Trends in Adolescent Substance Abuse, Service Use, and Treatment Capacity

Amy A. Mericle, PhD
Amelia M. Arria, PhD
Kathleen Meyers, PhD
John Cacciola, PhD
Ken C. Winters, PhD
Kim Kirby, PhD

1Treatment Research Institute; 2University of Maryland; 3University of Minnesota

Addiction Health Services Research Research Conference
Fairfax, VA, October, 5th 2011
Acknowledgements

- Supported by the NIDA-funded Parents’ Translational Research Center (P50-DA02784) at the Treatment Research Institute

- All authors report no competing conflicts of interest
Overview

• Present trends in percent of adolescents meeting criteria for substance use disorders (SUDs) and receiving treatment using the National Survey of Drug Use and Health (NSDUH) data

• Present trends in the use and availability of substance abuse treatment for adolescents using the National Survey of Substance Abuse Treatment Settings (N-SSATS) data

• Explore the gap between needed services and available services for US adolescents
Adolescent “Treatment Gap”

- In 2009, approximately 7% of adolescents met DSM-IV criteria for an SUD (SAMHSA, 2010)

- Treatment Gap: most adolescents who need services do not receive them (SAMHSA, 2010)

- Untreated SUD increases risk of:
  - SUD escalation (Chung & Martin, 2010)
  - Violence and sexual risk behavior (Steinberg, 2004; Weinberg et al., 1998)
  - Development/exacerbation of mental disorders (Kaminer & Bukstein, 2008)
  - Fatalities from accidents, homicide, and suicide (Clark & Winters, 2002)
Behavioral Model of Service Use

PREDISPOSING CHARACTERISTICS → ENABLING RESOURCES → NEED → USE OF HEALTH SERVICES

- Demographic
- Social Structure
- Health Beliefs
- Personal/Family
- Community
- Perceived
  - (Evaluated)

Treatment Gap = Difference between evaluated/identified need and use of services

(Andersen, 1968; Andersen, 1995)
Individual & Systems Determinants

(Arndt & Newman, 1973; Andersen, 1995)
Treatment Capacity

• Available “slots”

• Multifaceted: (Hser et al., 2007)
  – Program capacity (i.e., physical structures and facility licensure and program certification)
  – Staff capacity (i.e., ratio of clients to staff, or caseload)
  – Service capacity (i.e., adequate and specialized services to meet clients’ needs)
  – Funding capacity (i.e., funds to cover the costs of treatment)
Adolescent Treatment Capacity

- Data from the 2003 N-SSATS survey indicated that while 52% of facilities admitted adolescent clients, only 32% of all facilities offered “programs or groups” for adolescents (SAMHSA, 2004).
- Many facilities serving adolescents lack components considered essential to effective adolescent substance abuse treatment leaving significant room for improvement (Knudsen, 2009; Mark et al., 2006).
Understanding the Treatment Gap

Treatment Gap = Difference between evaluated need and use of services (NSDUH)

Capacity Gap = Difference between evaluated need and AVAILABLE services (NSDUH and N-SSATS)

(Andersen & Newman, 1973; Andersen, 1995)
Past Year Treatment for Alcohol or Illicit Drug Use by Location Type (2002-2009)
Unmet Need for Treatment (NSDUH)

Trends in the Percent of Adolescents with Past-Year Disorders Who Did NOT Receive Treatment at ANY Location in the Past Year

Percent of US Adolescents with SUD

Year

2002 2003 2004 2005 2006 2007 2008 2009

Trends in the Percent of Adolescents with Past-Year Disorders Who Did NOT Receive Treatment at ANY Location in the Past Year

Alcohol or Illicit Drugs

Alcohol

Illicit Drugs
Trends in Facilities Treating Adolescents (2002-2009)

- **Special Programming for Adolescents**
  - 38.3 (2002) to 35.7* (2009)
- **>1 Client Under 18 on Reference Date**
  - 36.6 (2002) to 29.4* (2009)
- **≥10 Clients Under 18 on Reference Date**

*Note: *p<.05 (prior year to current year)
*Note: *p<.05 (2002 to 2009)
Estimating The *Capacity* Gap

- **NSDUH**
  - We know how many adolescents met past year criteria for SUD

- **N-SSATS**
  - We have total number of substance abuse admissions and can multiply by the percent of adolescents served on reference date
  - Corrected for “operating capacity” or unused slots on the reference date
Estimating Adolescents Served Annually

- In 2009, facilities participating in the N-SSATS survey reported 3,529,021 admissions in the most recent 12-month period.
- In 2009, adolescents represented approximately 7% of all clients served on the reference date \((\frac{84,326}{1,182,077}=0.069)\).

\[
3,529,021 \times \left(\frac{84,326}{1,182,077}\right) = 251,750
\]

Adolescent Admissions in 2009
Correcting for Unused Slots

• In 2007, across sites how many clients were served versus how many could have been served on the reference date?

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Outpatient (OP)</td>
<td></td>
</tr>
<tr>
<td>Total Who Received OP Services</td>
<td>1,016,913</td>
</tr>
<tr>
<td>OP Capacity</td>
<td>1,306,347</td>
</tr>
<tr>
<td>Residential</td>
<td></td>
</tr>
<tr>
<td>Total Who Received Residential Services</td>
<td>103,709</td>
</tr>
<tr>
<td>Residential Capacity</td>
<td>109,617</td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
</tr>
<tr>
<td>Total Who Received Inpatient Hospital Services</td>
<td>14,803</td>
</tr>
<tr>
<td>Inpatient Hospital Capacity</td>
<td>13,387</td>
</tr>
</tbody>
</table>

Generously estimating that the substance abuse tx system could expand to meet need and is operating at only 75%, we corrected all annual admissions estimates for adolescents by a factor of 1.33 (inverse of 75%)
Depicting the Capacity Gap

Estimated Number of Adolescents Needing Tx & Estimated Treatment Capacity 2002-2009

- Estimated # of Adolescents (12-17) with SUDs (NSDUH)
- Total # of Clients<18 Served on Reference Date (N-SSATS)

CAPACITY GAP (1.4 million)

- Estimated # of Annual Adolescent Admissions (N-SSATS: Total Annual Admissions*Proportion of <18 Clients Served on Reference Date)
- Estimated Annual Adolescent Treatment Capacity (N-SSATS: Estimated # of Annual Adolescent Admissions*1.33)
Summary

• Despite an overall decrease since 2002 in the percent of adolescents with SUD, unmet need for treatment is high and has remained stable since 2002
• The number of facilities treating adolescents has decreased since 2002
• Although the data necessary to estimate adolescent “operating” treatment capacity are wanting, it is unlikely that the treatment system could accommodate all adolescents who need treatment
Discussion

• Why don’t we have the data necessary to better approximate substance abuse treatment “operating” capacity?

• Why are there unused “slots” if so many adolescents have a putative need for services?
  – Individual level variables (predisposing, enabling, and need related factors)
  – Systems factors (program, staffing, service or funding)

• If we could get the system operating at 100%, how could we increase availability—“optimal” treatment capacity—to meet needs?
Implications

• Need to increase detection of SUD among adolescents and expand the capacity of the substance abuse treatment system…SBIRT?

Integrated behavioral health care in medical settings

• Need to improve the quality of the substance abuse treatment system for adolescents…improved supply could increase demand
Directions for Future Research

• More/better data to estimate adolescent treatment capacity
• More sophisticated modeling to understand the contribution of the capacity gap and other individual-level factors (e.g., predisposing and enabling factors) to the treatment gap
• More studies on interventions to increase identification of SUD and access to adolescent substance abuse treatment as well as interventions to improve the quality of care provided
References


Contact email: americle@tresearch.org