Promoting Resilience and Recovery: Policy, Clinical, and Recovery Support Strategies to Inhibit the Intergenerational Transmission of Addiction and Related Problems

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In 2005, the City of Philadelphia began transformation of its behavioral health system around the principles of resilience, recovery, and self-determination. The resulting processes and programs have drawn national and international attention in tandem with the emergence of recovery as a new organizing paradigm within the alcohol and drug (AOD) problems and larger behavioral health arenas. Clinical responses to severe, complex, and chronic AOD problems have since begun to shift from models of acute biopsychosocial stabilization to models of sustained recovery management wrapped within larger recovery-oriented systems of care. This shift entails the integration of person- and family-focused clinical interventions with larger environmental (population-based public health) approaches to enhancing the long-term health of whole communities.

One of the critical questions emerging within this integration is how to break intergenerational cycles of AOD and related problem transmission at personal, family, and community levels. This paper: 1) reviews the processes and mechanisms through which alcohol and other drug problems are transmitted within and across generations, 2) identifies protective factors that can interrupt these cycles, and 3) describes strategies for promoting intergenerational resilience and recovery.

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personal, family, and environmental factors that can neutralize or diminish such transmission, and 3) explores potential policies and community-level programming through which the City of Philadelphia can reduce the long-term prevalence of substance use disorders among its population through targeted services to high-risk children and families. The purpose of this paper is to provide a platform for discussion between the Philadelphia Department of Behavioral Health and Intellectual disAbility Services and its community partners toward the goal of formulating a long-term strategy to break intergenerational cycles of addiction and related problems within the City of Philadelphia.

Background

The addiction research literature is replete with references to family density of alcoholism, familial loading for alcoholism, familial aggregation of alcoholism, familial aggregation of substance abuse, intergenerational continuity of substance use, intergenerational transmission of substance abuse, and the intergenerational cycle of substance abuse. In fact, concern about the intergenerational transmission of substance use disorders (SUDs) dates to the earliest days of the American Temperance Movement. Most research to date on the intergenerational transmission of substance use disorders (SUDs) has focused on the intergenerational effects of alcohol use disorders. One in four children under age 18 (28.6% of all children in the U.S.) are exposed to alcohol use disorder (AUD) in the family. Children with parents with an AUD have an elevated risk of developing an SUD over the life course compared to children without this risk factor, although the degree of such risk varies across studies. Risk may extend from dependence on a specific substance to

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increased risk for a broad spectrum of substance use patterns, early onset of alcohol use, increased frequency of binge drinking, and a more rapid progression of problem development.

Children of parents with SUDs are more than 5 times more likely to develop an AOD-related problem, including tobacco dependence, than children without parental alcoholism. Children with family histories of drug use disorders other than AUD are as much as 8 times more likely to subsequently develop a drug use disorder than children without such family history. There is a documented “generalization effect” through which children of alcohol dependent parents consume a far greater variety of substances than their addicted parents. Early manifestations of this SUD risk factor include disinhibition, impulsivity, and sensation seeking.

The risks faced by children of an SUD-affected parent extend beyond vulnerability to alcohol problems to include increased vulnerability for other drug problems, conduct disorder, delinquency, antisocial personality, anxiety, depression, suicide, eating disorders, school absenteeism, school failure, teen pregnancy, violence, and accidents). These effects can extend into adult relationship difficulties, including the increased risk of selecting intimate partners with substance-related problems.

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Only a minority of children of alcoholics (COAs) develop an SUD\textsuperscript{24}—between 33-40%,\textsuperscript{25} with many leading highly successful lives,\textsuperscript{26} and there are people without family risk factors who develop SUDs.\textsuperscript{27} It is not possible to predict a child’s future development solely based on parental addiction status,\textsuperscript{28} but addiction risk is much greater within affected families than in the general population, and this risk may be intensified by increased density of SUD within one’s familial history (e.g., grandparents, aunts/uncles, etc.).\textsuperscript{29} The presence, intensity, and duration of childhood problems in the face of parental AOD-related problems are predicted not by parental SUD status alone but the interaction of multiple risk factors and the availability of key protective factors.\textsuperscript{30} These multiple risk and protective factors appear to influence a broad spectrum of intergenerational problems, including addiction and other behavioral health challenges, poverty, education failure, unemployment, incarceration, trauma, child neglect, and abuse as well as other forms of trauma and violence.

We will next summarize research on eleven potential mechanisms involved in the intergenerational transmission of AOD-related problems.

**Pathways, Mechanisms, and Trajectories of AOD Problem Transmission**

SUDs are transmitted intergenerationally through a variety of genetic/biological and environmental (parent/sibling/family, peer, and community) mechanisms that vary across individuals and subgroups.\textsuperscript{31} These pathways and mechanisms exert independent effects but may also operate simultaneously and interact to magnify the total risk profile.

**Genetic/Neurobiological Influences.** Early studies of twins separated at birth found twins with a biological alcoholic parent were 4 times more likely to develop adult alcoholism as children without this family risk.\textsuperscript{32} Subsequent studies confirmed such risks and extend such risks to the


transmission of other SUDs and sparked speculation of a common genetic risk for multiple substance dependencies.

There is growing consensus that there are multiple genes and chromosomes involved in such transmission as opposed to a single mechanism of gene expression and that the genetic risks for SUDs can be magnified by environmental conditions. The focus on genetic research has been on parental SUD, but SUD risk may also be influenced by greater density of SUD within the family and extended family.

Research examining the precise source of genetic risk for SUD has focused on such factors as:

- impaired neuropsychological functioning (executive functioning of the brain) affecting decision-making and judgment,
- atypical tolerance (less subjective experience of intoxication from low levels of consumption) predicts 4-fold increase in risk for alcohol use disorder,
- greater neurological reward (stronger euphoric effects) and greater stress-response dampening (e.g., enhanced sense of personal power, tension reduction, and social comfort and fluidity), and
- less early negative feedback from AOD experiences.

Genetic risks may be magnified when combined with prenatal and postnatal neurological insult.

Fetal Alcohol Spectrum Disorders (FASDs) span a broad array of functional deficits resulting from prenatal alcohol exposure. Since the 1973 discovery of fetal alcohol syndrome (FAS) by Jones and Smith, research has established a much broader span of severity of effects of such exposure, including more subtle functional impairments that would not meet criteria for FAS. These effects include impairments in brain functioning (e.g., memory, impaired capacity for attention and sustained focusing, choice generation, choice analysis, impaired problem solving, and learning from past experience) among persons with normal intelligence and without the distinctive facial characteristics often associated with FAS. In fact, those with milder forms of FASDs may be at greater risk for the development of substance use disorders than those with FAS.

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A recent research review of FASDs by Therese Grant and colleagues\textsuperscript{41} reported several findings of import to the issue of intergenerational transmission of AOD-related problems, including:

- increased risk for early onset AOD use and related problems,
- increased risks for adult substance use disorders among persons who have experienced FASDs (e.g., with nearly half of adults with FASDs experiencing a substance use disorder)\textsuperscript{42},
- increased risks for mood disorders which can in turn heighten risk for excessive AOD consumption and related problems,
- decreased social skills that could heighten risk for involvement in AOD-using social networks, and
- neurocognitive impairments of patients with FASDs undergoing addiction treatment may compromise treatment engagement, completion, and post-treatment recovery outcomes.

In spite of these findings, Grant and colleagues also discovered that addiction treatment programs did not routinely screen for FASDs nor provide specialized approaches to the treatment of patients with learning or behavioral problems resulting from FASDs.

In reviewing local experience in the Philadelphia areas with FASDs, local informants noted other factors through which FASDs could contribute to the intergenerational transmission of substance use disorders. These risk factors include defective parenting, increased risk for neglect and abuse (including multiple placements in the child welfare system), increased risk for physical/sexual trauma resulting from impaired parental supervision, risks of early pregnancy while using alcohol and other drugs, and subsequent recycling of risk factors in next generation.\textsuperscript{43}

**Assortative Mating.** Genetic and neurobiological risks within families affected by SUDs may be enhanced by the propensity of children exposed to parental SUDs to later be attracted to and marry individuals who share this SUD family history. The children born of such unions may have elevated SUD risks due to the progressive concentration of genetic risk across generations resulting from this selection process.\textsuperscript{44} Assortative mating offers one explanation for the progressive density of AOD-related problems across generations. This same process may also elevate other risk for children raised in this environment, e.g., increasing risk of prenatal AOD exposure.\textsuperscript{45}

**Co-occurring Conditions and Temperament.** SUD risk of children exposed to parental SUD may also flow from a more indirect route. For example, some researchers have speculated that intergenerational SUDs could be spawned by exposure to parental conditions that generate risks for the development of externalizing disorders that can be expressed via excessive AOD use. Others have suggested that genetically influenced psychiatric illnesses in children and adolescents increase the risk for self-medication with alcohol and other drugs and the subsequent development of SUDs. Others have attributed the mechanism of risk transmission

\textsuperscript{42} Streissguth, A., Barr, H., Kogan, J. et al. (1996). *Understanding the occurrence of secondary disabilities in clients with fetal alcohol syndrome (FAS) and fetal alcohol effects (FAE).* Final report to the Centers for Disease Control and Prevention. Seattle, WA: University of Washington, Fetal Alcohol and Drug Unit, Tech Report No. 96-06.
\textsuperscript{43} Personal communications with Bev Haberle, PRO-ACT, March 2014.
to be via temperament (rebelliousness, unconventionality, impulsiveness, emotional hyper-reactivity, sensation-seeking, risk-taking, behavioral hyperactivity, low capacity for persistence, slow rate of stress decompression, emotionally disinhibited, and anxiety), early conduct disorder, and self-medication of deficits.

**Developmental/Historical Trauma.** Adverse childhood experiences (addicted or mentally ill parent, parental discord/separation/divorce, or physical/sexual abuse) increase the likelihood of early age of onset of drinking and drinking to cope (versus for pleasure or social conformity) during early onset of alcohol use. Exposure to parental alcoholism significantly increases the range and intensity of stressors experienced by children of these parents. Also of note are the elevated rates of physical and sexual abuse among children of parents with SUDs. While there are mixed findings on the association between childhood physical/sexual abuse and the development of adolescent/adult SUDs, there is a general association between the former and the latter, particularly among women. Substance use in such circumstances may serve as a mechanism to regulate negative affect related to PTSD, and the damaged self-esteem emanating from such trauma can lead to deviant peer associations, which in turn leads to increased AOD exposure.

The links between developmental trauma and adult SUD risk may be magnified in the presence of particular traumagenic factors, including early age of onset of trauma, long duration of trauma, a larger cumulative volume of traumatic events, trauma inflicted by family members, multiple perpetrators of trauma, more physically invasive forms of trauma, physical violence or threat of such violence as a dimension of the trauma, and response to disclosure of trauma (disbelief or blame rather than protection). Adverse childhood experiences increase the risks

of developing alcohol problems in later life as a response to stressful experiences and contribute to substance use problem persistence in the face of substance-related illnesses.

Historical trauma, such as that experienced by Native American tribes, has been linked to the intergenerational transmission of AOD and related problems through the mechanisms of negative affect, loss of institutions for acculturation and support, and the depletion of coping skills.

Family Dynamics and Parenting. Studies of family dynamics surrounding parental addiction note unrealistic expectations of children, poor boundary management, low cohesion, weak communication, heightened conflict, role ambiguity and role reversals, lower levels of parental competence, and increased risk of neglect and maltreatment as well as increased risk of victimization by persons outside the immediate family. Reports of ineffective parenting by substance-affected parents note weak engagement, transmission of negative affect, inadequate support, inadequate, inconsistent or harsh discipline, hostile communications and conflict, weak rule-setting, monitoring and supervision, hardship, increased access to dangerous substances, and paradoxical effects of mother/father problem disclosure—increasing rather than decreasing SUD risk among children. These conditions can be further exacerbated by poverty, minority status, and single parenthood. Weak monitoring has been linked to increased involvement with AOD-using peers, and strict alcohol-specific rule setting and monitoring in combination with warm parent-child communication have been shown to lower rates of early alcohol exposure and alcohol-related problems. What have been characterized as “closed family systems” may result in AOD use as an expression of adolescent individuation and separation while simultaneously isolating the family from community resources to intervene early in the development of AOD problems.

Parental Modeling and Collusion. Much of the family literature on parental influences on intergenerational SUD transmission has focused on such specific mechanisms as parental modeling (child emulation/identification of parental AOD use) and its effects on positive AOD


beliefs/expectancies\textsuperscript{63} and parental collusion (coaching and permissiveness related to AOD use.\textsuperscript{64} The magnification of risk may be greatest if parental AOD dependence overlaps the adolescent development of their children.\textsuperscript{65} The literature also notes the potential for “aversive transmission”—AOD problems in a parent sparking aversion to AOD (abstinence or minimal AOD use) in a child.\textsuperscript{66}

**Older Sibling Influences.** Several studies have suggested that sibling influence on AOD use could be greater than parental influence,\textsuperscript{67} particularly when the AOD-involved sibling is older, close-in-age, same-sex, and shares a peer social network with the other siblings.\textsuperscript{68} Siblings of older youth with AOD problems are at increased risk of developing such problems if they experiment with AOD use during adolescence and do so during pre-adolescence or early adolescence.\textsuperscript{69} The mechanisms of such influence include modeling, introduction to drug-using peer network, and opportunities for substance procurement and use.\textsuperscript{70}

**Early Age of Onset of AOD Use.** As noted, a number of confluent factors influence early onset of AOD use among children whose parents have an SUD compared to children without this parental risk factor.\textsuperscript{71} Two things are significant related to this finding. First, early onset of AOD use is:

- predictive of adult SUD,\textsuperscript{72}
- faster development of drug dependence,\textsuperscript{73}
- greater problem severity.\textsuperscript{74}


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• greater problem complexity—the presence of comorbid physical and psychiatric disorders,
• less social support for subsequent recovery,75
• increased risk of accidents while under the influence of alcohol76 and alcohol-related violence,77 and
• poor intervention outcomes via less help-seeking and greater post-intervention relapse.78

Second, any strategy aimed at breaking intergenerational cycles of SUDs will require interventions aimed at preventing and at least postponing early AOD exposure, particularly among high-risk children and adolescents.

Disruption of Family Rituals. Several researchers have noted the role of disrupted family rituals in the intergenerational transmission of AOD problems.79 Family rituals span religious and holiday observances, rituals of entering or exiting the home, dinner rituals, and weekend or vacation rituals. Rituals play a critical role in family health by clarifying roles, delineating boundaries within and without the family, and defining rules so that all members know that “this is the way our family is.”80 When family rituals are maintained in the presence of parental AUDs, children are less likely to subsequently develop alcohol or other drug problems.81 Research by Wolin and colleagues82 found that “transmitter families” abandon family rituals or allow rituals to be disrupted, accept intoxicated behavior without expressions of disapproval, ignore the behavior without talking about it, get pulled into collusion roles, or get needs met outside the family. “Non-transmitter families” maintained family rituals, expressed strong disapproval when drinking threatened to disrupt such rituals, and talked about behavior with each other in disapproving tones.83

Environmental factors. Intergenerational transmission of AOD problems can also be intensified by environmental factors, such as distress or disorganization within the neighborhood, key community institutions, and the community as a whole. Such factors increase the prevalence

of peer AOD use/peer modeling, AOD availability, and AOD promotion at local/cultural levels and can concentrate AOD-related problems within particular families and neighborhoods.

SUMMARY. High genetic risks, neonatal insult from maternal AOD use, developmental vulnerabilities, high-risk family and community environments, and inadequate personal, family, and community protective factors combine to elevate risk for development of severe and prolonged substance use disorders and continuing intergenerational cycles of addiction and related problems. This section of our paper identified eleven potential mechanisms that can influence the intergenerational transmission of AOD problems. Each of these mechanisms have severity and density dimensions that can influence and potentially magnify risks and that interact with recovery and resiliency capital factors to shape one’s ultimate risk for AOD problems. Multiple risk factors (diverse etiological pathways) may set the stage for development of SUDs among children from affected families, with SUDs then becoming functionally autonomous from these factors. What we are seeking in this exercise is the identification of potential sequences/combinations of interventions that can reduce risk factors where possible and to amplify protective factors that can neutralize or diminish these risk factors.

Potential Protective Factors

Research on the risks faced by children of parents with SUDs has in recent decades been extended to the study of resilience among such children. The concept of resilience posits that resilience, by definition, exists only in the presence of adversity and risk. It is based on the understanding that protective factors exist that minimize or neutralize the effects of adversity allowing children at high risk of developing AOD and related problems to effectively cope, and in many cases, thrive. Werner’s classic study of resilience in children of alcoholics concluded that: “The risks associated with parental alcoholism can be buffered by constitutional characteristics of the child, and by qualities of the early caregiving environment” (p. 39). Protective characteristics in the Werner study included qualities of temperament that drew positive attention from parents and others, intelligence, communication skills, achievement orientation, caring attitude toward others, and positive self-concept. Mylant et al. note five SUD protective factors: 1) personality characteristics that evoke positive social responses from others, 2) capitalizing on special abilities, e.g., academic or athletic success, 3) parenting that fosters competence and self-esteem, 4) relationships with other supportive adults, and 5) opportunities that arrived during critical life transitions.
Benard’s research review in the late 1990s concluded, “50-70% of “high risk” children grow up to be successful, confident, competent, and caring individuals.”\(^{90}\) Subsequent reviews noted three elements of such resilience: 1) strengths of the child, 2) strengths of the family, and 3) strengths of the community. Personal strengths include happiness, hope, competence, confidence, purpose, determination, and social and coping skills; family strengths include parent-child bonding, parental supervision and discipline, family communication, maternal and paternal disapproval of AOD use, and availability of supports outside the family.\(^{91}\) As noted earlier, maintenance of family rituals in the presence of parental SUD has also been found to be a protective factor for children in such families.\(^{92}\) Resiliency studies have evolved from a focus on resiliency traits to resiliency as a relational process between child, family, and community.\(^{93}\)

Protective factors include “turning points” (e.g., events, relationships, and opportunities) that fundamentally and positively alter the trajectory of a child’s life for years to come,\(^{94}\) developmental differentiation (de-identification) between younger siblings and older AOD-using siblings,\(^{95}\) and parenting-related protective factors, including nurturance (warmth), socialization (clarity of family values and expectations), modeling, and control (supervision, monitoring, and discipline).\(^{96}\) Supportive community networks have also been found to reduce and ameliorate the effects of adverse childhood experiences.\(^{97}\)

Surprisingly, little research has been conducted on the effects of parental recovery status on the future risk of children developing an SUD. Moos and Billings\(^ {98}\) reported better emotional health and functioning of children of recovering alcoholics compared to children of alcoholics who had relapsed but did not find differences in the children’s substance use behaviors. Studies of family structure show far greater impaired structure in alcoholic families than in families in...
recovery or community controls, that the distressing effects of addiction on the family decline in recovery, and that families in recovery function as well as families not affected by addiction (although less socially active). Also of note is a study by Chassin and Barrera finding that children of parents in recovery have lower AOD consumption than children whose parents continue to have AOD-related problems. Parental recovery status may be offset by sibling influences: “...sibling drinking, affiliation with peers who drink, lowered socioeconomic status, and high levels of environmental stress may place adolescent children of alcoholics on a high-risk developmental trajectory regardless of whether parental alcoholism is active or remitted. Also of note is Knight and colleagues’ conclusion that “...intergenerational risk may be reduced if substance use can be curtailed in adolescence.” This would suggest the potential role of student assistance programs and assertive treatment of high-risk adolescents as potential intervention points for breaking intergenerational cycles of addiction.

Research on the long-term resiliency of children at increased risk for development of SUDs suggests optimism for the development of future strategies to break intergenerational cycles of addiction. Given the complexity of both risk and resiliency factors, such strategies will require discovery of the most potent combinations and sequences of interventions and implementing these interventions at personal, family, community, and state and national social policy levels.

Evaluations of Intergenerational Interventions

Optimism also comes from studies evaluating interventions that exert influence across generations. The question plaguing family models of intervention is whether the highest risk families can be engaged for such interventions. Research to date suggests that high risk families can be engaged and retained in service interventions for an extended period of time and that parental addiction recovery prospects are enhanced by elevating the functioning of the spouse and family and through family involvement in treatment. Interventions into parental SUDs seem quite promising. For example, the use of recovery coaches in child welfare settings has been shown to reduce risk of prenatal substance use exposure, increased access to addiction treatment and enhanced odds of family reunification. Studies of addiction treatment outcomes

have also found that recovery enhances family functioning\textsuperscript{110} and that families in recovery function on par with community controls.\textsuperscript{111} Spouses of recovered alcoholics report less marital conflict than spouses of alcoholics not in recovery and spouses of community controls\textsuperscript{112}—suggesting a lessening of this risk factor for intergenerational transmission.

Some optimism also comes from research on fetal alcohol spectrum disorders (FASDs) where studies have confirmed three important findings: 1) assertive case management (education, coaching, and monitoring) of pregnant women and women about to become pregnant dramatically increases the odds of a healthy pregnancy via elimination or severe reductions in drinking)\textsuperscript{113}, 2) a stable, nurturing home spanning most of one’s childhood can serve as a protective factor for the development of AOD problems among children experiencing FASDs,\textsuperscript{114} and 3) accommodations can be made to the delivery of addiction treatment that address impairments related to FASDs\textsuperscript{115}

Research to date suggests multiple targets for parental intervention: 1) enhancing general parenting effectiveness, 2) enhancing AOD-specific parenting practices, and 3) outreach aimed at engaging the addicted parent and related family-focused interventions.\textsuperscript{116} Child-focused interventions could include educating high-risk children (e.g., family history of AOD problems) about their risks related to problem drinking. At-risk children educated about such risks subsequently consume less alcohol than at-risk children not educated about such risks.\textsuperscript{117}

Multi-component programs (targeting children and parents or child, parent and community) have greater effects than programs with a single target.\textsuperscript{118} Also informing potential interventions is the discovery that past prevention programs have the potential for iatrogenic effects (harm in the name of help, e.g., increasing rather than decreasing drug use and its mediators rather than reducing them).\textsuperscript{119} In a review of research on prevention programs, Werch

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and Owen\textsuperscript{120} found 17 alcohol and drug prevention studies reporting negative effects of the intervention, e.g., increased alcohol use. Great care must be taken in the design of such interventions as well as in the rigorous evaluation of piloted interventions before widespread application.

**Clinical and Recovery Support Strategies**

Based on this review, we believe the following practices could be implemented within addiction treatment programs and recovery community organizations to reduce intergenerational cycles of addiction. These recommendations are proposed as discussion points for the continued evolution of the behavioral healthcare system within the City of Philadelphia.

**Recommendation 1:** Shift the “unit of service” for addiction treatment programs from the individual to the family and extended family with concomitant changes in assessment; service planning and delivery; and long-term monitoring, support, and if and when needed, early re-intervention. In this shift, assessment and service planning would potentially encompass service plans for each individual family member and the family as a unit. Each person seeking recovery would be asked three core questions at the point of engagement: 1) How can we help you achieve and maintain stable recovery? 2) What does your partner need at this time to enhance his or her present and future physical/emotional health and security? 3) What do your children most need to enhance their present and future physical/emotional health and security? These same questions would be asked of family members, with cumulative responses shaping the resulting service plans.

**Recommendation 2:** Conduct screenings for fetal alcohol spectrum disorders (FASDs) for all persons entering addiction treatment and integrate accommodations for the potential cognitive/behavioral deficits such individuals may exhibit that could compromise their long-term recovery outcomes.\textsuperscript{121}

**Recommendation 3:** Communicate to all parents undergoing addiction treatment or participating in recovery support services that their children are at increased risk to develop an AOD problem and that there are specific actions they can take (e.g., effective parenting, key AOD-specific parenting practices, maintenance of key family rituals, etc.) to lower that risk. The actions that parents could take could be modeled by staff and volunteers (e.g., effective listening) and by the program as a whole (e.g., modeling rituals of daily communication, exit and entry, mealtime rituals, holiday celebrations, etc.).

**Recommendation 4:** Integrate services for couples, children, and families within all addiction treatment programs, including educational (e.g., parenting effectiveness training, marital communication and conflict resolution, and effective boundary management), screening and early intervention, therapeutic and peer recovery support tracks that use engaging media (including internet resources, art, music and drama). Each family undergoing treatment should be aided in preparation of a family relapse prevention and management plan that includes identification of resources for rapid responses to any crises within the family.

**Recommendation 5:** Establish child-focused goals for families in addiction treatment and families with children affected by FASDs that include (adapted from Kumpfer & Bluth, 2004)\textsuperscript{122}

- attachment of each child with at least one caring adult,


• availability of at least one positive, encouraging role model for each child,
• balance of emotional closeness and support with clear behavioral expectations,
• ensuring regular parent-child time,
• consistent family rituals,
• positive ethnic/cultural identification,
• availability of teaching/coaching life skills and competencies,
• clear expectations/consistent discipline (including AOD use rules),
• communication of high expectations,
• encouraging dreams and aspirations via identification of strengths and interests, and
• attachment to extended family and social network.

Recommendation 6: Target the younger siblings of adolescents and young adults admitted for addiction treatment for prevention and early intervention services, with services delivered by the treatment program or through assertive linkage to community resources (e.g., student assistance programs within the schools).

Recommendation 7: Develop collaborative, multi-agency models of intense interventions for families/children of those entering service with the highest levels of problem severity and lowest levels of recovery capital (prioritize resources for these families at highest risk for intergenerational transmission of multiple problems).

Recommendation 8: Add evaluation of physical/emotional health, AOD status and school performance of children as a recovery-focused, post-treatment benchmark within all addiction treatment follow-up data collection.

Policy Implications and Policy Level Strategies

The issues raised in this paper have profound implications for behavioral health policy, funding, and service system evaluation. In this final section of the paper, we will try to outline some potential directions that DBH/IDS and our local, state, and national counterparts might take to address the intergenerational transmission of addiction and related problems.

This review suggests a number of broad strategies, many of which are already being undertaken by communities across the country, including 1) programs to treat parental addiction, 2) prevention programs aimed at preventing adult addiction, 3) programs aimed at prevention of fetal alcohol syndrome and fetal alcohol effects, 4) school-based prevention programs for children, 5) programs targeting children (particularly sons) of alcohol dependent fathers, 6) mutual aid via Alateen, COA, and ACOA groups, and 7) Strengthening Families Programs (SFPs) aimed at both parents and children.123 Broad intervention goals for high-risk children include decreasing their exposure to risk factors through treatment and recovery support strategies for parents and by enhancing protective factors within the child and within the child’s environment, e.g., access to adults who can buffer reduced competencies of the addicted parent.124 Breaking intergenerational cycles of addiction is inseparable from addressing broader adversities that affect the fate of at-risk children.

Earlier work has sought to conceptualize what is needed in this area. Masten\textsuperscript{125} suggested a four-part strategy: “1) reduce environmental risk and vulnerability, 2) reduce stressors and pileup, 3) increase available resources, and 4) mobilize protective processes.”\textsuperscript{126} Schuckit and Smith\textsuperscript{127} suggested that a key step in addressing intergenerational transmission of AOD problems was to shrink the adult SUD population through effective prevention, early intervention, and treatment programs. Grant\textsuperscript{128} offered a particularly bold vision.

*What is urgently needed is a comprehensive strategy that integrates all systems oriented toward the provision of health, social, and treatment services, designed to improve the lives of children at risk from their exposure to alcohol abuse and dependence [and other drug problems] in the family. Such a strategy must include a broadening of an array of services targeted to the needs of these children at every developmental stage, coupled with aggressive interventions to enhance their lives and protect their safety.*

Based on the review conducted in this paper, we would offer the following concrete steps that policy leaders and systems administrators could take to forge a long-term plan to address the intergenerational transmission of AOD problems.

**Recommendation 1:** *Issue a Policy Statement* on Promoting Family Recovery and Intergenerational Health as a public health issue to signal this increased focus on needs of children and families affected by addiction and related problems.

**Recommendation 2:** *Create The Intergenerational Fund*—a multi-agency coalition committing staff and public financial resources toward joint policy initiatives that support innovative projects aimed at stemming the intergenerational transmission of AOD problems, mental health challenges, child neglect and abuse, school failure, criminality, and violence.

**Recommendation 3:** *Broaden and sustain early intervention resources* within each community to include student assistance programs in all middle and high schools and encouraging pediatricians to assess AOD family history and screening for AOD problems in pre-teens and adolescents. We believe successful models of physician screening, brief intervention, and referral to treatment for adults could be adapted for use with latency-age children and adolescents.

**Recommendation 4:** *Identify and intensify intensity and duration of services for individuals and families at greatest risk* of contributing to future AOD problems. A small percentage of AOD users and their families experience an inordinate proportion of the total negative consequences and costs of AOD use. This high risk population could be identified and targeted for specialized, multi-agency prevention, early intervention, treatment, and recovery support strategies.\textsuperscript{129} Children of the most severely AOD dependent parents could be identified for intensified service interventions with particular focus on those exhibiting developmental antecedents of SUDs.


and/or exhibiting early onset of AOD use. One of the goals of these interventions would be linkage of children and families to natural and sustainable supports that exist within the community. Also of value would be the expansion of family education, use of family advocates and The Recovering Families Parenting Program and the Guiding Good Choices Program through the Recovery Community Center.

**Recommendation 5:** *Develop clinical guidelines* (and monitoring benchmarks) for minimal levels of child/family-focused services to be provided by publicly funded addiction treatment programs.

**Recommendation 6:** *Provide support for at least one designated child/family service position* within every publicly funded addiction treatment program toward goals of:

- integrating family/child assessment into the intake and clinical assessment process,
- integrating parenting training/coaching into primary addiction treatment or continuing care,
- providing prevention and early intervention services to children whose older sibling has been admitted to addiction treatment, and
- facilitating peer-based recovery support services for children and adult family members.

**Recommendation 7:** *Integrate child/family services* into existing and new post-treatment monitoring, support, and early re-intervention efforts within both addiction treatment programs and within the recovery support menu of recovery community organizations, e.g., offering parenting in recovery training for local communities of recovery, encouraging development and utilization of child and family recovery support groups, etc. Recovery community organizations could be encouraged and supported to expand recovery support services for families and children and to include families and children in recovery celebration events.

**Recommendation 8:** *Support community-based programs* aimed at the prevention/postponement of AOD use and assertive early intervention into AOD problems among adolescent and young adults and programs aimed at the prevention of and early intervention with fetal alcohol spectrum disorders (FASDs).

**Recommendation 9:** *Support ethnic cultural revitalization movements* that address health and relationship challenges within the contexts of historical trauma and needed personal/cultural renewal.

**Recommendation 10:** *Support and conduct research* on the intergenerational transmission of AOD and related problems, including the isolation of active ingredients within programs that ameliorate this risk. Such research should include studies of resilient children and isolation of the factors that contribute to their resiliency. There is a paucity of well-designed studies to inform national and community-level policy development aimed at breaking intergenerational cycles of addiction.\(^{130}\) Such studies are needed to marshal and target limited resources and to avoid potential iatrogenic effects of interventions into this incredibly complex issue.\(^{131}\) Research efforts should include exploration of mechanisms to establish baseline and regularly updated rates of

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intergenerational SUD transmission. Such data to our knowledge has never been collected to guide systems planning and service evaluation.

**Recommendation 11:** Assess the extent to which the issues outlined in these recommendations suggest changes in policies and procedures for program licensure, funding, pay-for-performance benchmarks, program monitoring, quality assurance and worker training and credentialing.

**Conclusions**

It is our belief that America cannot, in the long-term, treat its way out of its most severe, complex, chronic and costly AOD problems without extending that treatment to address the broader needs of families and children. The central policy question is how local communities can muster the resources to serve more than a small fraction of at-risk children and families. Meeting that challenge will require the strategic integration and selective focusing of existing resources and garnering additional resources dedicated to the specific goal of breaking intergenerational cycles of addiction and related problems. What is needed is leadership within a single community to demonstrate the viability and effects of a sustained community effort to achieve this goal. This paper is an invitation and challenge to the City of Philadelphia to become that pioneering community.

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