Assessing Opioid Misuse and Overdose Using Prescription Drug Monitoring Programs (PDMP) and Other Data Sources

NPN Conference
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September 12, 2017
Overview of SAMHSA’s Prevention Portfolio
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Prevention Planning Using Prescription Drug Monitoring Programs (PDMP) and Other Data Sources: Lessons Learned
Sandeep Kasat, Associate Director of Epidemiology, CAPT Core
Alyssa O’Hair, Regional Coordinator, CAPT West Resource Team

Using Prescription Monitoring Program and Other Data for Prescription Drug and Opioid Misuse Prevention in Minnesota
Elisabeth Atherly, Evaluation Consultant, Alcohol and Drug Abuse Division, Minnesota Department of Human Services
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Overview of the Center for Substance Abuse Prevention’s (CSAP’s) Grant Portfolio

CSAP currently has four opioid related grant programs:

- **Partnerships for Success**
- **Prescription Drug Overdose (Partnership with CDC)**
- **State Targeted Response (STR): partnership with Center for Substance Abuse Treatment (CSAT) and Center for Behavioral Health Statistics (CBHSQ)**
- **Strategic Prevention Framework - Prescription Drugs (SPF-Rx)**
Partnerships for Success

Overview:

- Prevent the onset and reduce the progression of substance abuse, prioritizing underage drinking among people age 12 – 20, prescription drug misuse and abuse among people age 12 – 25, or both
- Reduce substance abuse-related problems
- Strengthen prevention capacity and infrastructure at the state and community levels
- Leverage, redirect, and align statewide funding streams and resources for prevention
Partnerships for Success

- Number of current awards: 69
- Anticipated award amount: $318,543 to $1,230,000 per year
- Length of project: 5 years
Prescription Drug Overdose

Overview:

- Implements overdose death prevention strategies, such as naloxone distribution and the purchase of naloxone for first responders
- Raises awareness among pharmaceutical and medical communities on the risks of overprescribing
Prescription Drug Overdose

- Number of awards: 12
- Estimated award amount: Up to $1,000,000 per year
- Length of project period: Up to 5 years
State Targeted Response

Overview:

• Aims to address the opioid crisis by increasing access to treatment, reducing unmet treatment need, and reducing opioid overdose related deaths through the provision of prevention, treatment and recovery activities for opioid use disorder (OUD)
State Targeted Response

- Total available funding: $485,000,000 per year
- Number of awards: 59
- Length of project: Up to 2 years
SPF Rx

- Raises awareness of the dangers of sharing medications, and work with pharmaceutical and medical communities on the risks of overprescribing to young adults
- Implements prescription drug misuse prevention activities and education to schools, communities, parents, prescribers, and their patients
SPF Rx

- Aims to assist grantees in developing capacity and expertise in the use of data from state-run Prescription Drug Monitoring Programs (PDMPs)
- SPF Rx builds on the established SPF-based state and tribal prevention infrastructures
- The focus of SPF Rx is on prescription drug misuse among youth ages 12-17 and adults 18 years of age and older
SPF-Rx

• Number of awards: 25
• Award amount: Up to $371,616
• Length of project period: Up to five years
SPF Rx Cross-Site Evaluation Questions

1. Did SPF Rx implementation improve prescription drug outcomes over time?

2. How was SPF Rx funding leveraged with other funding to address prescription drug misuse and opioid overdose?
SPF Rx Cross-Site Evaluation Questions

3. What factors accounted for variation in performance on grantee- and community-level outcomes across grantees?

4. What are the barriers and facilitators associated with SPF Rx implementation?
Prevention Planning Using Prescription Drug Monitoring Programs (PDMP) and Other Data Sources: Lessons Learned

Sandeep Kasat, Associate Director of Epidemiology, CAPT Core
Alyssa O'Hair, Regional Coordinator, CAPT West Resource Team
The Opioid Crisis: Prescription Opioids and Heroin Overdose (OD) Death Trends

Prescription Opioids and Heroin OD Deaths per 100K, CDC Wonder

- Blue line: Prescription opioids
- Red line: Heroin

Rate per 100K

Why Look at PDMPs?

• About two-thirds of all opioid overdose deaths are related to prescription opioids

• PDMPs have been consistently tracking opioid prescriptions for years

• PDMP data strengths:
  ▪ Available in “real time” (compared to other health data)
  ▪ Rates by state, county, region/city, and location over time
  ▪ Available by drug type, patient, prescriber, and pharmacy
PDMP Data in SAMHSA Initiatives

• SPF Rx
  ▪ Use PDMP and epidemiological data to identify prevalence; identify and address PDMP data gaps

• State Targeted Response to the Opioid Crisis Grants (Opioid STR)
  ▪ Use opioid overdose, PDMP, and other epidemiological data to conduct needs assessment; enhance use of PDMPs

• Grants to Prevent Prescription Drug/Opioid Overdose-Related Deaths (PDO)
  ▪ Needs assessment of prescription drug/opioid overdose issue to identify areas/populations of greatest need
Looking at PDMP and Other Data Sources to Understand the Opioid Crisis
Prescribing Rates vs. Overdose Deaths in 2015 (PDMP and CDC Wonder)

OD Deaths and Opioid Prescribing by Age in 10 PBSS States*

*http://www.pdmpassist.org/content/prescription-behavior-surveillance-system
Excessive Dosage and Overdose Deaths by County, California 2013

Percent of residents receiving >100 MME (Source: CA PDMP)

Prescription opioid-involved OD deaths per 100K (Source: CDC Wonder)
The Opioid Crisis: Overdose Deaths and Misuse Trends

### Prescription Opioids and Heroin OD Deaths per 100K, CDC Wonder

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate Per 100K</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
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</tr>
<tr>
<td>2003</td>
<td>1.6</td>
</tr>
<tr>
<td>2007</td>
<td>1.9</td>
</tr>
<tr>
<td>2011</td>
<td>4.6</td>
</tr>
<tr>
<td>2015</td>
<td>7.0</td>
</tr>
</tbody>
</table>

### Past Month Non-medical Prescription Painkillers and Heroin Use, NSDUH

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>1.9</td>
</tr>
<tr>
<td>2005</td>
<td>2.0</td>
</tr>
<tr>
<td>2008</td>
<td>2.1</td>
</tr>
<tr>
<td>2011</td>
<td>1.7</td>
</tr>
<tr>
<td>2014</td>
<td>1.6</td>
</tr>
</tbody>
</table>
## Making Sense of Data Findings

<table>
<thead>
<tr>
<th>Observation</th>
<th>Possible Reasons</th>
<th>Possible Solutions</th>
</tr>
</thead>
</table>
| Opioid prescribing rate age categories do not match with overdose (OD) age categories for older ages | • Opioid prescribing rate may not be the best indicator for predicting OD deaths  
• Legitimate opioid use more common in older adults                           | • Look at doctor shopping/multiple provider episodes                              
• Look at additional indicators like patient diagnosis                          |
| High dosage rate counties do not match with high OD rate counties            | • Age/gender may be playing a confounding role                                   | • Look at demographic distribution across counties                                  
• Obtaining prescriptions from a doctor/pharmacy in adjacent county           |                                                                                  | • Look at additional indicators (e.g., patient diagnosis, access to care)          |
|                                                                             | • Access to emergency room (ER)/hospital care in a county different than the prescription fill |                                                                                     |
| OD deaths do not match opioid misuse rates                                   | • Past-month opioid/heroin misuse may not be the best indicator for predicting OD deaths | • Look at additional indicators (e.g., high dosage prescriptions, dangerous combinations, ER admissions) |

Each data source only gives you one piece of the puzzle. Multiple data sources/indicators can help you see the bigger picture.
Limitations of PDMP Data

• Access to data is limited by each state’s, tribe’s, or jurisdiction’s legislation

• Race and ethnicity not recorded on patient’s prescription

• Does not include patient diagnosis (for example, cancer) or physical specialty (for example, pain management clinic)
Summary

• PDMP data is useful, but PDMP data alone may not be helpful in identifying prevention needs.

• Looking at additional data sources (e.g., overdose, hospitalization, treatment, misuse) can help you identify priorities.

• PDMP data can be useful in identifying prescribers and pharmacies that should be involved in prevention efforts.
Additional Data Sources

- Center for Disease Control and Prevention Multiple Cause of Death (CDC WONDER)*
- Agency for Healthcare Research and Quality’s (AHRQ) Healthcare Cost and Utilization Project (HCUP)*
- SAMHSA’s Treatment Episode Dataset (TEDS)*
- Center for Medicare and Medicaid Services Medicare Part D Prescriber Data*
- SAMHSA’s National Survey of Drug Use and Health (NSDUH)*
- Federal Bureau of Investigation Uniform Crime Reporting (UCR) System
- American Association of Poison Control Center’s National Poison Data System (NPDS)

* Available on CAPT’s Substance Abuse Prevention Planning and Epidemiology Tool (SAPPET) at www.sappet-epi.com (password: sappet)
CAPT Resources on Opioid-related Prevention Planning

• Data System
  ▪ Substance Abuse Prevention Planning and Epidemiology Tool (SAPPET)

• Archived Webinars
  ▪ Using Prescription Drug Monitoring Program Data in Prevention Planning
  ▪ Examples of Logic Models for Addressing Opioid-related Overdose Deaths

• Products
  ▪ Preventing prescription drug misuse: factors and strategies
  ▪ Opioid-related National Data Sources and Indicators
  ▪ Preventing Heroin Use: Facts, Factors, and Strategies
Thank you!

For more information, please contact:

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Using Prescription Monitoring Program and Other Data for Prescription Drug and Opioid Misuse Prevention in Minnesota

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Strategic Prevention Framework (SPF) Rx and State Targeted Response (STR) Prevention

- Partnering with Board of Pharmacy on statewide provider education
- Funding communities to implement SPF to address Rx drug misuse and illicit opioid use
Prioritization Process

• Review of potential data sources and indicators: years available, geographic level, strengths, limitations

• State Epidemiological Outcomes Workgroup vote on final three indicators
  • Rate of opioid prescriptions filled (Prescription Monitoring Program)
  • Rate of opioid overdose deaths (vital statistics)
  • Percent of youth reporting past-year prescription pain reliever misuse (Minnesota Student Survey)
## Minnesota Prescription Monitoring Program Data

### Strengths
- Available at the county level
- Data exchange with other states
- Use of PMP by providers and pharmacists is growing
- Data on 20 types of opioid prescriptions
- Tracks multiple prescriber and dispenser episodes

### Limitations
- County of residence on file with pharmacy not always up to date
- No data from treatment providers
- No data from non-Indian Health Service tribal providers
- Limited demographic data
- Data from 2014 and earlier no longer available
### Other Data Sources Used

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>INDICATORS</th>
<th>DEMOGRAPHICS</th>
<th>GEOGRAPHIC LEVEL</th>
</tr>
</thead>
</table>
| **Minnesota Student Survey**                | • Any Rx misuse  
• Pain reliever misuse  
• Heroin use  
• Rx misuse risk  
• Rx misuse disapproval | • Grade  
• Sex  
• Race/ethnicity  
• Sexual orientation  
• Gender identity | School district               |
| **Minnesota Survey of Adult Substance Use** | • Pain reliever misuse  
• Heroin use | • Age  
• Sex  
• Race/ethnicity  
• Sexual orientation | Region                              |
| **Vital Statistics/Death Certificate Data** | • Rx opioid overdose deaths  
• Heroin overdose deaths | • Age  
• Sex  
• Race/ethnicity | Zip code                              |
## Other Data Sources Used

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</tr>
</thead>
</table>
| Medicaid Claims Data                               | • Neonatal abstinence syndrome  
• Maternal opioid use (pain relievers, methadone, buprenorphine) | • Age                        | Zip code         |
|                                                    |                                                                             | • Race/ethnicity              |                  |
| Drug and Alcohol Abuse Normative Evaluation System | • Admissions for heroin as primary-tertiary substance of abuse  
• Admissions for other opioids                      | • Age                        | County           |
|                                                    |                                                                             | • Sex                         |                  |
|                                                    |                                                                             | • Race/ethnicity              |                  |
| National Emergency Medical Services Information    | • EMS runs involving overdose  
• EMS runs involving naloxone                                  | • Age                        | Zip code         |
| System*                                            |                                                                             | • Sex                         |                  |
|                                                    |                                                                             | • Race/ethnicity              |                  |
Challenges and Opportunities

• Enhance collaboration between tribal nations and Board of Pharmacy

• Collect data on misuse of buprenorphine

• Evaluate efforts on-reservation, off-reservation among tribal youth, and off-reservation among non-tribal youth

• Substance Use in Minnesota: [www.sumn.org](http://www.sumn.org)

• Minnesota Department of Health, Opioid Dashboard: *Coming soon!*
Thank you!

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Behavioral Health is Essential To Health

Prevention Works

Treatment is Effective

People Recover