State Epidemiology Outcomes Workgroup (SEOW)

MARYLAND STRATEGIC PREVENTION FRAMEWORK
Advisory Council Meeting
31 January 2013

SEOW Director, Linda Simoni-Wastila
lsimoniw@rx.umaryland.edu
Overview

• SEOW
  – Who We Are and Mission

• Data
  – NSDUH: National Survey on Drug Use and Health
  – HSCRC: Health Services Cost Review Commission
  – SMART: Substance Misuse and Abuse Reduction Team
  – MPC: Maryland Poison Center
  – FARS: Fatal Accident Reporting System

• Focus on 5 Areas:
  – Opioid Analgesics
  – Sedative-Hypnotics
  – Marijuana
  – Emerging Substances
  – Alcohol
The Team

• Partnership with ADAA based at the University of Maryland Baltimore School of Pharmacy
  – Pharmaceutical Health Services Research (PHSR) Department
  – Pharmaceutical Research Computing
  – Maryland Poison Center

• The Team
  – Linda Simoni-Wastila, BSPharm, PhD (PHSR)
  – Wendy Klein-Schwartz, PharmD (MPC)
  – Corinne Woods, PharmD (PRC-Data Coordinator)
  – Jeanne Yang (PRC-Programmer)
  – Jenny Wei, PhD (PHSR-Post-Doctoral Fellow)
  – Patience Moyo (PHSR-Doctoral Student)
  – Jane Huang (PHSR-Doctoral Student)
  – Pharmacy Students
SEOW: Mission

The Maryland SEOW monitors the use of alcohol, tobacco, and other drugs and the consequences of such use in order to identify and prioritize the prevention and treatment needs of the state. To achieve this end, the Maryland SEOW oversees the collection, interpretation, and dissemination of statewide data that quantifies substance use and its consequences in the broader context of behavioral health for Maryland.

The SEOW utilizes data to:

- Determine prevention and treatment priorities at the state, county, and local levels
- Identify, monitor, and interpret key indicators of use and consequences of tobacco, alcohol and substance use
- Support the state and jurisdictions as they assess need, develop interventions, and evaluate prevention and treatment efforts

[http://www.pharmacy.umaryland.edu/programs/seow/](http://www.pharmacy.umaryland.edu/programs/seow/)
OPIOID ANALGESICS
NSDUH: Nonmedical Use of Pain Relievers in Past Year
Age 12+ years, MD vs US

% Reporting Use

Years

<table>
<thead>
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<th>MD</th>
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<td>2011</td>
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NSDUH: Maryland Sub-State Regions

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<td>Washington</td>
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<td></td>
<td>Queen Anne's</td>
<td>Somerset</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Talbot</td>
<td>Wicomico</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Worcester</td>
<td></td>
</tr>
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</table>
NSDUH: 2008-2010 Nonmedical Use of Pain Relievers in Past Year

% Reported Use

12+ | 12 to 17 | 18 to 25 | 26+

Maryland
Anne Arundel
Baltimore City
Baltimore County
Montgomery
North Central
Northeast
Prince George's
South
West

2/1/2013
HSCRC: Changes in Opioid-Related Inpatient and ED Visits from 2008 to 2011

Percentage Change in Inpatient Visits

<table>
<thead>
<tr>
<th>County</th>
<th>Percentage Change</th>
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<tbody>
<tr>
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<td>Wicomico</td>
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<tr>
<td>Washington</td>
<td>0.74</td>
</tr>
<tr>
<td>Talbot</td>
<td>0.50</td>
</tr>
<tr>
<td>Somerset</td>
<td>0.14</td>
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<tr>
<td>St Marys</td>
<td>0.26</td>
</tr>
<tr>
<td>Queen Annes</td>
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<tr>
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<tr>
<td>Kent</td>
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<td>Howard</td>
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<td>0.72</td>
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<td>Garrett</td>
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<td>Frederick</td>
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<td>Charles</td>
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<tr>
<td>Carroll</td>
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<tr>
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<tr>
<td>Baltimore County</td>
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<tr>
<td>Allegany</td>
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<tr>
<td>Maryland Overall</td>
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Percentage change in ED Visits

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<tr>
<td>Washington</td>
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<td>Talbot</td>
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<td>St Marys</td>
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<td>Prince Georges</td>
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<td>Howard</td>
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<tr>
<td>Harford</td>
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<tr>
<td>Maryland Overall</td>
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SMART: Maryland Admissions for Prescription Opioid-Related Treatment by County of Residence, FY 2012*

* Data as of November 2012
SMART: Maryland Admissions for Opioid-Related Treatment, FY 2008-2012*

* Data as of November 2012
SMART: Proportion of Total Admissions by Primary Substance Problem, FY 2008-2012*

* Data as of November 2012
SEDATIVE-HYPNOTICS
HSCRC: Inpatient Admissions and ED Visits: Sedative-Hypnotics

• In 2011, 5062 inpatient admissions and 1591 ED visits related to sedative-hypnotics

• Between 2008 and 2011
  – Inpatient sedative-hypnotic-related hospital admissions increased 0.2%
    • Largest increases in Kent County (0.5%) and Allegany County (0.6%)
  – ED visits increased <0.1%
HSCRC: 2011 Sedative-Hypnotic-Related Inpatient Admissions

Percentage of Inpatient Admissions with Sedative-Hypnotic-Related Diagnosis:
- Blue: 0.29 - 0.42
- Green: 0.43 - 0.68
- Light Green: 0.69 - 0.90
- Yellow: 0.91 - 1.13
- Orange: 1.14 - 1.33
- Red: 1.34 - 1.67

Data as of November 2012

2/1/2013
SMART: Proportion of Total Admissions with Benzodiazepines as Primary Substance, FY 2008-2012*

* Data as of November 2012
SMART: County of Residence Among Patient Admissions for Benzodiazepine Related Treatment in FY 2012*

* Data as of November 2012

2/1/2013
NSDUH: Marijuana Use in Past Month Age 12+ years, MD vs US

% Reporting Use

03 04 05 06 07 08 09 10 11

US

MD

Years

2/1/2013
NSDUH: Perceptions of Great Risk of Smoking Marijuana Once a Month Age 12+ years, MD vs US

% Reporting Use

- US
- MD

Years: 03 04 05 06 07 08 09 10 11

Values:
- U.S.: 39.1, 39.7, 39.0, 39.2, 39.6, 37.9, 36.1, 33.6, 32.3
- MD: 35.6, 39.7, 39.0, 38.9, 38.9, 36.3, 35.1, 33.0, 32.5

2/1/2013
NSDUH: Age 12+ years, Use vs Perceptions of Great Risk of Smoking Marijuana Once a Month, MD
NSDUH: Age 12-17 years, Use vs Perceptions of Great Risk of Smoking Marijuana Once a Month, MD

Perceptions of Great Risk of Smoking Marijuana Once a Month
Marijuana Use in Past Month
Marijuana Use in Past Year

% Reporting Use

03 04 05 06 07 08 09 10 11
Years

0 5 10 15 20 25 30 35 40
% Reporting Use

14.8 15.1 14.5 12.3 12.4 12.8 13.4 13.7 13.2
Marijuana Use in Past Year

7.87 7.42 6.88 5.63 5.78 6.26 6.86 7.07 6.12
Marijuana Use in Past Month

30.9 35.6 35.2 33.0 33.5 33.7 31.9 26.5 26.1
Perceptions of Great Risk of Smoking Marijuana Once a Month
NSDUH: Age 18-25 years, Use vs Perceptions of Great Risk of Smoking Marijuana Once a Month, MD

Perceptions of Great Risk of Smoking Marijuana Once a Month
Marijuana Use in Past Month
Marijuana Use in Past Year

% Reporting Use

Years

03 04 05 06 07 08 09 10 11

0 5 10 15 20 25 30 35

30.3 29.9 28.4 28.1 30.4 28.6 28.9 30.9 31.4

22.5 25.9 25.4 24.6 24.1 21.4 20.6 19.01 17.77

19.43 18.05 13.86 13.36 15.86 16.42 16.28 16.8 16.9
2008-2010 Perceptions of Great Risk of Smoking Marijuana Once a Month

% Reported Use

12 to 17
18+

Maryland
Anne Arundel
Baltimore City
Baltimore County
Montgomery
North Central
Northeast
Prince George's
South
West
SMART: Maryland Admissions for Marijuana/Hashish Treatment, FY 2008-2012*

* Data as of November 2012
SMART: Maryland Admissions for Marijuana/Hashish Treatment by County of Residence, FY 2012*

* Data as of November 2012
EMERGING SUBSTANCES
What is “Spice?”

- Synthetic marijuana (cannabinoids)
- Typically contains several different ingredients
  - Ingredients vary in potency, but are much more potent than THC
- Smoked like marijuana
- Adverse effects have been reported, including dysrhythmias, suicidal ideation, psychosis, and convulsions
Calls to MPC for Spice (Oct 2010 through 2012)

- DEA emergency scheduling of synthetic marijuana
- Federal Drug Policy Amendment

2/1/2013
What are “Bath Salts?”

- **Stimulants**
  - Effects similar to amphetamine and cocaine

- **Substituted Cathinones**
  - Including methylenedioxypyrovalerone (MDPV)
  - Mephedrone and methylone

- Commonly swallowed or snorted, but can also be smoked or injected

- Case reports suggest it may cause nausea, palpitations, violent behavior, paranoia, kidney and liver failure, suicide, and more
Calls to MPC for Bath Salts (2011 through 2012)

- DEA emergency scheduling of bath salts
- Federal Drug Policy Amendment
ALCOHOL
NSDUH: Past-Month Alcohol Use Age 12+ Years, MD vs US

% Reporting Use

<table>
<thead>
<tr>
<th>Year</th>
<th>US</th>
<th>MD</th>
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<td>2005</td>
<td>51.1</td>
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<tr>
<td>2011</td>
<td>51.8</td>
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Years

2/1/2013
NSDUH: Past-Month Alcohol Use Among Underage (Age 12-20) Drinkers, MD vs US

% Reporting Use

2003 2004 2005 2006 2007 2008 2009 2010 2011

US

MD
2008-2010 Past-Month Alcohol Use

% Reported Use

- 12 to 20
- 18+

Maryland
Anne Arundel
Baltimore City
Baltimore County
Montgomery
North Central
Northeast
Prince George's
South
West
NSDUH: Past-Month Binge Drinking Age 12+ Years, MD vs US

% Reporting Use

Years

03 04 05 06 07 08 09 10 11

US
MD

2003 20.7 19.7 20.0 20.2 21.1 22.1 20.9 20.2 20.9

2004 21.7 20.0 20.2 21.1 22.1 20.9

2005 22.7 22.7 22.8 23.2 23.3 23.5 23.4 22.9
NSDUH: Past-Month Binge Drinking Among Underage (12-20) Drinkers, MD vs US

% Reporting Use

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<tr>
<td>2010</td>
<td>16.3</td>
<td>14.6</td>
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</table>
NSDUH: Past-Month Binge Drinking Age 18-25 Years, MD vs US

% Reporting Use

- US
- MD

Years

- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011

- 41.3
- 41.4
- 41.5
- 42.0
- 42.0
- 41.4
- 41.4
- 41.2
- 40.2

- 39.8
- 37.6
- 37.3
- 37.5
- 40.2
- 40.6
- 36.7
- 36.1
- 39.6
2008-2010 Past-Month Binge Drinking

% Reported Use

- 12 to 20
- 18+
- 26+

Maryland
Anne Arundel
Baltimore City
Baltimore County
Montgomery
North Central
Northeast
Prince George's
South
West
HSCRC: Inpatient Admissions and ED Visits: Alcohol

• In 2011, 42,215 inpatient admissions and 26,659 ED visits related to alcohol

• Between 2008 and 2011
  – Inpatient alcohol-related hospital admissions increased 0.58%
    • Largest increases in Kent (2.2%), Carroll (1.5%), and Frederick (1.2%) counties
  – ED visits increased 0.18%
    • Largest increases in St. Mary’s (0.70%), Carroll (0.52%), and Worcester (0.51%) counties
SMART: Age Distribution of Patients Admitted for Alcohol Treatment*, FY 2008-2012

* One of three substance-abuse problems reported at admission.
SMART: Maryland Admissions for Alcohol Related Treatment by County of Residence, FY 2012*

* Data as of November 2012
Proximity of Alcohol-Related Fatal Crashes to Alcohol Outlets

Fatal Crashes Involving Alcohol Impaired Drivers, 2008-2011
State of Maryland

Crashes, 2008-2011
- Star: At Least One Driver Killed
- Circle: All Drivers Survived

Mean Number of Restaurants and Bars Within 5 Miles of Crash by County
- Yellow: 15 or Fewer Restaurants or Bars within 5 Miles of Crash
- Orange: 16 - 50
- Brown: 51 - 100
- Red: 101 - 150
- Pink: 151 or More

0 12.5 25 50 Miles
Summary

• Opioid Analgesics
  – Opioid analgesic use declining in US and MD
  – Opioid-related hospital inpatient admissions up 0.2%; ED visits up <0.1%
    • 2011 Hotspots: Prince Georges, Montgomery, Baltimore City, Worcester, Garrett
  – Heroin treatment admissions stable
  – Rx opioid/all opioid treatment admissions up from 15\%_{2008} to 33\%_{2012}

• Sedative-Hypnotics
  – Hospital admissions up 0.2%
    • 2011 Hotspots: Cecil and Alleghany
  – % Benzodiazepine treatment admissions/all treatment admissions inc from 0.68_{2008} to 1.16_{2012}
Summary

• Marijuana
  – Use declining in US and Maryland overall **BUT**
    • Among 12-17 year olds: Perception of great risk declined from 33% - 26%
    • Among 18-25 year olds: Perception of great risk declined from 26% to 17% **AND** both past year and past month use increased
  – Treatment admissions increasing

• Bath Salts and Spice
  – Keep on eye on trends
• Alcohol
  – Past-month use stable or declining (including underage drinkers)
    • Binge-drinking among underage drinkers down 3.3% since 2008
  – Binge drinking remains problem for 18-25 year olds (up 3.5% from 2010)
  – Alcohol-related hospital admissions increased 0.58%; ED visits increased 0.18%
  – Alcohol treatment admissions down or stable for all age groups