Systems of Care for Adolescents with Comorbid Substance Use and Psychiatric Disorders: *Lessons from best practices in adults*

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Background

Despite significant public health efforts, alcohol and drug use during adolescence remains common and contributes to the increase in morbidity and mortality in this age range. Recent studies suggest that more than 80% of adolescents experiment with drugs or alcohol before adulthood. Psychoactive drug initiation, progression into more severe use patterns, and dependency rates peak during adolescence and young adulthood, and adolescents have higher rates of substance use and addictive disorders compared to children and older adults. Early use of psychoactive drugs robustly predicts later drug addiction, psychopathology, and deficits in social and occupational functioning.

Comorbid or co-occurring psychiatric and substance use disorders are common among adolescents with over 70% of adolescents with a substance use disorder also having one or more psychiatric disorder (Kaminer & Bukstein, 2008). Comorbid/co-occurring psychiatric disorders may temporally precede, follow, or be concurrent with chronic substance use and comorbidity is associated with increased addiction severity, increased risk for relapse, and poorer treatment outcomes, especially among adolescents (Bukstein & Horner, 2010). The psychiatric disorders which most commonly co-occur with SUD during adolescence include conduct disorder, attention deficit/hyperactivity disorder (ADHD), mood disorders (including depression and bipolar), anxiety disorders, and traumatic distress (Grella et al., 2001; Chan et al., 2008). Adolescents with comorbid substance use and psychiatric disorders present a major challenge to mental health and addiction service systems with comorbidity being associated with increased utilization rates and costs of service (Hawkins, 2009)

Over the past two decades systems of care approaches have emerged as one of the primary models for medical, behavioral, and mental healthcare, originating in children's mental health centers. Systems of care are defined as "systems that incorporate a broad, flexible array of services and supports for defined populations that is organized into a coordinated network, integrates service planning and service coordination and management across multiple levels, is culturally and linguistically competent, builds meaningful partnerships with families and youth at service delivery, management, and policy levels, and has supportive management and policy infrastructure" (Hodges, Ferreira, Israel, & Mazzza, 2007). While systems-based approaches have been studied and implemented extensively in adult populations with comorbid/co-occurring disorders (Minkoff, 2001), little is known about if these models can be successfully adapted to youth populations. More service and implementation studies are needed to inform policy-making decisions.

We aim to examine national consensus best practices for adults with co-occurring substance use and psychiatric disorders and compare these guidelines to current systems of care for the treatment of adolescent and transition age youth with comorbid/co-occurring substance use and psychiatric disorders.

Methods

We conducted a series of English-language medical literature searches using PubMed and PsycINFO using the search terms "adolescent", "youth", "adult", "systems of care", "best practices", "guidelines", "substance abuse", "substance dependence", "substance use disorder", "addiction", "psychiatric disorders", "co-occurring psychiatric and substance use disorders", "dual diagnosis". We manually searched reference lists of pertinent original research articles, review articles, and textbooks for relevant citations that our searches missed. Articles were selected if they provided guidelines or best practices (1) for development and implementation of a co-occurring psychiatric and substance use disorder system of care and (2) for assessment, treatment, and psychopharmacological interventions for individuals with co-occurring psychiatric and substance use disorders.

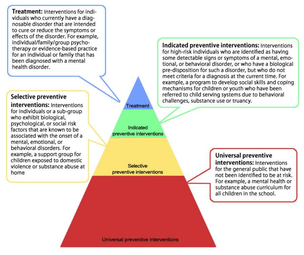

Figure 1. Youth Mental Health Levels of Intervention and Prevention

Adapted from O'Connell, Boat, & Warner, 2009

Table 1. Best Practices Standards for Systems Design for Adults with Co-occurring Psychiatric and Substance Use Disorders

Principles for Systems Design
1. Comorbidity should be expected, not considered an exception. Consequently, the whole system must be designed to be welcoming and accessible to patients with all types of dual diagnoses.
2. Psychiatry and substance use disorders should be regarded as primary disorders when they coexist, each requiring specific and appropriate intensive assessment, diagnosis, and treatment, in accordance with established practice guidelines.
3. Serious psychiatric and substance use disorders are chronic, relapsing illnesses that can be conceptualized by using a disease and recovery model, with parallel phases of treatment or recovery.
4. Within each subtype of the treatment population, consumers are in different phases of treatment and at different stages of change with regard to their illness. Thus a comprehensive array of interventions that are phase and stage specific is required.
5. Whenever possible, treatment of persons with complex comorbid disorders should be provided by teams, or programs with expertise in mental health and substance use disorders.
6. The system should promote a longitudinal perspective on the treatment of patients with dual diagnoses, emphasizing the value of continuous relationships with integrated treatment providers, independent of participation in specific programs.
7. Admission criteria should not be designed to prevent consumers from receiving services but rather to promote acceptance of consumers at all levels of motivation and readiness and with any combination of comorbid disorders.
8. The service system should not begin or end at the boundaries of formal treatment programs; rather, it should include interventions to engage the most detached individuals- for example those who are homeless.
9. The fiscal and administrative operations of the system should support the accomplishment of the system's mission and the implementation of these principles.
10. Each system should identify quality and outcome measures-structure, process, and outcome measures; program standards and competencies; assessment tools-including those for level-of-care assessment and utilization management; practice guidelines; workforce competencies; and training materials in order to implement the system's mission and philosophy.

Note: Best Practices Standards for Systems Design for Adults with Co-occurring Psychiatric and Substance Use Disorders are from a 1998 national expert consensus report titled Co-occurring Disorders in Managed Care Systems: Standards of Care, Practice Guidelines, Workforce Competencies, and Training Curricula. This report was the product of a SAMHSA-funded Managed Care Initiative coordinated through the University of Pennsylvania Center for Mental Health Policy and Services Research (CMHPSR). It was published in 2001 (Minkoff, 2001).

Table 2. Best Practice Guidelines for Assessment, Treatment, and Psychopharmacology for Clinicians Treating Adults with Co-occurring Psychiatric and Substance Use Disorders

Practice Guidelines
1. Assessment for either disorder should begin as early as possible, without the implementation of arbitrary waiting periods of sobriety and without a requirement of psychiatric stabilization, on the basis of data collection for an integrated longitudinal history.
2. For each disorder, assessment should include a definition of the stage of change or level of motivation.
3. When mental illness and a substance use coexist, each disorder should be considered as primary, and integrated dual primary treatment should be provided; the treatment for each disorder should be matched to the diagnosis and the stage of change.
4. Medications for known serious mental illness should never be discontinued on the grounds that the patient is using substances.
5. Benzodiazepines are not recommended in the ongoing treatment of patients with known substance dependence with or without a comorbid psychiatric disorder. If a prescriber believes that an exception is warranted, this belief should be considered an indication for peer review, expert consultation, or a second opinion.

Note: Best Practices Standards for Assessment, Treatment, and Rehabilitation and Psychopharmacology for Clinicians Treating Adults with Co-occurring Psychiatric and Substance Use Disorders are from a 1998 national expert consensus report titled Co-occurring Disorders in Managed Care Systems: Standards of Care, Practice Guidelines, Workforce Competencies, and Training Curricula. This report was the product of a SAMHSA-funded Managed Care Initiative coordinated through the University of Pennsylvania Center for Mental Health Policy and Services Research (CMHPSR). It was published in 2001 (Minkoff, 2001).

Results

National expert consensus guidelines for systems design for adults with co-occurring psychiatric and substance use disorders are presented in Table 1. National expert consensus guidelines for best practices standards for assessment, treatment, and rehabilitation and psychopharmacology for clinicians treating adults with co-occurring psychiatric and substance use disorders are presented in Table 2. Both guidelines are from a 1998 national expert consensus report titled Co-occurring Disorders in Managed Care Systems: Standards of Care, Practice Guidelines, Workforce Competencies, and Training Curricula (Minkoff, 2001). This report was the product of a SAMHSA-funded Managed Care Initiative coordinated through the University of Pennsylvania Center for Mental Health Policy and Services Research (CMHPSR). Practice parameters for the assessment and treatment of children and adolescents with substance use disorders are presented in Table 3 (Bukstein & the AACAP Workgroup on Quality Issues, 2005). While no guidelines for systems design for adolescent co-occurring disorders exists, published early evaluations and pilot studies of integrated treatments for youth commonly contain the following elements: (1) intensive services (weekly or two-to-three meetings per week for 12-24 weeks; (2) small therapist to client ratios (one-to-six); (3) community and home-based delivery of services; (4) the use of one accountable "care manager and/or therapist"; (5) around-the-clock availability to each family; (6) the use of a psychiatrist for medication evaluation/management; and (6) stage-wise interventions using combinations of cognitive-behavioral-motivational & family therapy (parent behavior training) approaches (Turner et al., 2004)

Areas that are unique to adolescent/youth co-occurring psychiatric and substance use disorders with regard to systems design and treatment guidelines:

(1) ***Developmentally-informed Approach to Assessment, Treatment, and Rehabilitation*** Adolescents with co-occurring psychiatric and substance use disorders differ in important ways from adults and developmental differences may impact expectancies, response to interventions, adherence, and treatment outcomes (Deas et al., 2000). Systems of care for adolescent substance use disorders should take into account the individuals developmental stage, strengths and weaknesses.

(2) ***Involving the Family in Treatment Planning*** Family-based approaches have demonstrated efficacy in the treatment of adolescents with co-occurring psychiatric and substance use disorders. The adolescent's family should be engaged/involved in treatment and parent management/training should be a component of the treatment plan.

(3) ***Primary Prevention, Secondary Prevention, & Intervention as component of systems based risk stratification*** Child & Adolescent psychiatric and substance use disorder systems should include different levels of intervention including primary prevention, secondary prevention, and interventions (O'Connell, Boat, and Warner, 2009) (See Figure 1).

(4) ***Pharmacological approach based upon best evidence from clinical trials of children and adolescents*** Among adults, SUD-targeted pharmacotherapies have emerged as viable options to complement psychosocial treatments and enhance outcomes. Developmental differences exist in pharmacodynamics and treatment-response, and comparatively little research has focused on SUD-targeted pharmacotherapies for youth. Evidence-based pharmacotherapies should be used in the treatment of psychiatric and substance use disorders.

Table 3. AACAP Practice Parameters for Assessment and Treatment of Children and Adolescents with Substance Use Disorders

Practice Guidelines and Recommendations	Practice Guidelines and Recommendations Continued
1. The clinician should observe an appropriate level of confidentiality for the adolescent during the assessment and treatment.	9. Medication can be used when indicated for the management of craving and withdrawal and for aversion therapy.
2. The mental health assessment of older children & adolescents requires screening questions about the use of alcohol and other substances of abuse.	10. Treatment should encourage and develop peer support, especially regarding the non-use of substances.
3. If the screening raises concerns about substance use, the clinician should conduct a more formal evaluation to determine the quantity and frequency of use and consequences of use for each substance used and whether the youth meets criteria for SUD(s).	11. Twelve-step approaches may be used as a basis for treatment. Attendance to AA/NA groups is an adjunct to professional treatment and should be encouraged.
4. Toxicology, through the collection of bodily fluids or specimens, should be a routine part of the formal evaluation and ongoing assessment of substance use both during and after treatment.	12. Programs/Interventions should attempt to provide comprehensive services in other domains (e.g. vocational, recreational, medical, family, and legal).
5. Adolescents with SUDs should receive specific treatment for their substance use.	13. Adolescents with SUDs should receive thorough evaluation for comorbid psychiatric disorders.
6. Adolescents with SUDs should be treated in the least restrictive setting that is safe and effective.	14. In adolescents with SUDs, comorbid psychiatric disorders should be appropriately treated.
7. Family therapy or significant family/parental involvement in treatment should be a component of treatment of SUDs.	15. Programs and interventions should provide or arrange for post-treatment aftercare.
8. Treatment programs and interventions should develop procedures to minimize treatment dropout and to maximize motivation, compliance, and treatment completion.	

Note: American Academy of Child & Adolescent Psychiatry (AACAP) Practice Parameters for Assessment and Treatment of Children and Adolescents with Substance Use Disorders was developed by Oscar Bukstein and the Workgroup on Quality Issues. It was reviewed at the member forum at the 2002 annual meeting of AACAP and published in 2005.

Conclusions

Substance use and addictive disorders are among the most costly diseases in our society and most individuals with substance use disorders began their use in adolescence. Among adolescents with SUDs co-occurrence with psychiatric disorders is the rule rather than the exception and systems-based approaches are needed. National expert consensus on treatment and design of systems of care for adults with co-occurring psychiatric and substance use disorders may inform and enhance adolescent systems. These include: (1) the use of an integrated or concurrent treatment approach, (2) conceptualizing both psychiatric and substance use disorders as primary disorders, (3) incorporating best practices/guidelines for psychiatric and substance use disorders as part of co-occurring disorder treatment planning, (4) use of case management to coordinate different providers with different expertise, (5) building services for different levels of care, (6) training of co-occurring disorder treatment teams, and (7) development of flexible funding streams that reduce barriers to entry into care systems. The development of best practices protocols for system design and treatment of youth with co-occurring psychiatric and substance use disorders will require more research across multiple domains (e.g. clinical trials, systems-based, implementation).

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Acknowledgements: The presenters acknowledge grant support from the American Academy of Child & Adolescent Psychiatry (Hammond).

Disclosures: The authors report no conflicts of interest with respect to the content of this poster. Dr. Hammond has received support from the American Academy of Child & Adolescent Psychiatry Pilot Research Award for Junior Investigators supported by Lilly USA, LLC.