SUPPLEMENTAL TECHNICAL INFORMATION | APRIL, 2018

Patterns of Opioid Prescribing in Minnesota: 2012 and 2015

Supplemental Technical Information

This document provides additional technical information for the issue brief, *Patterns of Opioid Prescribing in Minnesota: 2012 and 2015.*[1] The analysis uses the 2012 (extract 19) and 2015 (extract 20v1) Minnesota All Payer Claims Database (MN APCD), prepared by the Minnesota Department of Health.[2] The MN APCD is a comprehensive state repository of health care transactions for Minnesota patients derived from claims and encounter records submitted by private insurers, Medicare, Medicaid and other state public programs such as MinnesotaCare. Medicaid and other state public programs are referenced collectively as Medicaid.

The analysis of 2012 prescription patterns includes all persons with at least four consecutive coverage months during October 2011 through December 2012. Similarly, the analysis of 2015 prescription patterns includes all persons with at least four consecutive coverage months during October 2014 through December 2015. These 15 month observation windows allow observation of medical visits 90 days prior to a prescription in January through March of the calendar year.

The analysis excludes persons in "active cancer treatment, palliative care, [or] end-of-life care," as the Centers for Disease Control and Prevention (CDC) recommends.[3] Current CDC guidelines for opioid prescribing are not intended to apply to these patients. Thus, all covered months for persons with a cancer diagnosis at any time during the 15 month observation window are excluded.[4] Among all other persons in the MN APCD, any month while in hospice is excluded.

Minnesotans with multiple, concurrent sources of coverage are assigned to a unique coverage category in the following order: (1) Medicaid, (2) Medicare, or (3) private insurance. Dual-eligible Minnesotans are assigned to Medicaid for this analysis. Less than 3% of individuals in the MN APCD had multiple, concurrent sources of coverage for any month during 2015. All results are weighted by the percentage of covered months in the calendar year observed for each person, across all sources of coverage reported for that person (for example, a person observed for just 9 months is weighted at 0.75). A covered person is defined as twelve covered person-months.

Each person is matched to his/her medical plan(s) to identify diagnoses or procedures in a medical claim that precedes an opioid prescription fill. The analysis looks back 15 days and then forward 16 to 90 days from the opioid prescription fill date. Persons with an opioid prescription in January through March 2012/2015 are matched to their medical records in (respectively) October through December 2011/2014. Prescriptions are thereby associated with prior procedures or diagnoses that include a surgery, injury, other acute pain, back pain, other chronic pain, long term opioid use, any other medical visit, or no medical visit.

The analysis adopts CDC's list of oral opioids by National Drug Code (NDC), morphine milligram equivalents (MME), and Schedule II opioid prescriptions.[5] Hydrocodone combination products were moved from Schedule III to Schedule II by the DEA, effective October 6, 2014. For the purposes of this analysis, hydrocodone was categorized as Schedule II for both 2012 and 2015. Tramadol was placed in Schedule IV, effective August 18, 2014. For the purposes of this analysis, tramadol was categorized as Schedule IV for both 2012 and 2015. The list of relevant prior diagnosis and procedure codes identifying pain conditions prior to a prescription is based on CDC's *Guide to ICD 9 and ICD 10 Codes Related to Poisoning and Pain*.[6]

Residential ZIP codes are assigned to metropolitan, micropolitan, small town, and rural areas as defined by the Rural-Urban Commuting Area (RUCA) Codes classification scheme of the University of Washington School of Medicine Rural Health Research Center.[7] County was assigned based on residential ZIP code. Geographic estimates are adjusted by age, payer, and age by payer by reweighting member months in each geographic area to equal the statewide distribution of member months in the MN APCD by member age, payer, and member age by payer. Age adjustments are done in 5 year intervals for adolescents and adults age 11 or older, and as a group for all children age 2-10. Payer adjustments reflect the assignment of each person in the MN APCD to a unique payer category (Medicaid, Medicare, and private insurance) in each year.

References

[1] Available at www.health.state.mn.us/healthreform/allpayer/publications.html, accessed April 17, 2018.

[2] Minnesota Department of Health. Minnesota All Payer Claims Database: State Repository of Health Care Claims Data (March 2016). Available at www.health.state.mn.us/healthreform/allpayer/mnapcdoverview.pdf, accessed February 8, 2018,

[3] Centers for Disease Control and Prevention, CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. Available at www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm, accessed January 16, 2018.

[4] Opioids are commonly used to treat chronic pain following chemotherapy (Ballantyne, 2003).

[5] See National Center for Injury Prevention and Control. CDC compilation of benzodiazepines, muscle relaxants, stimulants, zolpidem, and opioid analgesics with oral morphine milligram equivalent conversion factors, 2016 version. Atlanta, GA: Centers for Disease Control and Prevention; 2016. Available at www.pdmpassist.org/pdf/BJA_performance_measure_aid_MME_conversion.pdf, Accessed April 10, 2018; and Centers for Disease Control and Prevention. Opioid Overdose/Data Resources. Available at www.cdc.gov/drugoverdose/resources/data.html, accessed February 12, 2018.

[6] See www.cdc.gov/drugoverdose/pdf/pdo_guide_to_icd-9-cm_and_icd-10_codes-a.pdf, accessed February 8, 2018.

[7] See depts.washington.edu/uwruca/ruca-codes.php, accessed April 16, 2018; and depts.washington.edu/uwruca/, accessed April 16, 2018.

MN APCD
All Payer Claims Database

For further information about the MN APCD:
Online: www.health.state.mn.us/healthreform/allpayer
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Supplemental information to this report is available online at www.health.state.mn.us/healthreform/allpayer/publications.html

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