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Opioid Prescribing Patterns in Minnesota and New Chronic Opioid Users: Recent Findings from the MN APCD

APCD Council Webinar

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Overview

Today's Presentation

- Background/Context
- Opioid Prescribing Patterns in MN
- Opioid New Chronic Users
- Discussion

Acknowledgements

- Analyses for this research were conducted by Mathematica Policy Research, Inc. (Deborah Chollet, PI)
- Funding for this effort came from the National Center for Injury Prevention and Control and the Center for Consumer Information & Insurance Oversight
- Dr. Jeff Schiff and colleagues at DHS developed the new chronic user measure and provided feedback on the study
- Input and feedback from MDH colleagues in Injury and Violence Prevention Section
- Stefan Gildemeister, MN State Health Economist, and I have given similar presentations in 2018 at NAHDO and MN Policy Conference, respectively

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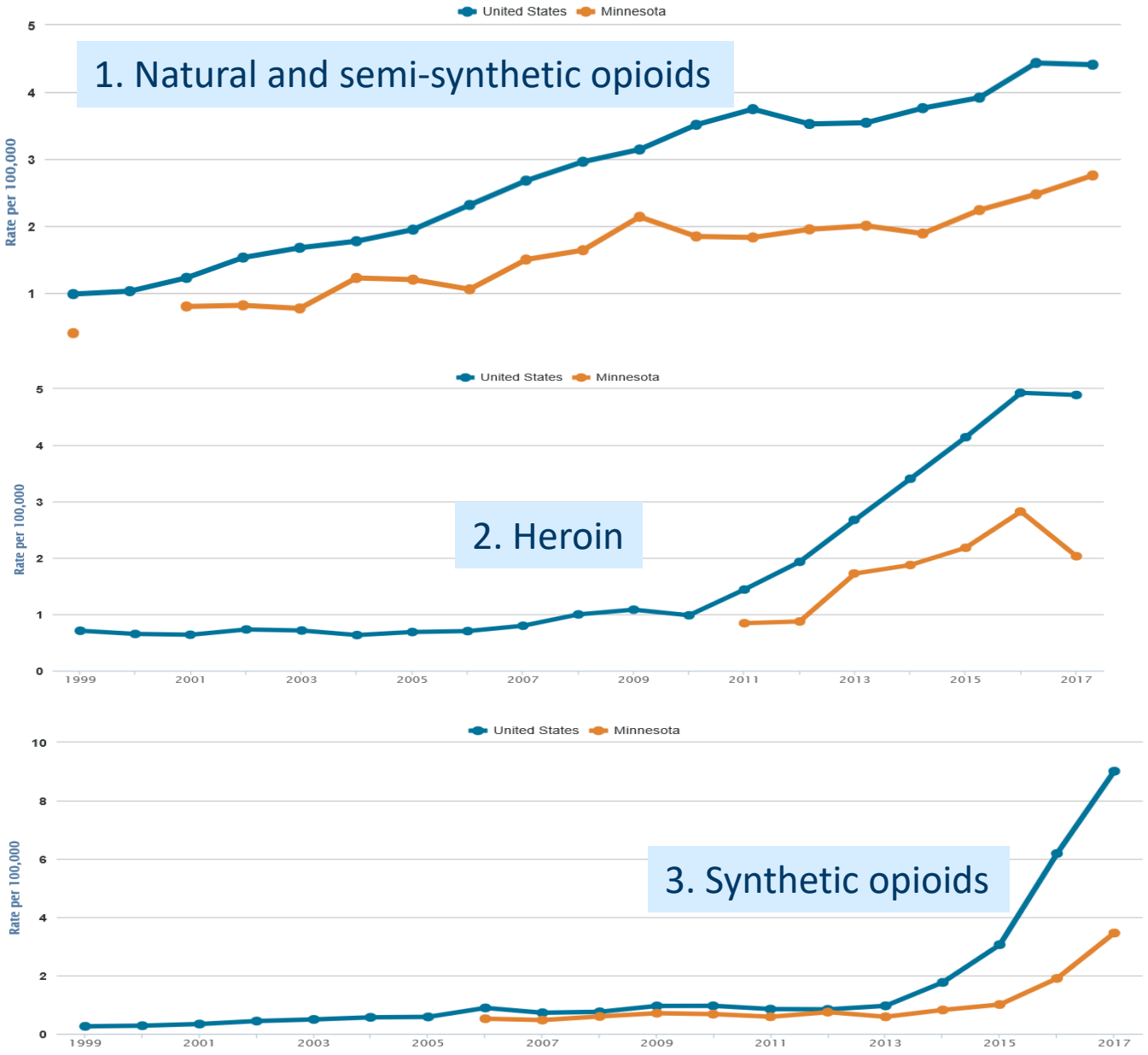
Opioid Use and Opioid-Involved Deaths in the U.S. and Minnesota

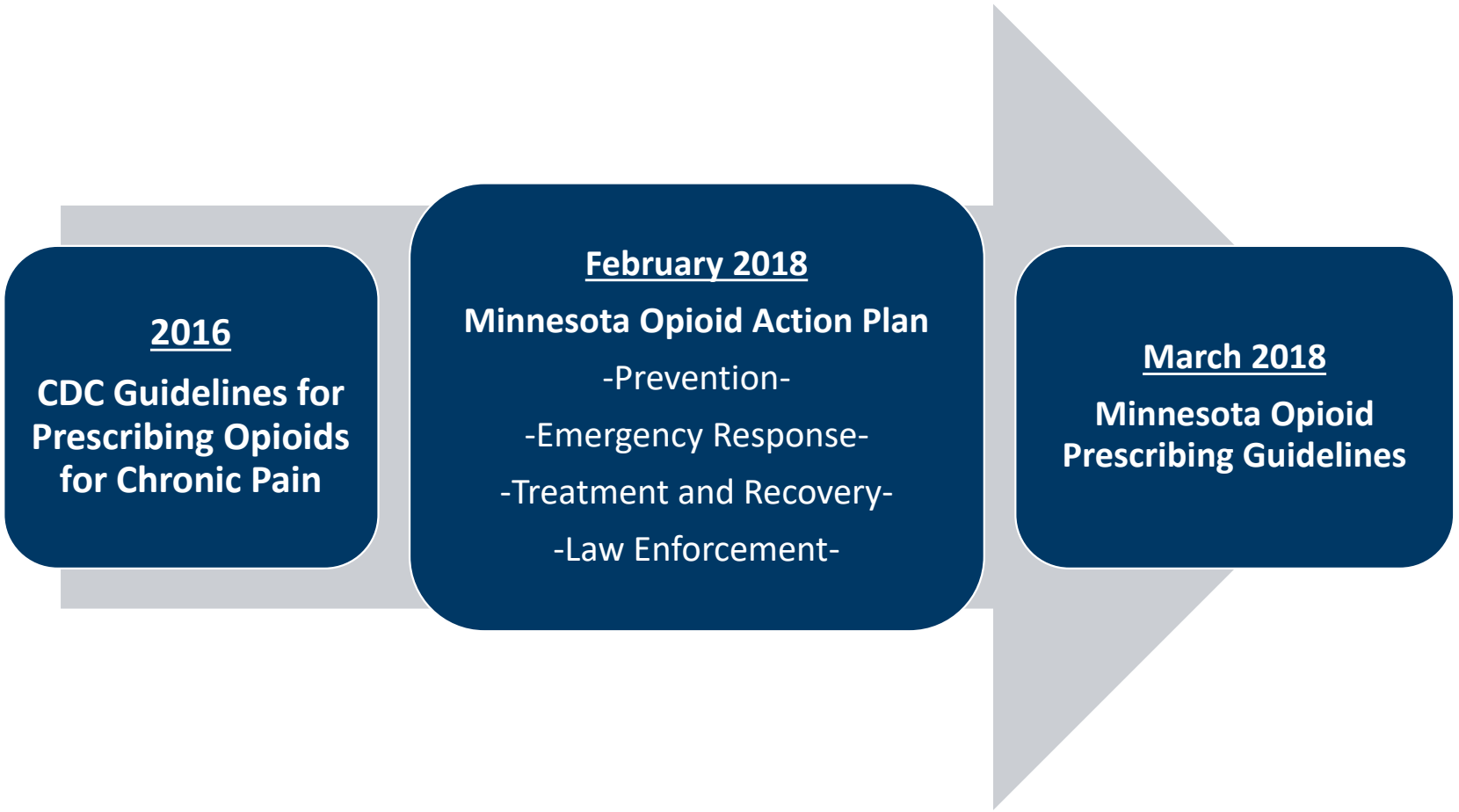


The Opioid Epidemic in **US** and **Minnesota**:

- Opioid-related poisoning deaths (rates per 100,000), 1999-2017
  - Rates in MN lower than US average, but follow similar pattern
- Opioids (prescription and illicit) were responsible for **401 deaths in MN in 2017**
  - About a 7-fold increase since 2000
  - About half of these deaths were from commonly prescribed opioids

Source: SHADAC analysis of Centers for Disease Control and Prevention, National Center for Health Statistics via CDC WONDER Database, State Health Compare, University of Minnesota, statehealthcompare.shadac.org, Accessed February 15, 2009

Study Context



Ongoing

- Legislative deliberations
- Available data include:
  - Mortality
  - Pharmacy (dispensed volume/rates)
  - Out-of-home placements of children
  - Opioid-related arrests

Drawing a More Comprehensive, Actionable Picture

- Gaps in our knowledge:
  - Baseline of opioid prescribing practices in MN (prior to the release prescribing guidelines)
  - Opportunity to help assess the impact of policy changes under consideration at the MN Legislature
  - Prospects for reducing unnecessary use and overuse of prescription opioids, and prevention of new chronic use

- Unique contribution of APCD data:
  - Not available in vital statistics: Detail about prescription opioid use and prescribing patterns
  - Not available in Rx monitoring programs: Provides richer clinical contextual information about prescribing patterns

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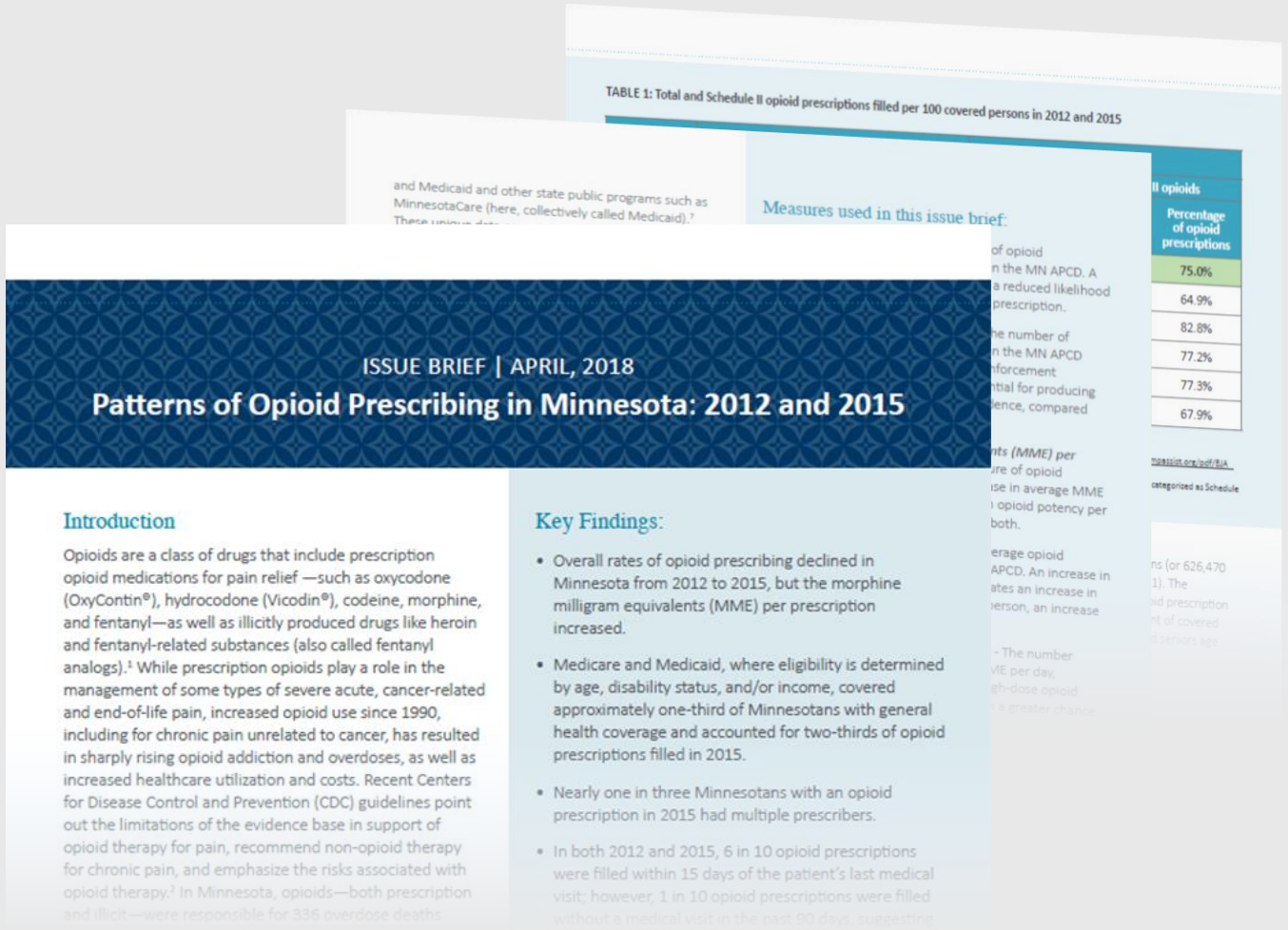
Opioid Prescribing Patterns: An Excerpt

Patterns of Opioid Prescribing in Minnesota: 2012 and 2015



Focuses on opioid prescription patterns among Minnesotans with private or public insurance coverage.

Explores:

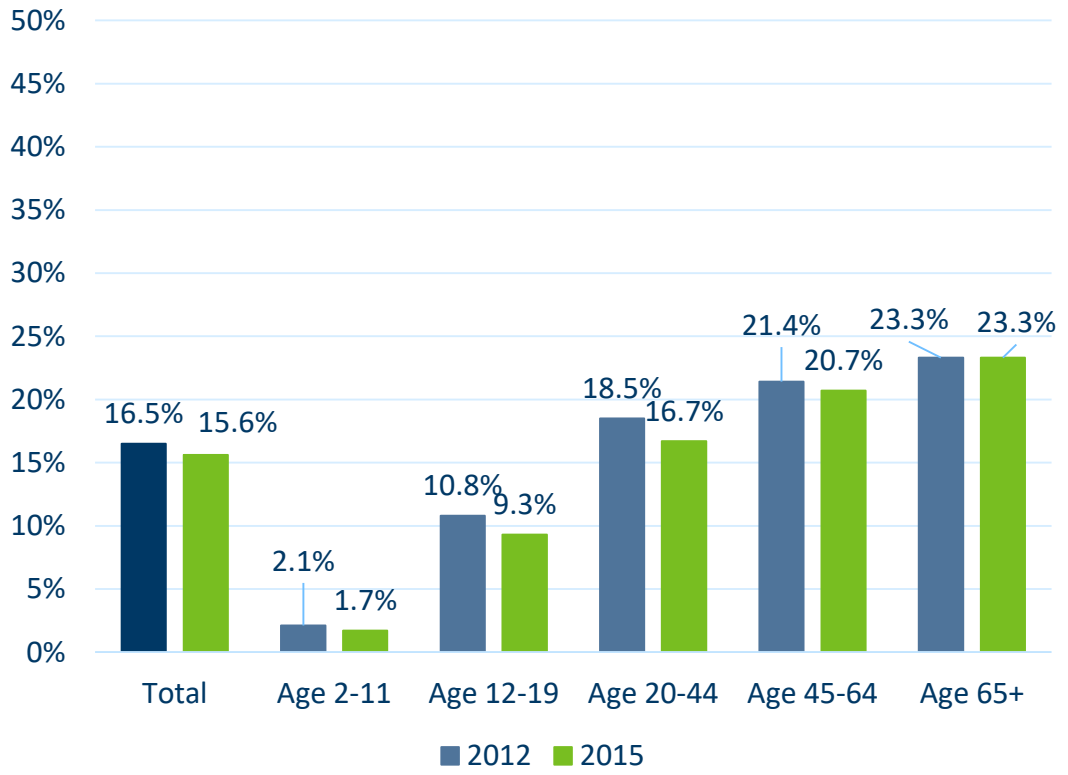
- Opioid prescription patterns by payer
- Patients' diagnoses preceding a prescription opioid fill
- Number of prescribers
- Patients' geographic location

https://www.health.state.mn.us/data/apcd/docs/opioidbrief20185.pdf

Percent of covered Minnesotans with an opioid prescription

Patterns of Opioid Prescribing in Minnesota: 2012 and 2015

- More than 1 in 6 covered Minnesotans filled an opioid prescription in 2015
  - More than 1 in 5 over age 45
  - Almost 1 in 4 over age 65
- From 2012 to 2015:
  - Rates for all age groups decreased
    - Exception: 65+ population
  - Although the proportion of Minnesotans with at least one prescription decreased, the average number of days per prescription increased (14.0 to 15.1)
    - Average MME per prescription also increased

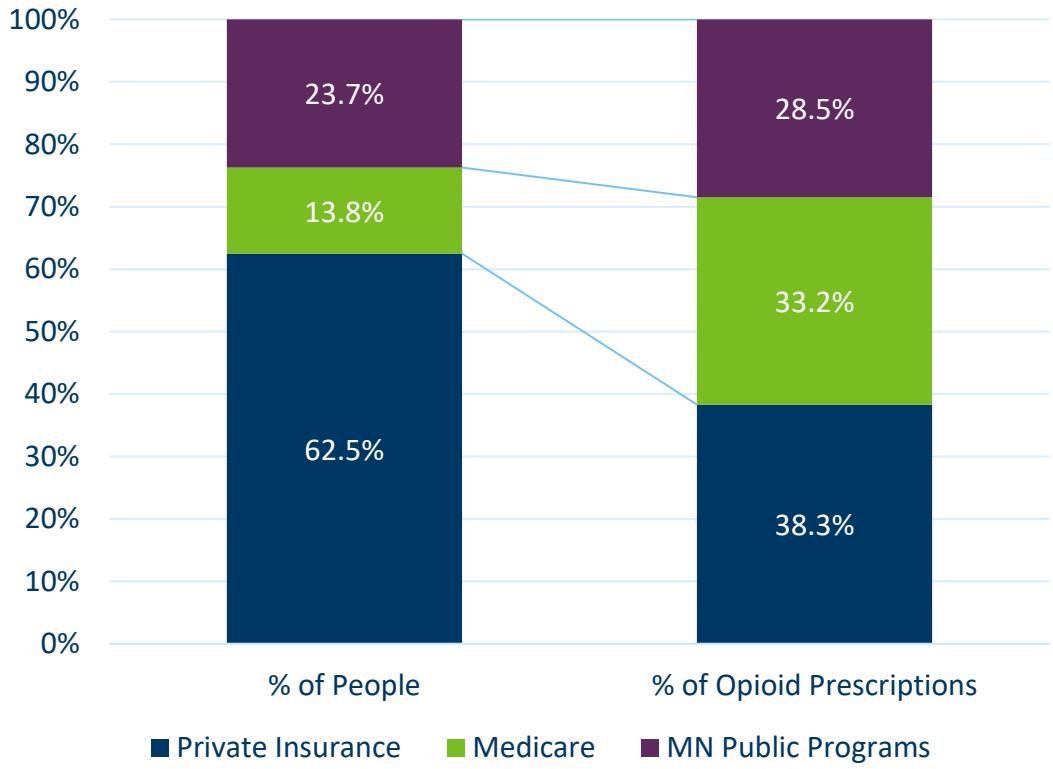


Source: Mathematica Policy Research analysis of claims and encounter data from the Minnesota All-Payer Claims Database v. 19 and 20.1.

https://www.health.state.mn.us/data/apcd/docs/opioidbrief20185.pdf

Proportion of Insured Individuals and Prescriptions by Payer in 2015

- Public programs, which generally cover sicker populations, accounted for two-thirds of opioid prescriptions filled in 2015
  - Medicare accounts for roughly 1 in 7 insured individuals, but accounts for 1 in 3 opioid prescriptions



Source: Mathematica Policy Research analysis of claims and encounter data from the Minnesota All-Payer Claims Database v. 19 and 20.1.
Note: Minnesotans are assigned to coverage categories based on coverage at the time of prescription. Minnesotans with multiple, concurrent sources of coverage are assigned to a unique coverage category in the following order: (1) Medicaid, (2) Medicare, and (3) private insurance. Dual-eligible Medicare/Medicaid beneficiaries are assigned to Medicaid.

See: https://www.health.state.mn.us/data/apcd/docs/opioidbrief20185.pdf

Proportion of Prescriptions by Prior Procedure or Diagnosis in 2015

Patterns of Opioid Prescribing in Minnesota: 2012 and 2015

Procedure or Diagnosis within 90 Days	Total	High-dose (90 MME per day or more)
Surgery	51.7%	50.7%
Injury	7.3%	5.7%
Back Pain	**9.4%**	**12.2%**
Other Acute Pain	1.0%	1.0%
Other Chronic Pain	**13.0%**	**18.2%**
Long Term Opioid Use	1.0%	1.1%
Other Medical Visit	7.4%	4.0%
No Medical Visit within 90 Days	9.3%	7.1%

Source: Mathematica Policy Research analysis of claims and encounter data from the Minnesota All-Payer Claims Database v. 19 and 20.1.
Note: Prescriptions for opioid withdrawal medication or methadone (used for both pain management and opioid withdrawal) are excluded, equal to 2.5% and 3.0% of prescriptions in 2012 and 2015 respectively. In addition, persons without continuous medical coverage in the past 90 days are excluded, equal to 5.8% and 7.1% of covered persons in 2012 and 2015 respectively. Percent change estimates may reflect rounding error.

- Half of all opioid prescription fills followed a surgery, but back pain and other chronic pain accounted for about 30 percent of high-dose prescriptions

See: https://www.health.state.mn.us/data/apcd/docs/opioidbrief20185.pdf
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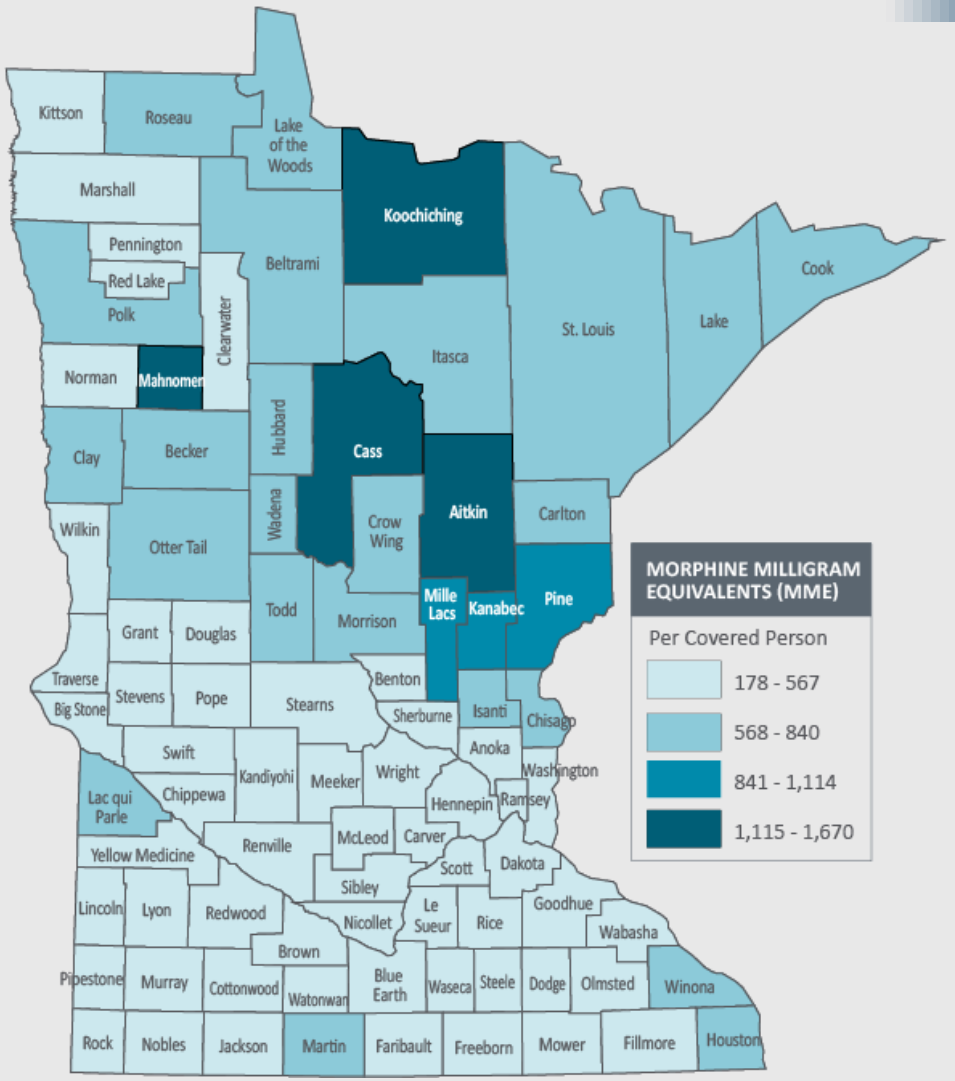
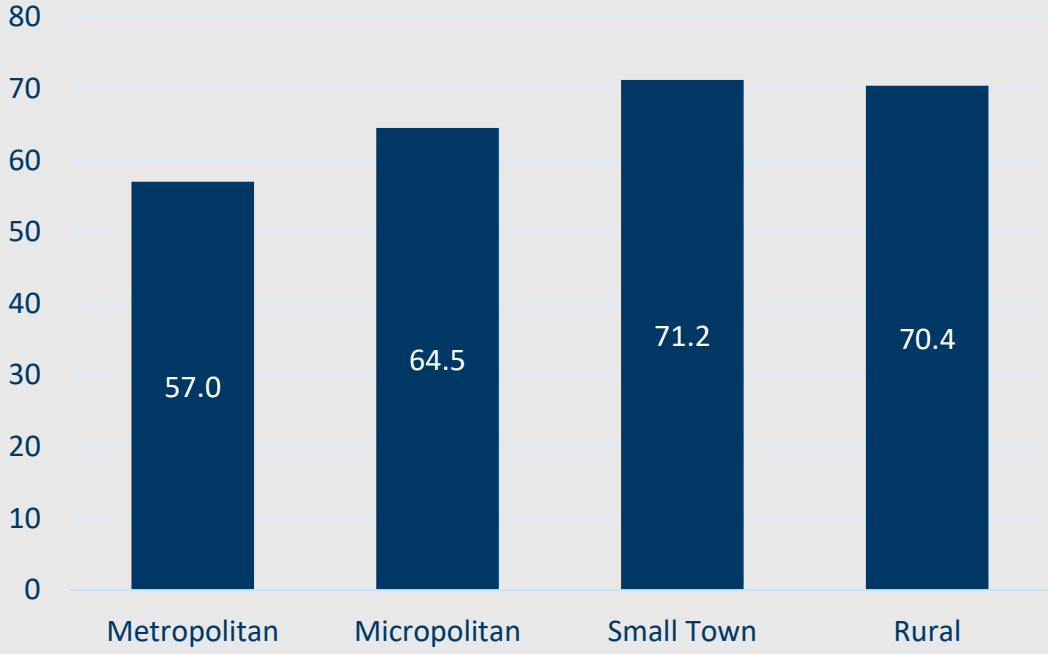
Geographic Variation in Prescribing Patterns

Opioid Prescriptions in Morphine Milligram Equivalents (MME) per Covered Person by County, (2015)



See: https://www.health.state.mn.us/data/apcd/docs/opioidbrief20185.pdf

Number of Opioid Prescriptions per 100 Covered Persons by Geographic Location: 2015



Source: Mathematica Policy Research analysis of claims and encounter data from the Minnesota All-Payer Claims Database v. 20.1.
Note: Counties with rates of MME per covered person at least one standard deviation (greater than 841 MME) or two standard deviations (greater than 1,115 MME) above the unweighted mean calculated among all counties in Minnesota are highlighted.
Note: Residential zip codes are assigned to metropolitan, micropolitan, small town, and rural areas as defined by the Rural-Urban Commuting Area Codes classification scheme of the University of Washington School of Medicine Rural Health Research Center depts.washington.edu/uwruca/ and depts.washington.edu/uwruca/ ruca-codes.php accessed April 16, 2018

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Opioid New Chronic Users, An Excerpt (Forthcoming)

New Chronic Opioid Users in Minnesota:
April 2014 to March 2015 (Forthcoming)

Some Reasons for Opioid Prescription:

Cancer/ Hospice

Opioids prescribed to hospice or palliative-care patients, or patients with cancer or end-of-life pain

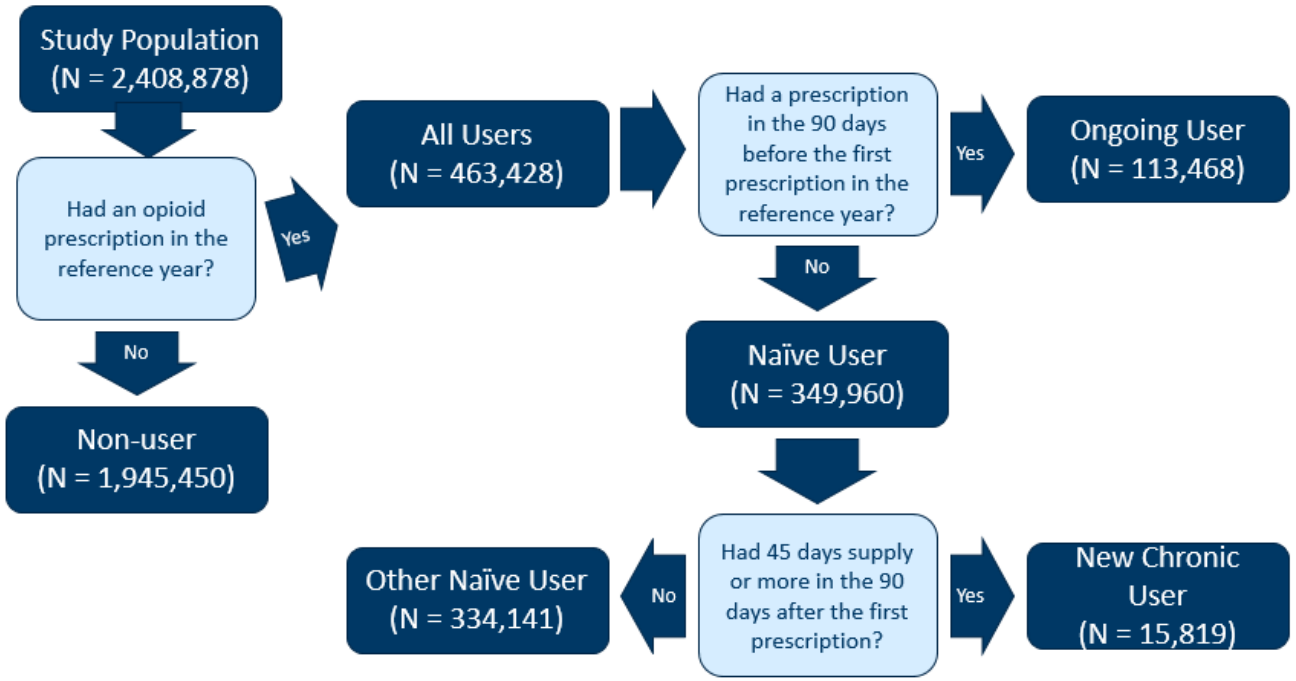
Injury/ Surgery

Opioids prescribed after a surgery or injury to manage acute pain

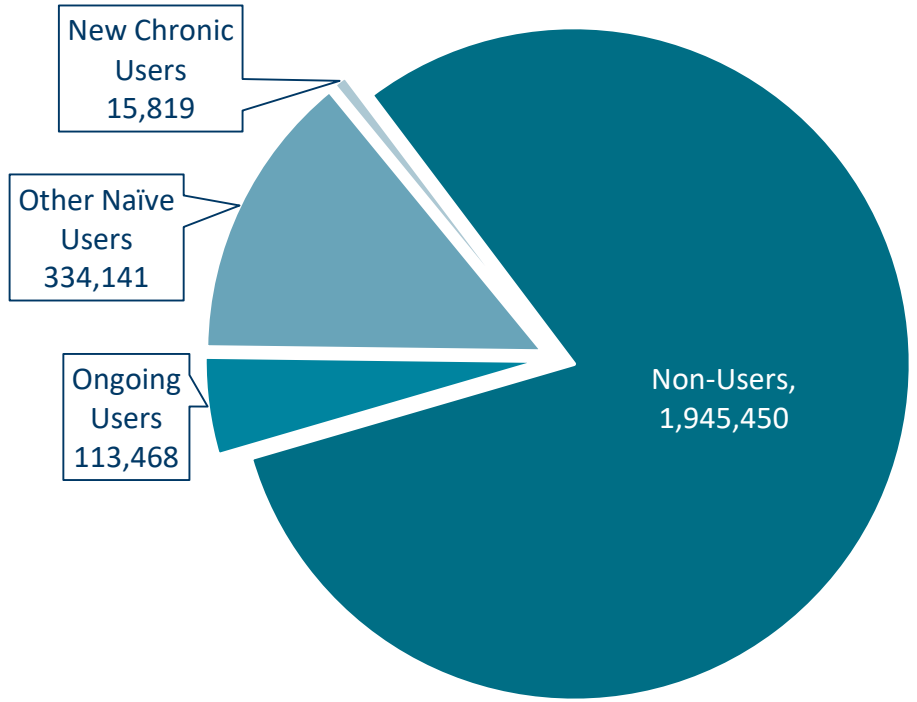
These prescriptions can lead to unintended persistent or chronic use.

- This brief offers a baseline of opioid prescribing practices in Minnesota prior to release of new opioid prescribing guidelines by CDC (2016) and Minnesota (2018)
- A better understanding of persons at risk of becoming new chronic users of opioids might help practitioners balance the benefits and risks of initiating opioids, and potentially reduce the likelihood of overuse and addiction
- MN Prescribing Guidelines: The evidence to support chronic opioid analgesic therapy for chronic pain is insufficient at this time, but the evidence of harm is clear. **Providers are advised to avoid initiating chronic opioid therapy and to carefully monitor those who remain on opioid medication**
- This research was based on MN DHS development of a definition/measure to identify new chronic opioid users

Individuals by Opioid Use Status, April 2014 to March 2015 (Forthcoming)



4.5 percent of naïve users became new chronic users



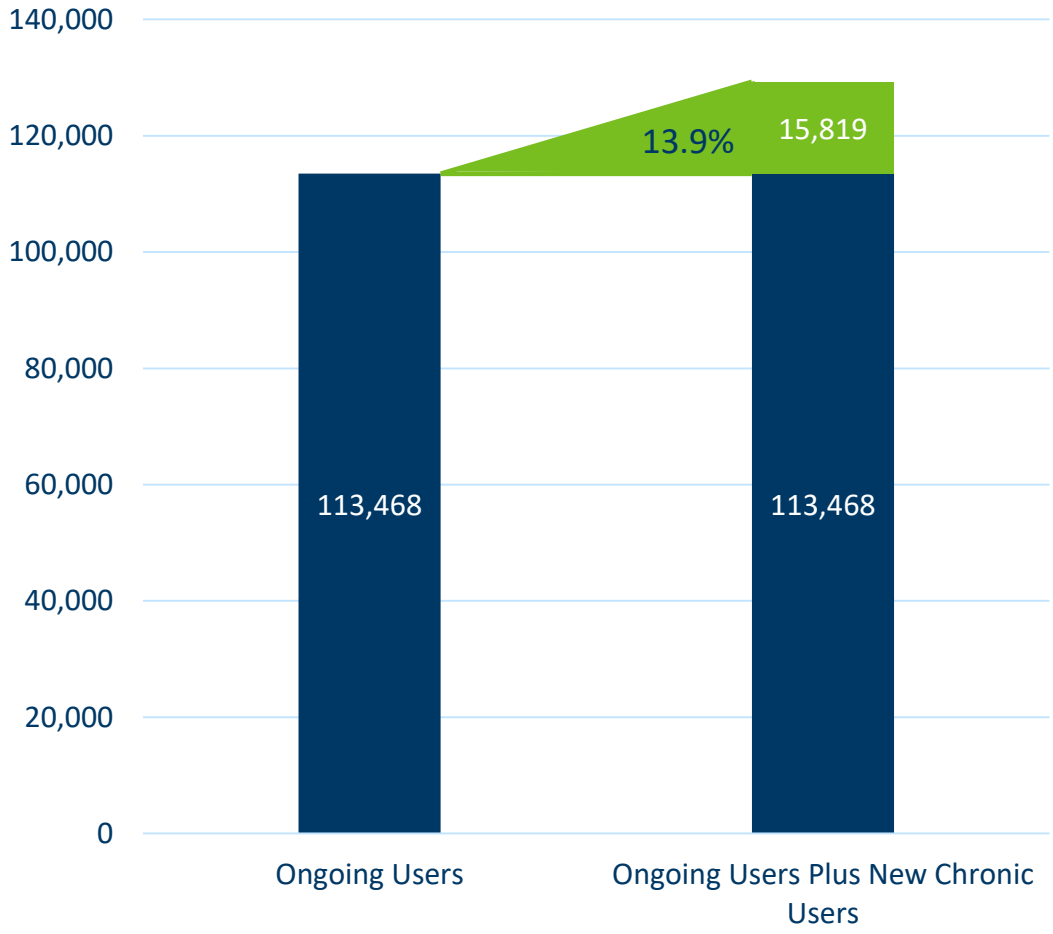
Source: Mathematica Policy Research analysis of claims and encounter data from the Minnesota All-Payer Claims Database v. 19 and 20.1.

Note: Excludes MN residents without coverage for the whole study duration, children ages 11 and younger, and individuals with a cancer diagnosis or in hospice

Significant Increase in Population Potentially Dependent on Prescription Opioids

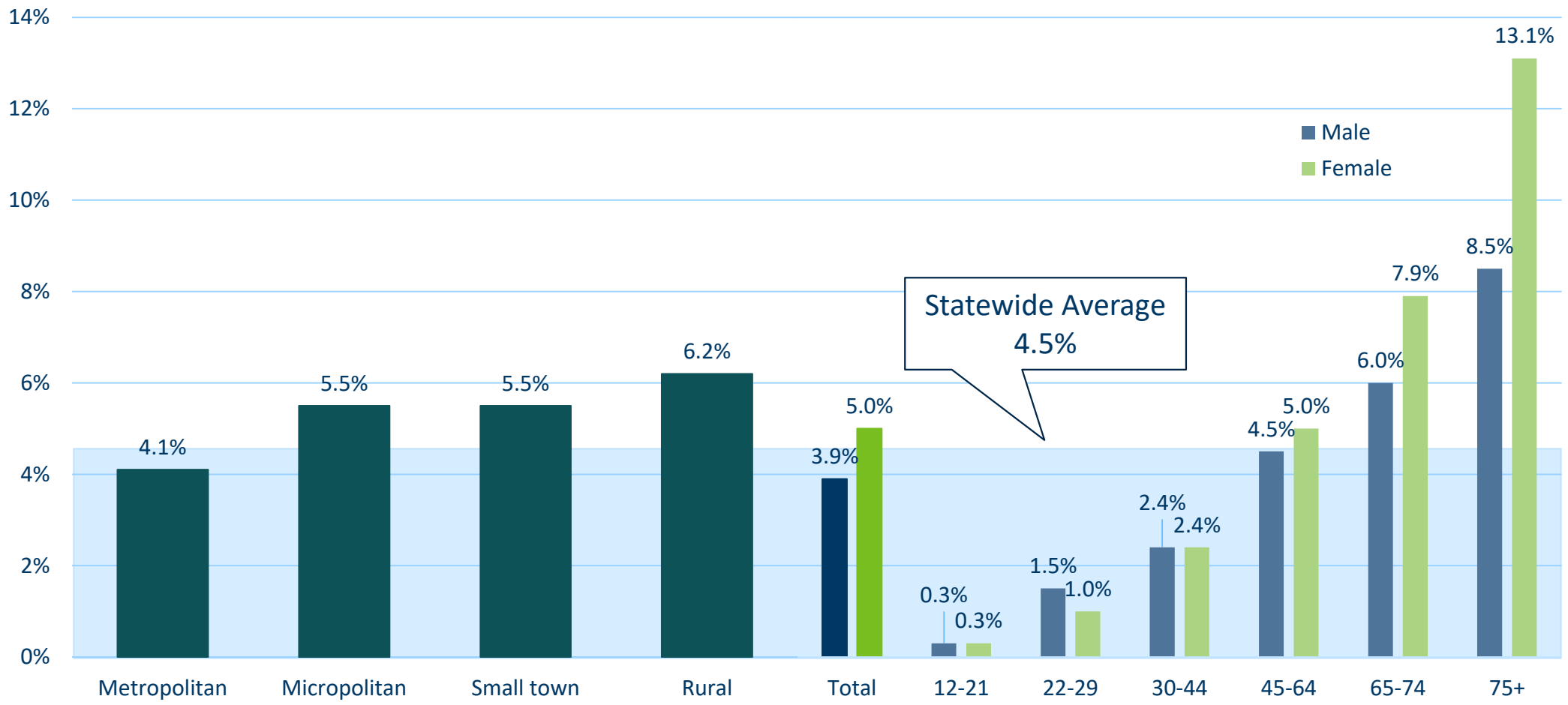
New Chronic Opioid Users in Minnesota (Forthcoming)

- New chronic users represented a 13.9% increase in the number of Minnesotans in the study population who were potentially dependent on prescription opioids



New Chronic Users as % of Naïve Users, by Urbanicity, Age, and Gender

New Chronic Opioid Users in Minnesota (Forthcoming)



Discussion

Policy Implications

- Policymakers and other stakeholders need accurate information to guide and inform their work … but that may not be enough
- Continued attention to opioid prescribing appears to be having an impact
- Need for evaluation of outcomes of policy initiatives underway
- Data matter:
  - Unique ability of APCDs to examine interaction of medical dx, health care service use, health care access, and health care providers over time
  - Data linkage would enhance the impact

Data Caveats

- How to account for opioids that may be used for both pain management and opioid withdrawal
- How to manage delta in classification of some opioids
  - Hydrocodone moved from Schedule III to Schedule II, 10/2014
  - Tramadol placed in Schedule IV, 8/2014
- Some gaps to bear in mind:
  - Pharmacy claims from prescribing dentists, but no dental claims
  - Lack of data from accident-only insurance, IHS, workers' compensation and VA affect developing a "full picture"
  - Prescription opioids are only part of the problem

MN APCD Publications

- Minnesota All Payer Claims Database (MN APCD)
  - Patterns of Opioid Prescribing in Minnesota: 2012 and 2015
    https://www.health.state.mn.us/data/apcd/docs/opioidbrief20185.pdf
    - Supplemental Tables
      https://www.health.state.mn.us/data/apcd/docs/opioidtablesv3.pdf
    - Supplemental Technical Information
      https://www.health.state.mn.us/data/apcd/docs/opioidtechrptv2.pdf
  - Opioid New Chronic Users
    - Issue brief is in-progress
    - Look for it on the MN APCD publications webpage
      https://www.health.state.mn.us/data/apcd/publications.html
  - Reports and Issue Briefs on other topics may also be found on the MN APCD publications page
    https://www.health.state.mn.us/data/apcd/publications.html

Thank you.

Health Economics Program: https://www.health.state.mn.us/healtheconomics

MN All Payer Claims Data: https://www.health.state.mn.us/data/apcd/index.html

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