DEPARTMENT OF HEALTH

Opioid Use in Minnesota: Analysis of Prescribing Patterns & Chronic Use

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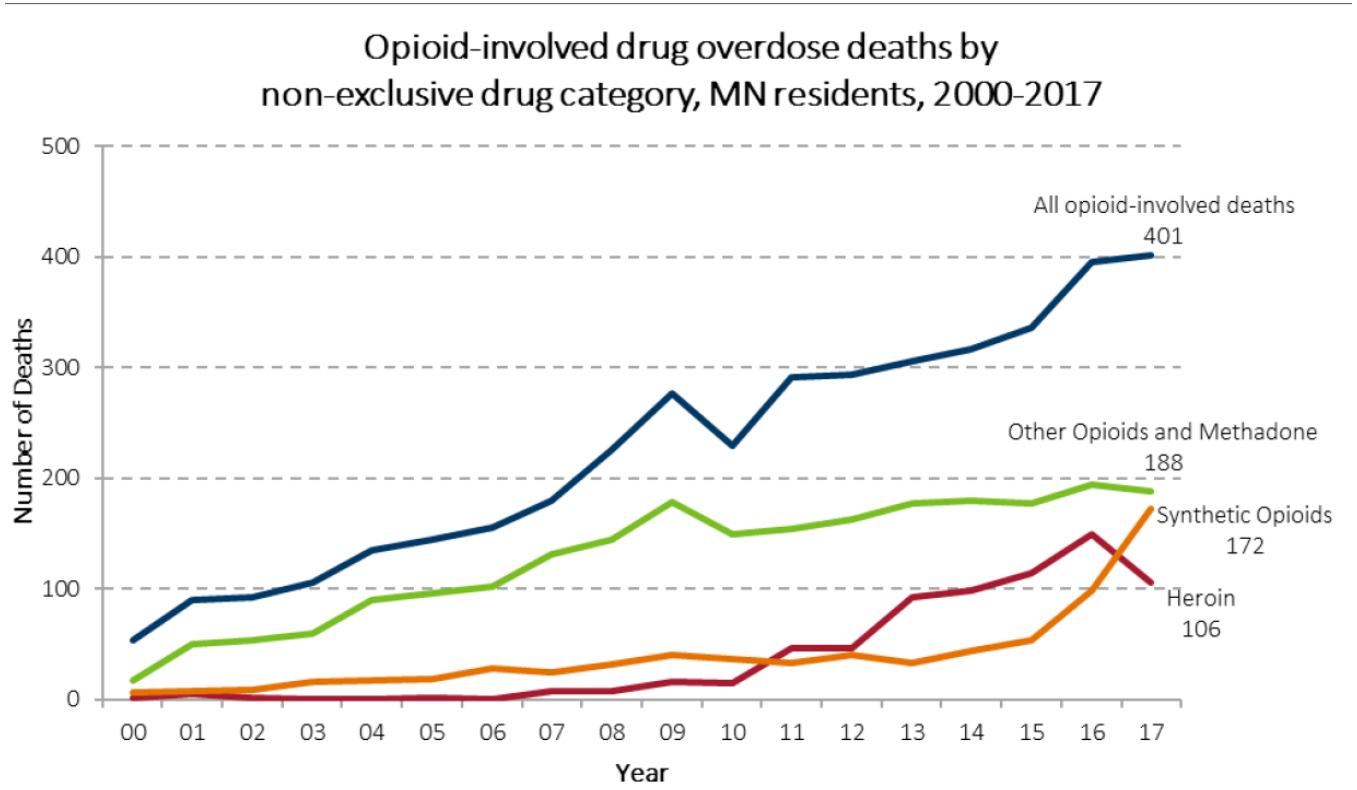
MN APCD
All Payer Claims Database

Overview & Acknowledgments

- Study Context
- Findings
- Lessons

- Acknowledgments:
  - The analyses for this work were conducted by Mathematica Policy Research, Inc. (Deborah Chollet, PI)
  - Pamela Mink, Director of Health Services Research in the Health Economics Program at MDH, led this work
  - Funding for this effort came from the National Center for Injury Prevention and Control and the Center for Consumer Information & Insurance Oversight
  - Jeff Schiff and colleagues of DHS developed the new chronic user measure and provided feedback on the study

Opioid Related Mortality in Minnesota



- Opioids (prescription and illicit) were responsible for 401 deaths in MN in 2017; about a 7-fold increase since 2000
- Nearly half (47 percent) of opioid-involved drug overdose deaths in 2017 were from commonly prescribed opioids
- In recent years:
  - Opioid overdose deaths due to commonly prescribed products have stabilized, while
  - Deaths from heroin and synthetic opioids have increased.
  - Deaths from heroin overdose declined from 2016 to 2017, however.

Minnesota Department of Health, Preliminary 2017 Drug Overdose Deaths: Continuing and Shifting Trends
See: http://www.health.state.mn.us/divs/healthimprovement/content/documents-opioid/2017drugoverdosedeathreport.pdf

Study Context

- CDC Guideline for Prescribing Opioids for Chronic Pain – United States (2016)
- Minnesota Opioid Action Plan (February, 2018)
  - Prevention
  - Emergency response & law enforcement
  - Treatment and recovery
- Minnesota opioid prescribing guidelines (March 30, 2018)
- Legislative deliberations
- Available data: 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 of 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 Pattern: An Excerpt

Research on Opioid Prescribing and Chronic Use

ISSUE BRIEF | APRIL, 2018

Patterns of Opioid Prescribing in Minnesota: 2012 and 2015

Introduction

Opioids are a class of drugs that include prescription opioid medications for pain relief —such as oxycodone (OxyContin®), hydrocodone (Vicodin®), codeine, morphine, and fentanyl—as well as illicitly produced drugs like heroin and fentanyl-related substances (also called fentanyl analogs).[1] While prescription opioids play a role in the management of some types of severe acute, cancer-related and end-of-life pain, increased opioid use since 1990, including for chronic pain unrelated to cancer, has resulted in sharply rising opioid addiction and overdoses, as well as increased healthcare utilization and costs. Recent Centers for Disease Control and Prevention (CDC) guidelines point out the limitations of the evidence base in support of opioid therapy for pain, recommend non-opioid therapy for chronic pain, and emphasize the risks associated with opioid therapy.[2] In Minnesota, opioids—both prescription and illicit—were responsible for 336 overdose deaths

Key Findings:

- Overall rates of opioid prescribing declined in Minnesota from 2012 to 2015, but the morphine milligram equivalents (MME) per prescription increased.
- Medicare and Medicaid, where eligibility is determined by age, disability status, and/or income, covered approximately one-third of Minnesotans with general health coverage and accounted for two-thirds of opioid prescriptions filled in 2015.
- Nearly one in three Minnesotans with an opioid prescription in 2015 had multiple prescribers.
- In both 2012 and 2015, 6 in 10 opioid prescriptions were filled within 15 days of the patient's last medical visit; however, 1 in 10 opioid prescriptions were filled

TABLE 1: Total and Schedule II opioid prescriptions filled per 100 covered persons in 2012 and 2015

Measures used in this issue brief:

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

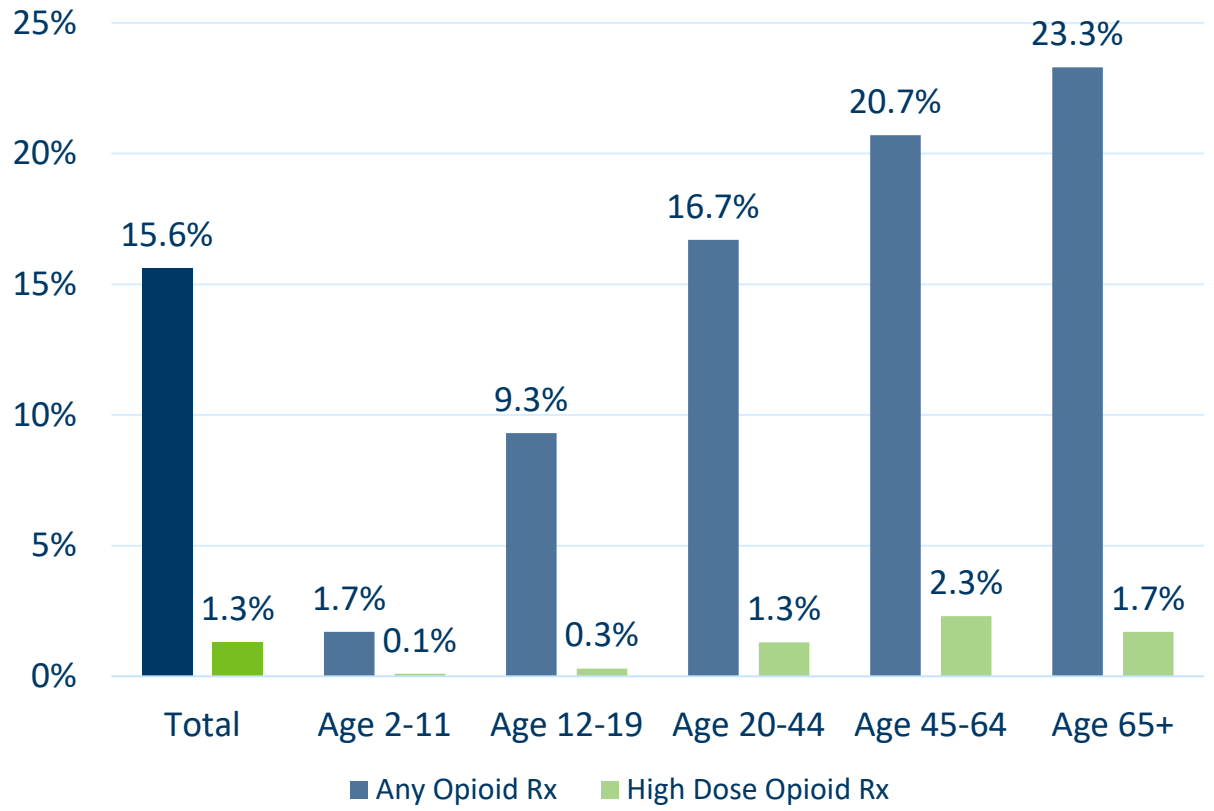
Explores:

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

http://www.health.state.mn.us/divs/hpsc/hep/publications/opioidbrief20185.pdf

Percent of Insured Minnesotans with an Opioid Prescription in 2015

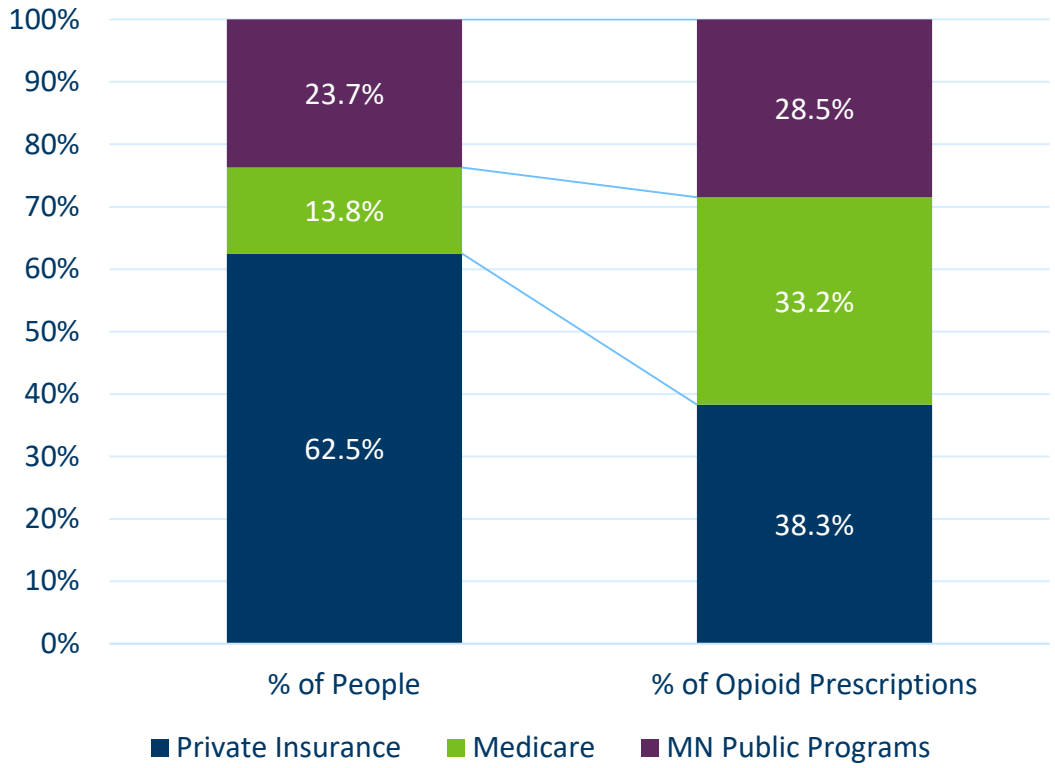
- More than 1 in 6 covered Minnesotans filled an opioid prescription in 2015
  - More than 1 in 5 over age 45
  - Almost 1 in 4 over age 65



Source: Mathematica Policy Research analysis of claims and encounter data from the Minnesota All-Payer Claims Database v. 19 and 20.1.
Note: High-dose opioid prescriptions are defined as prescriptions for at least 90 morphine milligram equivalents (MME) per day.

See: http://www.health.state.mn.us/divs/hpsc/hep/publications/opioidbrief20185.pdf

Proportion of Insured Individuals and Prescriptions by Payer in 2015



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: http://www.health.state.mn.us/divs/hpsc/hep/publications/opioidbrief20185.pdf

Proportion of Prescriptions by Prior Procedure or Diagnosis in 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%

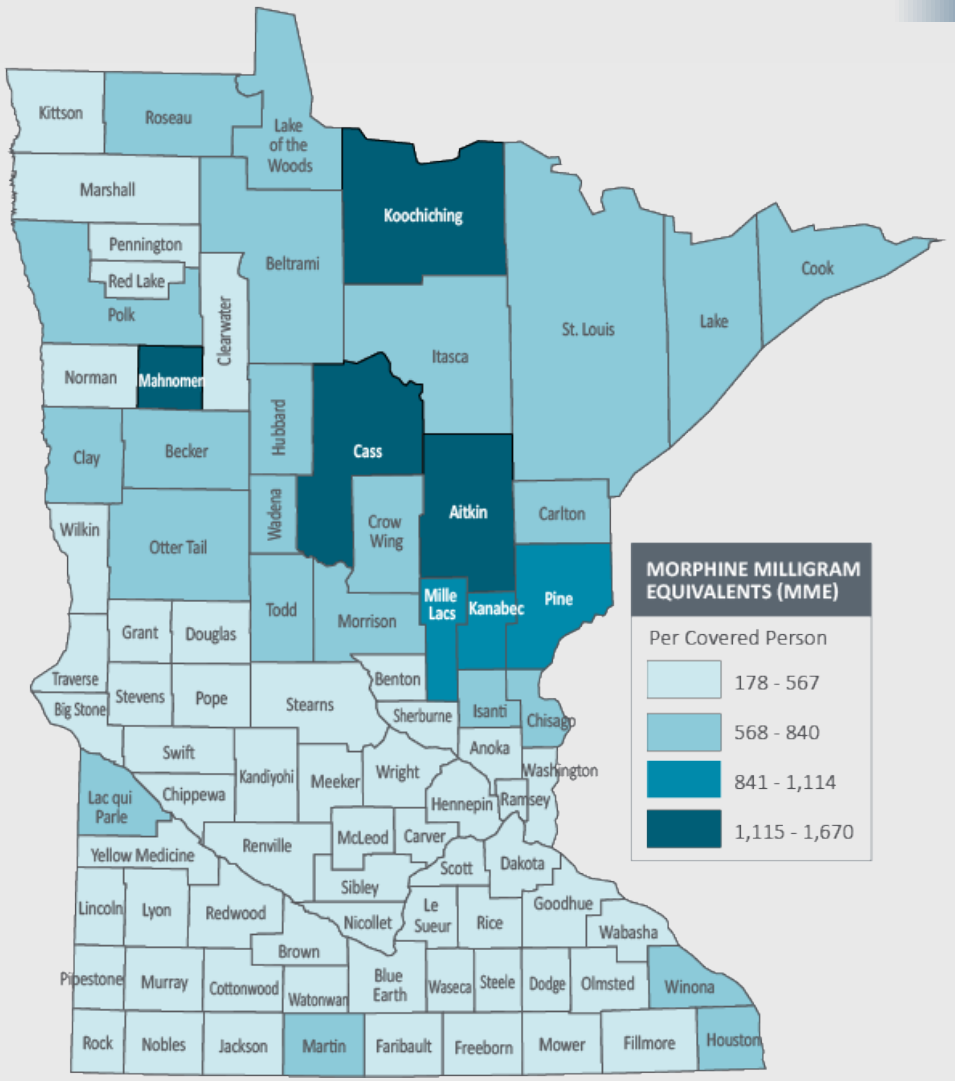
Source: Mathematica Policy Research analysis of claims and encounter data from the Minnesota All-Payer Claims Database v. 19 and 20.1.
Note: Prescriptions for opioid withdrawal medication or methadone (used for both pain management and opioid withdrawal) are excluded, equal to 2.5% and 3.0% of prescriptions 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

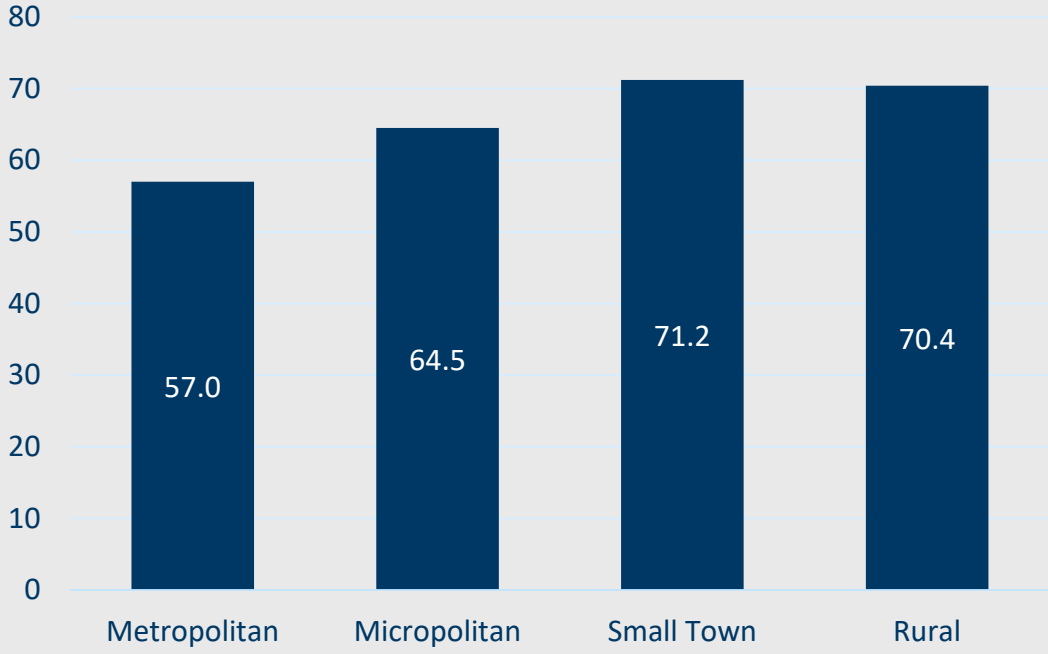
See:
http://www.health.state.mn.us/divs/hpsc/hep/publications/opioidbrief20185.pdf

Geographic Variation in Prescribing Patterns

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



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

See: http://www.health.state.mn.us/divs/hpsc/hep/publications/opioidbrief20185.pdf

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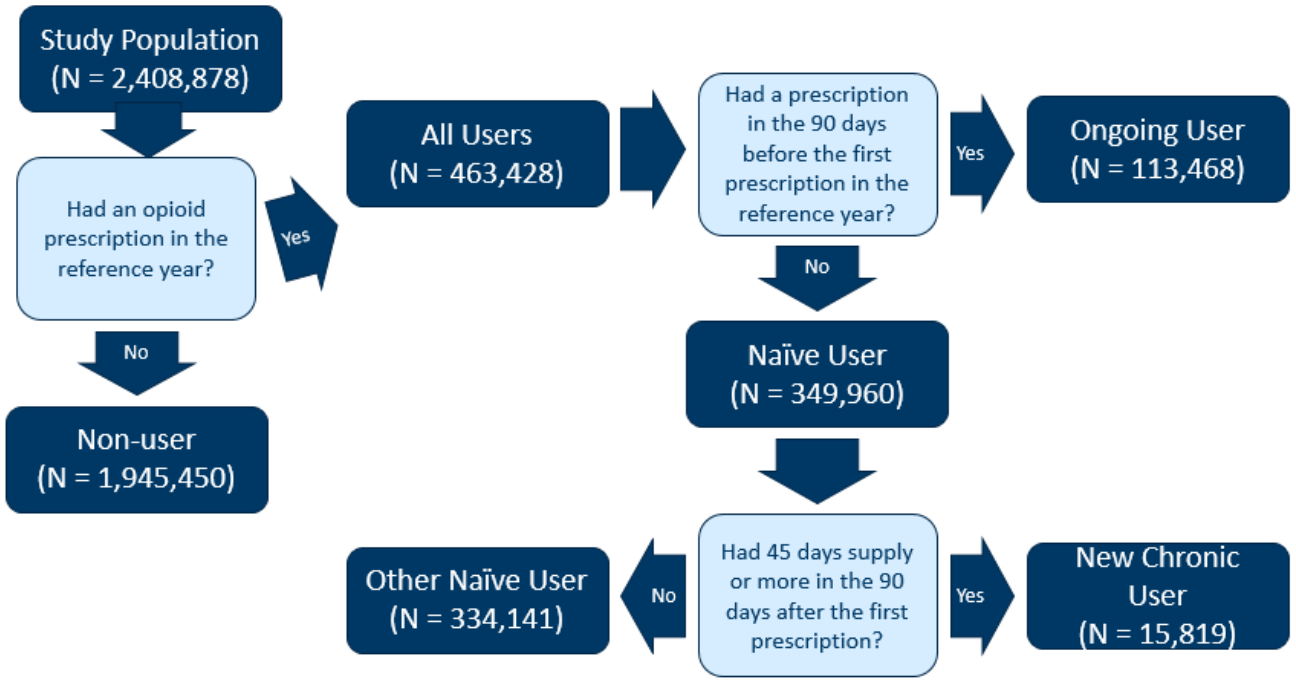
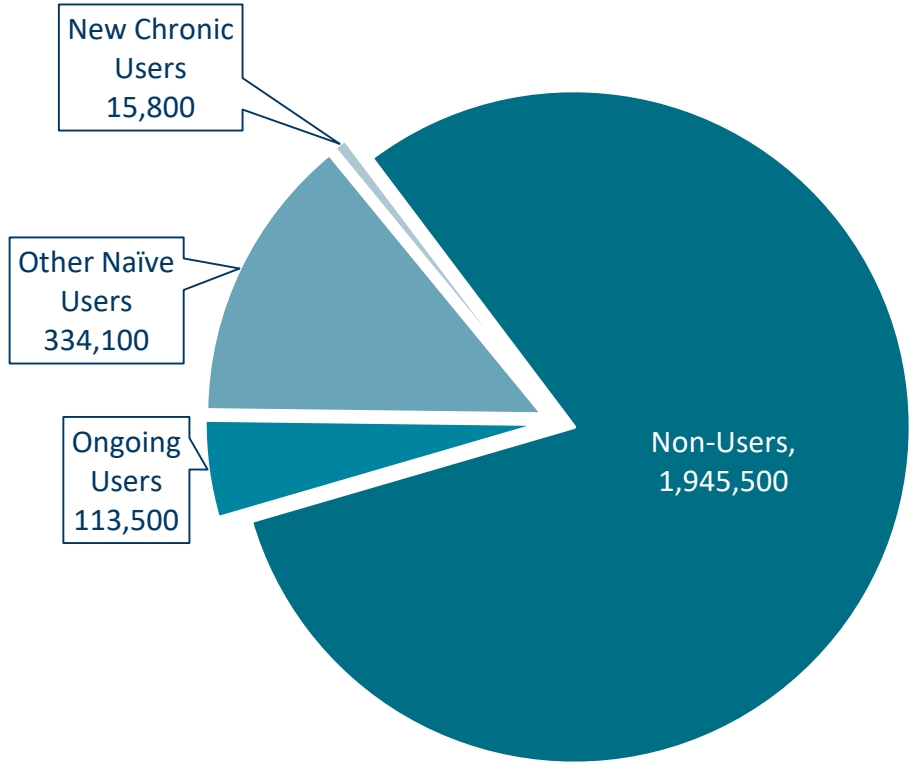
Opioid New Chronic Users, An Excerpt (Forthcoming)

Individuals by Opioid Use Status, April 2014 to March 2015



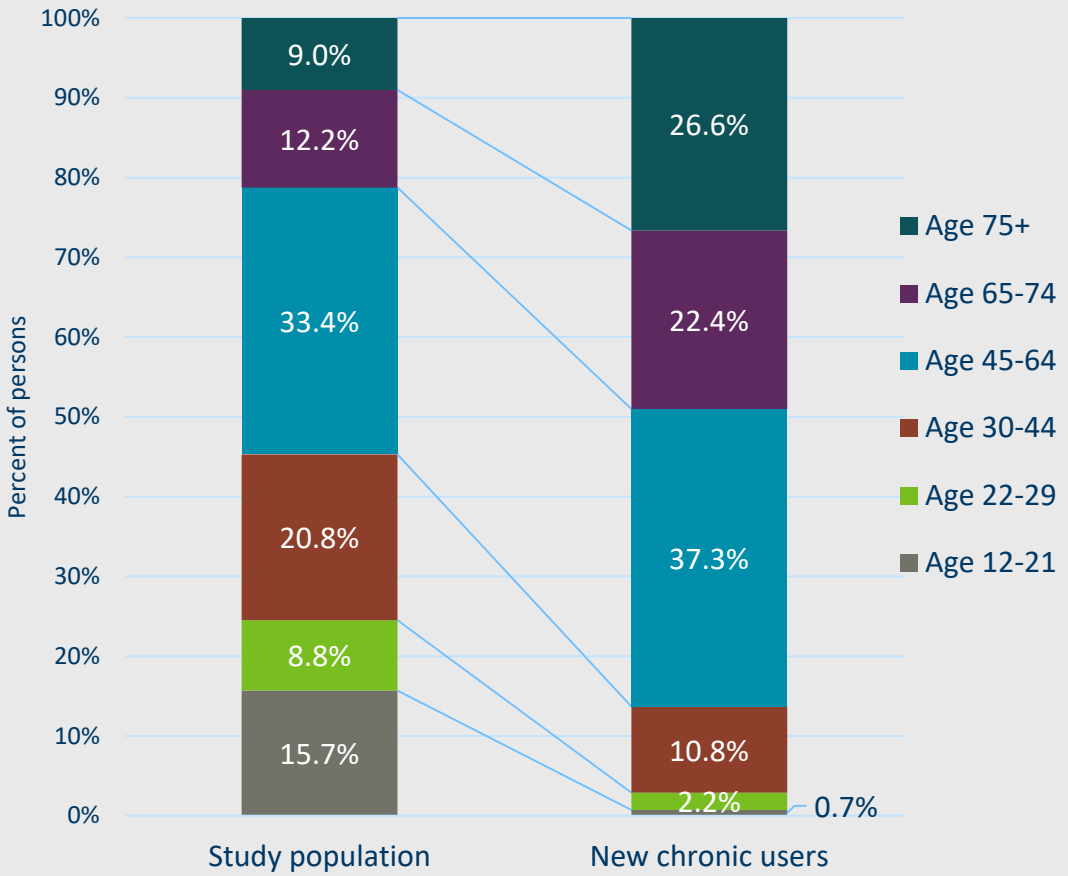


Note: Excludes MN residents without coverage for the whole study duration, children ages 11 and younger, and individuals with a cancer diagnosis or in hospice

Source: Mathematica Policy Research analysis of claims and encounter data from the Minnesota All-Payer Claims Database v. 19 and 20.1.
Data are rounded to the nearest 100.

Distribution of New Chronic Opioid Users by Age
(April 2014 - March 2015)

- About half of **new chronic users** of prescription opioids were age 65 or older
  - The 65+ population represented less than ***one-quarter*** of the study population
  - But, they accounted for ***nearly half*** of **new chronic users**



Source: Mathematica Policy Research analysis of claims and encounter data from the Minnesota All Payer Claims Database extract 20

Note: These are preliminary data and should be interpreted with caution. MDH plans to release an issue brief on New Chronic Opioid Users in Minnesota this fall (2018), available at: http://www.health.state.mn.us/healthreform/allpayer/publications.html

Some Lessons

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 over time
  - Hydrocodone moved from Schedule III to Schedule II, 10/2014
  - Tramadol placed in Schedule IV, 8/2014
- Gap in data resulting from pharmacy claims from dentists as prescribers
- Lack of data from accident-only insurance, IHS, workers' compensation and VA affect developing a "full picture" of the problem

Thank you.

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

MN All Payer Claims Data: www.health.state.mn.us/healthreform/allpayer

Contact: Stefan.Gildemeister@state.mn.us/ 651.201.3550