Data-Related Projects

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Overview of St. Louis County PDMP

• Local jurisdiction-based PDMP
• Began April 27, 2017, with 14 jurisdictions
• As of October 2019, includes 75 jurisdictions covering:
  – 85% of the state population
  – 94% of healthcare providers
• Includes schedule II-IV controlled substances
• Over 15,500 approved users
Overview of Data Reports

• Annual Reports
  – 2017 & 2018

• Quarterly Data Briefs
  – Q2 2017 – Q2 2019
  – Jurisdiction-specific reports

• Prescribing Summaries
  – First round to be released December 2019
  – Will be released quarterly
Logistics of Data Reports

- Receive monthly data extracts from vendor
- Extensive data cleaning conducted in R
- Data are analyzed in R
- Creating automated reports utilizing R & RMarkdown
Quarterly Data Briefs

• Original Format
  – 20+ pages (‘report’)
  – Data analyzed in Excel
  – Written in Word
  – Jurisdiction-specific
  – Time-consuming
  – Lots of information that wasn’t being leveraged quarterly

• New Format
  – 2 pages (‘brief’)
  – Data analyzed in R
  – Written in R & Word
  – Jurisdiction-specific
  – Less time intensive
  – More user-friendly
  – Actionable data on a quarterly basis
PDMP Brief – Q2 2019 – St. Louis County

The St. Louis County Prescription Drug Monitoring Program (PDMP) monitors the prescribing and dispensing of schedule II-IV controlled substances to assist in the identification and prevention of prescription drug misuse and abuse. The program’s goals are to 1) improve controlled substance prescribing, 2) inform clinical practice, and 3) reduce the number of people who misuse, abuse, or overdose.

The St. Louis County PDMP launched on April 25, 2017, with 14 jurisdictions participating in the initial implementation. Saint Louis County Department of Public Health (DPH) operates the PDMP on behalf of all participating jurisdictions. As of June 30, 2019, 72 jurisdictions have enacted legislation to participate in the St. Louis County PDMP.

As of 06/30/2019, there are over 15,000 approved users within the system. Figure 1 represents approved user counts for the total PDMP by quarter as well as the average number of patient searches performed per day. System utilization has increased as both the number of approved users and participating jurisdictions have increased. In Q2 2019, over 7,600 patient searches were performed daily by healthcare providers. Increasing utilization of the PDMP is a continued focus of DPH.

Opioid Dispensations

Across all age groups, opioids were the most frequently prescribed schedule II-IV controlled substance drug type. Opioids comprise ~40% of all controlled substances dispensed. Hydrocodone, oxycodone, and tramadol were the three most frequently prescribed opioids (over 82% of opioid prescriptions).

St. Louis County’s opioid dispensation rate was 558.6 per 1,000 population which is significantly lower than the total system (658.2 per 1,000 population).

Figure 3. Opioid dispensation rates per 1,000 by patient location.

Figure 4. Opioid dispensation rates per 1,000 by age and gender.

Opioid dispensions increase as patient age increases.

Females received higher rates of opioid prescriptions than males across most age groups as displayed in Figure 4.

Across both genders, St. Louis County residents aged 65+ received the highest rates of opioids compared to all other age groups – more than 1.3 opioid prescriptions per St. Louis County resident aged 65+.
Annual Report Content

• Participating jurisdictions
• Registration & system utilization
• Separate sections for drug categories
  – Opioids
    • Added buprenorphine section in 2018
  – Benzodiazepines
  – Stimulants
  – Unclassified
  – Zolpidem
  – Muscle Relaxants
Benzodiazepine Dispensations by Primary Ingredient
Stimulant Dispensation Rates

![Bar chart showing dispensation rates per 1,000 population by age group and gender.](chart.png)
Buprenorphine Prescribing

- Buprenorphine prescribing increased 40% in participating jurisdictions from 2017-2018
Prescribing Summary Process

• Automated in R
  – Data cleaning, analysis, and visualization
  – Output is individual PDF reports generated

• Delivery methods
  – Hosted within PDMP for providers with PDMP accounts
  – Mailed to providers without PDMP accounts
    • Quick guides about the PDMP and safer prescribing will be included

• Paired with education materials – Provider Toolbox
Prescribing Summary Metrics

- Provider & patient demographics
- Opioids
- Dangerous combinations
- Benzodiazepines
- Stimulants
- Other CS
Contact Information

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