

Assessing Individual Substance Use Based on Information from Multiple Data Sources

Lynn Wallisch PhD, Tom Bohman PhD, Kristin Christensen MSSW, Richard Spence, PhD
Addiction Research Institute, School of Social Work, University of Texas at Austin

Dena Stoner, Allen Pittman MSSW – Texas Department of State Health Services

Doris Chimera RN, MA, MHA – Harris County Hospital District; Britta Ostermeyer MD, Brian Reed MD – Baylor College of Medicine

Background and Relevance

- Accurate estimates of the kinds and amount of services needed are important for health care planning and monitoring.
- For a population with mental/behavioral health disorders, alcohol and drug (AOD) services should be made available, due to high likelihood of comorbidity.
- However, our recent evaluation of a program offering free health care and case management to a behavioral health population noted lower-than-expected use of available AOD services. Participants who could have benefited from these services may not have been optimally identified and referred by case managers.

Objective

This presentation discusses how different sources of information on participants' AOD use could have been triangulated to help identify more participants potentially in need.

Methods

- The Demonstration to Maintain Independence and Employment (DMIE) project recruited a sample of 1,616 outpatients from a large publicly-funded hospital district who were currently employed but had behavioral and physical disorders that put them at potential risk of disability, unemployment and reliance on federal benefits.
- Eligibility: age 21-60, currently working 40+ hrs/month, medically indigent, not receiving Medicaid or Social Security benefits.
- Participants had medical records ICD-9 diagnoses of either severe mental illness (schizophrenia, bipolar, major depression) or another mental/behavioral diagnosis plus a serious physical condition.
- Participants were randomized to intervention (N=904) and control (N=712) groups and were equivalent on demographic and other characteristics.

Substance Misuse in Medical Records

- Based on ICD-9 codes in participant medical records in the year prior to study entry, **12%** had alcohol or drug problems.

• Serious Mental Illness	9.3%
• Serious Mental Illness + AOD	1.7%
• Other Mental/Behavioral	78.7%
• Other Mental/Behavioral + AOD	6.1%
• Alcohol/Drug Diagnosis Alone	4.2%

Substance Misuse from Participant Surveys

Participants were surveyed at baseline (study entry), 12 months and 24 months.

- Do you have any substance (drugs or alcohol) problems (asked after 27 other mental and physical conditions - from World Health Organization HPQ scale): **10.0%**
- Substance misuse problems from BASIS-24 scale (how often had urge to drink/ take drugs; anyone talk to you about your use; try to hide your use; any problems from your use?) – percentage who endorsed any of the 4 problems: **16.3%**
- Percentage who reported having seen a substance abuse counselor in past 12 months: **4.2%**
- Percentage who had 5+ drinks on the same occasion on at least one day in past month (binge drinking): **15.7%**
- Percentage who had 5+ drinks on the same occasion on 5 or more days in past month (heavy alcohol use): **4.7%**
- Percentage who used MJ, cocaine, crack, methamphetamine, heroin or hallucinogens in past year: **8.1%**
- Percentage who misused prescription drugs in past year: **4.8%**

Participant Surveys - continued

- Percentage who reported two or more positive responses to UNCOPE screen (spent more time than intended; neglected responsibilities; wanted to cut down; friends/family objected to use; thought a lot about using; drank/used drugs to relieve emotional discomfort): **13.3%**

Substance Misuse from Case Manager Activity Reports

Case managers reported their activities with participants in the areas of health, employment, social services, counseling, etc.

- Over the two years of project services, case managers reported assisting 50 participants (**6%** of intervention group) in accessing AOD screening, assessment or treatment services.

Substance Misuse from Post-Intervention Interviews with Participants

After project services ended, intervention participants were interviewed by case managers.

- When queried about their use of, and perceived helpfulness of, a list of DMIE services, **39%** said they had used substance abuse treatment (and almost all of them found it helpful). This was a surprising number, in light of low usage reported by case managers and AOD providers.
- When asked about barriers to their ability to work, **27%** said that substance abuse was a potential barrier, although most said it didn't actually limit their ability to work. This is higher than the percentage that appeared to have substance problems based on medical records or survey reports.
- In open-ended comments about their health and work, about 5% of respondents mentioned a recent history of AOD.

Putting It All Together

- While some of the prevalence figures suggested by these different questions are within close range (e.g. 12% from medical records, 10% who endorsed the HPQ question, 16% positive on the BASIS questions, 13% who had substance problems as assessed by the UNCOPE), the overlap was not perfect. For example, of those positive on the BASIS, only 30% had a medical records diagnosis and only 60% were also positive on the UNCOPE.
- Combining responses across all questions would yield a wider estimate of the percentage with potential AOD misuse:
 - **23.5%** based on HPQ, BASIS, UNCOPE or visit to a counselor
 - **28.3%** based on the above OR a medical records diagnosis
 - **33.6%** based on the above OR other indicators (heavy alcohol use, illegal drugs, Rx misuse, case manager report, or mention of a current problem on post-intervention interview).

Discussion and Lessons Learned

There can be substantial differences in conclusions drawn from different sources. Differences may be due to the reporter, reference period, question format and context, social desirability, or change over time in respondents' perception/ motivation. Yet, including information from as many sources as available and later narrowing down based on more intensive questioning may be preferable to under-identifying individuals who potentially would benefit from help.

Some lessons for future studies of this type :

- Understanding how medical records diagnoses are made (by whom, when, and whether acknowledged by patient) would aid interpretation;
- Questions about substance use should be asked in different formats and contexts and at several time points over a long-term project;
- Apparently 'discrepant' responses should be followed up by more intensive questioning.