowledge and the legislative changes to the healthcare system. Public awareness about addiction and mental illness is growing, legislative advances have brought us ever closer to parity and integrated care, and the research base is expanding so that we can better address the social and biological determinants of these disorders. The necessary elements for change are now in place, and with proper alignment and leveraging of these forces, there is an enormous opportunity to have a significant impact on the way in which addiction is perceived and managed in our society. Adolescent substance use treatment has been woefully underfunded, often misunderstood and generally inadequate for far too long.

Use TRI’s *Call to Action* within your social network to choose what is most important to you and address that for future generations. TRI will do the same thing. With a committee comprised of TRI and the Bridge Foundation, we will prioritize and strategize to move the field forward. Never has the American public had such an opportunity to influence health care policy. If you speak up now, your voice **will** make a difference, shaping the future of millions of children and molding the very essence of American society. Adolescents are counting on it.

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