Measuring Prescription Drug Misuse in the National Survey on Drug Use and Health

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Presenter Disclosures

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- The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

- No relationships to disclose
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- The views expressed in this presentation do not necessarily reflect the official position or policies of SAMHSA or the U.S. Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.
Objectives

- Discuss public health importance of prescription drug misuse
- Discuss components of prescription drug misuse
- Discuss challenges in measuring prescription drug misuse in the United States
- Present methodological research findings to inform the redesign of the prescription drug modules in NSDUH

Supplemental information in handout
Misuse of Prescription Drugs Is Second Only to Marijuana Use in Prevalence in the U.S.

* Misuse; psychotherapeutics include pain relievers, tranquilizers, stimulants, and sedatives.

Source: SAMHSA, National Survey on Drug Use and Health, 2011.
Pain Reliever Dependence/Abuse and ED Visits Have Increased Since 2004

Thousands with Dependence/Abuse (Persons) or Emergency Department (ED) Visits

+ Number is significantly different from the number in 2010 at the .05 level.

Dependence or Abuse Source: SAMSHA, National Survey on Drug Use and Health, 2004-2010.
NSDUH Design

- Details at www.samhsa.gov/data/NSDUH.aspx
- Civilian, non-institutionalized population, aged 12+
- >60,000 respondents per year since 1999
- Representative nationally and in each state
- Face-to-face computer-assisted interview
- Sensitive questions are self-administered
- “Core” questions kept constant to permit measurement of trends
Measurement of Prescription Drug Misuse* in NSDUH

- Four therapeutic classes (excluding over-the-counter drugs)
  - Pain relievers
  - Tranquilizers
  - Stimulants
  - Sedatives

- Definition
  - “Not prescribed for you” or
  - “You took the drug only for the experience or feeling it caused”

*Also called “nonmedical” use in NSDUH reports and tables.
Measurement of Prescription Drug Misuse in NSDUH (continued)

- Lifetime misuse of specific prescription-type drugs
- Use of “pill card” booklets to facilitate identification/recall
- Respondents allowed to type in the names of “other” drugs in the relevant category that they have ever misused
- Focus is on misuse of any drugs in the overall category (e.g., any prescription pain reliever)
- NSDUH historically has kept the same list of specific prescription drugs to support trend analysis
Challenges in Measuring Prescription Drug Misuse

- Changes in drugs on the market/popularity of misused drugs
  - > 50% of stimulants and sedatives from the last NSDUH redesign (1999) discontinued/no longer legally available
  - Approved or emerging misused prescription drugs since 1999 not included in estimates, unless specified as “other” drugs
  - Risk of erosion of validity of trend data

- Complexity of the construct
  - Current NSDUH definition combines a behavior (not prescribed) and a motivation (for the experience or feeling it caused)

- Cognitive task for respondents
  - Have I ever used this/these drug(s)?
  - If so, have I used it when not prescribed or only for the experience or feeling it caused?
NSDUH Prescription Drug Module Redesign

- Misuse of specific prescription drugs in the past 12 months rather than lifetime
- Move methamphetamine out of the prescription stimulant section
- Use of electronic pill images (on-screen)
- Part 1: Update drug content (APHA presentation, 2009)
  - Drop discontinued drugs
  - Add increasingly important misused drugs
- Part 2: Assess questioning approach and format
  - Focus group
  - Usability testing
  - Cognitive interviews
Goals of Methods Studies

- **Focus group**
  - Obtain feedback from treatment providers about wording for misuse

- **Usability testing**
  - Test ease of navigating laptop computer screen layouts
  - Test use of on-screen images for prescription drugs
  - Test ability to answer questions based on hypothetical scenarios

- **Cognitive interviews**
  - Understand how participants interpret questions/terms
  - Understand the information (e.g., recall aids) or thought processes that participants use to arrive at an answer
  - Identify difficulties that participants have with questions/terms
  - Test revisions based on previously identified difficulties

- **Not to estimate prevalence**
Focus Group Highlights (n=9)

- 90-minute session; mix of provider characteristics (handout)
- Misuse of sedatives was less common in their practices
- “Not prescribed for you”
  - Straightforward, applicable to all age groups and drug types
- “Only for the experience or feeling it caused”
  - Applicable to pain relievers and tranquilizers
    - “Nothing matters” “In harmony with the universe”
  - Less applicable to prescription stimulants
    - Motivation often is a desired outcome rather than a “high”
- Does not cover overuse/continued use of pain relievers
  - Medical use → Overuse → Continued use past initial problem
  - Especially applicable to adults

Medical use → Overuse → Continued use past initial problem
Usability Testing Highlights (n=8)

- No major usability issues identified
- Screen layouts were acceptable (screen shot and quotes in handout)
- No strong preference for image placement (relative to text)
  - Preference for pictures above text: 2
  - Preference for pictures below introductory text: 3
  - No preference: 3
- No strong preferences for wordings for misuse (handout)
  - Comments about repetitiveness of the task rather than wordings
  - Some preferences for wording that included 3 criteria:
    - Without a prescription of your own,
    - In greater amounts, more often, or longer than you were told to take it, or
    - Just for the effect it had on you – not for its intended medical use.
Preparation of Cognitive Interview Instrument

- Concerns about repetitive nature of criteria across multiple drugs
  - 39 pain relievers, 18 tranquilizers, 23 stimulants, 16 sedatives
- Split up any use in past 12 months and misuse (if applicable)
- Question about any lifetime use (for overall category) if no past year use reported
- Follow-up questions about misuse of drugs if any use reported
- “Any use” adds another denominator for estimating misuse
Please look at the names and pictures of the pain relivers shown below.

In the **past 12 months**, which, if any, of these pain relievers have you used?

To select more than one drug from the list, press the space bar between each number you have typed. When you have finished, press [ENTER].

- 1. OxyContin
- 2. Percocet
- 3. Percodan
- 4. Tylox
- 5. Oxycodone (generic)
- 95. I have not used any of these pain relievers in the past 12 months
Preparation of Cognitive Interview Instrument (continued)

- Revised wording for misuse
  - Use “in any way a doctor did not direct you to use it/them”

- Introduction gave examples of misuse (if use had been reported)
  - Using it without a prescription of your own
  - Using it in greater amounts, more often, or longer than you were told to take it
  - Using it in any other way a doctor did not direct you to use it

- “Decomposition” questions to identify specific ways of misuse in the past 12 months
In the past 12 months, did you use Percodan in any way a doctor did not direct you to use it?

Percodan

Press [F2] to see and hear these ways again.

1. Yes
2. No
Cognitive Interview Methods

- Recruitment of adults and adolescents in Chicago, DC, and NC
- Up to 1 hour interview
- Participants administered a test instrument on laptop in private
- RTI interviewers administered probes based on answers (examples in handout)
- Any indication of a problem with the instrument was noteworthy
- Revisions tested in subsequent rounds
Cognitive Interview Participant Characteristics: Prescription Drug Testing Phase (n=40)

**Location**
- Chicago: 18
- DC: 10
- NC: 12

**Age**
- 12 to 17: 10
- 18 or Older*: 30
*Only adults in first interview round (n=16)

**Gender**
- Male: 22
- Female: 18

**Recruitment Source**
- General Population*: 13
- Substance Abuse Treatment: 27
*Only gen pop in third interview round (n=12)
Cognitive Interview Participant Characteristics: Prescription Drug Testing Phase (continued)

Number Reporting Past Year Use

<table>
<thead>
<tr>
<th></th>
<th>Pain Relievers</th>
<th>Stimulants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Past Year Misuse*</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>Past Year Use but No Misuse</td>
<td>9</td>
<td>13</td>
</tr>
</tbody>
</table>

*Includes persons who used some drugs as directed but misused others.

NOTE: Prescription drug questions were included in a second phase of cognitive interviewing but the focus in Phase 2 was on testing other sections in the instrument.
Identification of Prescription Drugs

- Pictures more helpful for stimulants than for pain relievers
  - More nonusers and less name recognition for stimulants
  - (For stimulants) “The pictures and the words were helpful. The words were hard to understand ’cause those were really big words.”
- Periodic reminders that actual drugs may look different from pictures

NOTE: Numbers include feedback from participants who were nonusers
Performance of Misuse Wording

- **Examples among persons who did not report misuse:**
  - “The [doctor] prescribed them and I took one, maybe two.”
  - “Take one [every] 4-6 hours as needed and that is how I used it.”
  - “I took it as prescribed but I lowered the dose… I didn’t like the way it made me feel. House could have burned down and I would have been with it.”
  - Adolescent participant reported use of stimulant as prescribed

- **Examples among persons who reported misuse:**
  - “I took someone else’s prescription.”
  - “My friend had some… We went to a party afterward.”
  - “When I had the prescription, I took more than I was supposed to. I took it because I was in pain.”
  - “I was snorting it.”
  - “I last took with alcohol.”
Misusers typically could answer without being reminded of ways of misuse (but not always)

- “I do not need to see the ways because it included that way I used it. I didn’t have a prescription for it.”
- Adolescent participant did not consider use in greater amounts to be misuse until after reviewing the examples

Some “false positive” reports of misuse

- Confusion about over-the-counter Tylenol® vs. Tylenol® with codeine
- Administration in hospital (injection) but no prescription for pill form
- Interpretation of taking less than prescribed as “not directed by a doctor”

Use of drugs obtained outside U.S. without a prescription

- May or may not be reported as “not directed by a doctor”
Decomposition of Ways of Misuse

- Which of these statements describe your use of prescription pain relievers at any time in the past 12 months? (>1 response allowed)

- Overuse shown as a single response option in Round 1
  - At least once, I used prescription pain relievers in greater amounts, more often, or for longer than it was prescribed.
  - Misinterpretation that respondent needed to have done all three

- Revision: Split overuse into three separate response options

- Use “in some other way a doctor did not direct me to use…”
  - “I did a half of one that way [snorting], and it really messed my nose up.”
  - “One I injected instead of by mouth.”
Strengths, Limitations, Other Issues

**Strengths**
- Iterative process with multiple methodological approaches
- Mix of participants, locations (for cognitive interviews)
- Users and non-users for cognitive interviews

**Limitations**
- Small convenience samples; not intended to represent the population
- More detail for pain relievers than stimulants (esp. for treatment)
- Varying degrees of detail in participants’ responses

**Other**
- Qualitative focus
- Salience of misuse criteria for treatment clients, but criteria also were understood outside of treatment
Next Steps

- National field test with redesigned prescription drug sections (late 2012)
  - Probability sample with 2,000 interviews
  - Quantitative data
    - Performance of the questionnaire (e.g., timing)
    - Prevalence of use, misuse, components of misuse, motivations

- “Dress rehearsal” for all new procedures, questionnaire (2013)

- Redesigned prescription drug sections in main survey (2015)

Final redesigned questions will not measure misuse perfectly, but will represent an improvement
For More Information

- Slides and handouts available through the online program for the 2009 Annual Meeting at [www.apha.org](http://www.apha.org)

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Questions?