

# Screening for Heroin and Use of Prescription Pain Medication in Primary and Emergency Care

*A brief report prepared by OMNI Institute for SBIRT Colorado, November 2016*

On an average day, 3,900 people initiate nonmedical use of prescription opioids and 580 initiate heroin use, with the numbers growing at an alarming rate.<sup>1</sup> In 2014, more people died from drug overdoses than in any other year on record. More than six out of 10 of these overdoses involved an opioid.<sup>i</sup> Relatedly, the Center for Behavioral Health Statistics and Quality found that approximately three out of four new heroin users report prior abuse of prescription opioids.<sup>ii</sup> The overall rate of opioid overdose has almost quadrupled since 1999,<sup>iii</sup> reflecting what many are calling an opioid epidemic.

Since 2006, Colorado has been actively working to disseminate screening and brief intervention (SBI) in health care settings across the state through a SAMHSA-funded screening, brief intervention, and referral to treatment (SBIRT) grant. Utilizing data collected from the SBIRT Colorado initiative between 2013 and 2016, this report examines the following questions:

- What proportion of adult patients screened through SBIRT Colorado screened positive for heroin or misuse of prescription pain medication? What proportion screened positive for both types of opioids?
- What are the characteristics of patients who screen positive for heroin or misuse of prescription pain medication?
- Were there increases in the proportion of patients who screened positive for opioids (prescription or heroin) over the past four years?

## METHODS

Through the SAMHSA-funded SBIRT Colorado initiative, health educators in grant-partner primary and emergency care sites across Colorado screened patients for risky alcohol and other substance use. Patients were screened about their substance use using the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST).<sup>iv</sup> The ASSIST assesses patients on various substance use categories, including opioids. Because Colorado was interested in distinguishing heroin use and the misuse of prescription pain medications, in August 2013, the ASSIST was adapted to track patient misuse of prescription pain medications separately from heroin, using the same ASSIST questions and scoring guidelines that are used for opioid use more generally. Specifically, patients were asked the ASSIST questions about misuse of prescription pain medications (e.g., fentanyl, oxycodone, OxyContin, Percocet) and then asked questions about use of heroin (e.g., opium, smack, H). Revisions to the ASSIST were based on work by the National Institute on Drug Abuse

(NIDA) and the Connecticut SBIRT program. Per ASSIST guidelines, scores of four or higher were coded as a positive screen. Throughout this brief report we refer to screening for heroin use rather than screening for risky use. However, per ASSIST guidelines, individuals who have used heroin may screen in the low risk range depending on the pattern of use. The data presented in this report are from August 2013, when the ASSIST opioid categories began being tracked separately, through August 2016, the end of the grant-funded period.

## RESULTS

In emergency care, of the 18,068 patients screened, 1,073 (5.9%) screened positive for opioid misuse:

- 1.5% (n=270) screened positive for prescription pain medication misuse.
- 5.0% (n=900) screened positive for heroin use.
- 0.5% (n=99) screened positive for both prescription pain medication and heroin.

In primary care, of the 27,705 patients screened, 223 (0.8%) screened positive for opioid misuse:

- 0.6% (n=162) screened positive for prescription pain medication misuse.
- 0.3% (n=78) screened positive for heroin use.
- 0.1% (n=18) screened positive for both prescription pain medication and heroin use.

Overall, the proportion of patients who screened positive for opioid misuse was higher in emergency than in primary care. In emergency care, the proportion of patients who screened positive for heroin use was much higher than the proportion who screened positive for prescription pain medication. The converse was true in primary care -- although a smaller overall proportion screened positive for opioid misuse than in emergency care, in primary care, almost twice as many patients screened positive for misuse of prescription pain medications than for heroin.

Finally, of the subset of patients who screened positive in either setting, less than 10% screened positive for both prescription medication misuse and heroin use:

- In emergency care, 99 of 1,073 positive screens (9.2%) were positive for misuse of both prescription pain medication and heroin.
- In primary care, 18 of 223 positive screens (8.1%) were positive for misuse of both prescription pain medication and heroin.

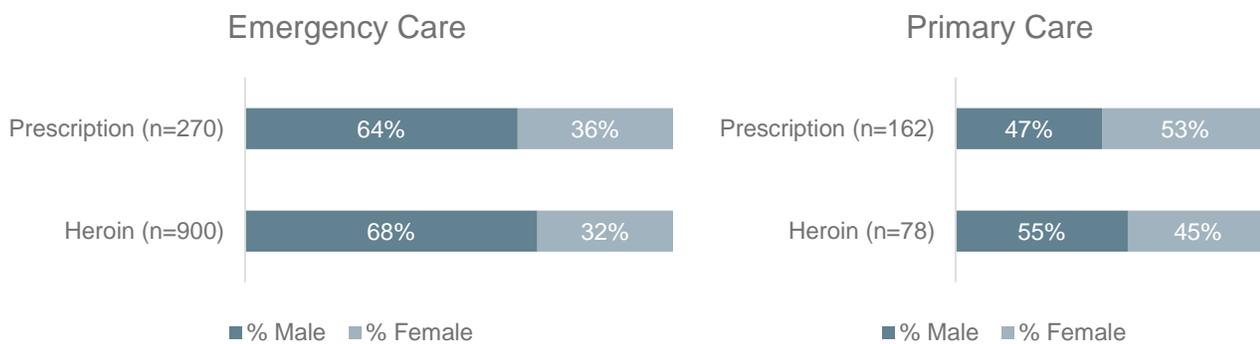
## PATIENT CHARACTERISTICS

In the figures below, we examine the characteristics of patients who screened positive for misuse of prescription pain medication or heroin in emergency and primary care settings. When comparing across settings, it is important to note that each setting may serve different populations; thus, comparisons across type of opioid within settings are more appropriate than comparisons across settings.

### PATIENT GENDER

Overall, 60% of patients screened in emergency care were male and 41% of patients screened in primary care were male. Figure 1 shows the gender of patients who screened positive for prescription pain medications and heroin in both settings. Within both settings, males were overrepresented among patients screening positive for both types of opioid misuse.

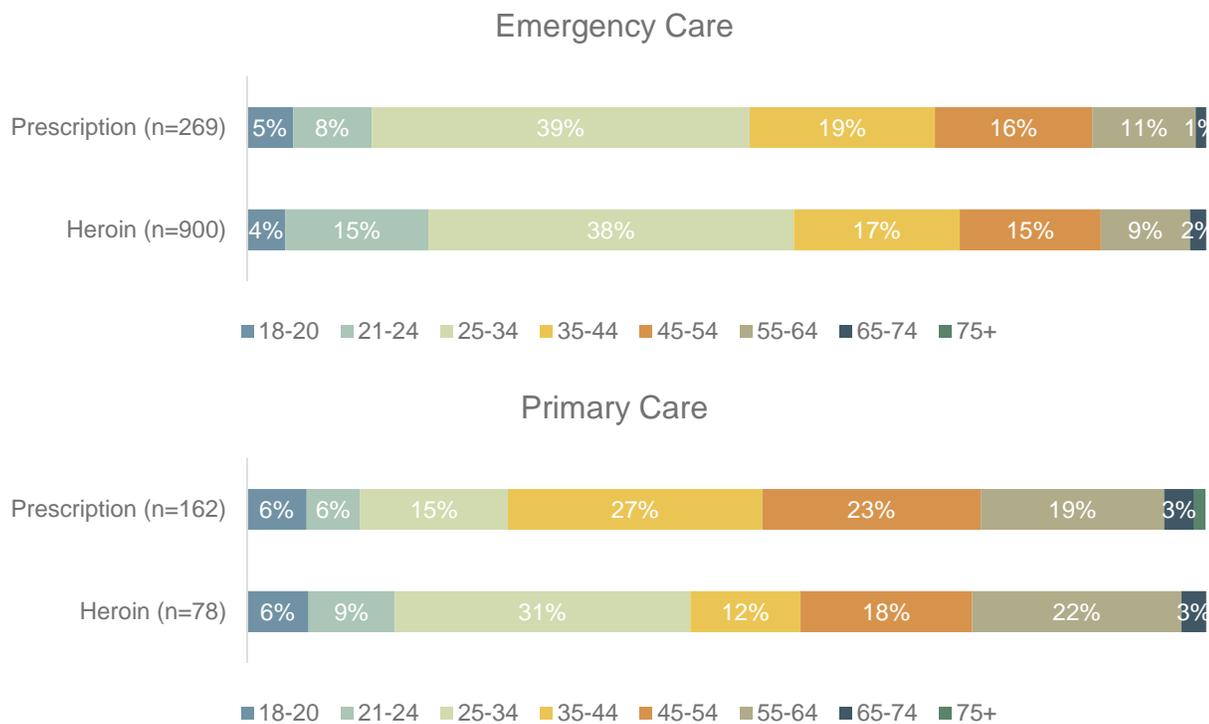
Figure 1: Gender of Patients who Screen Positive for Opioid Misuse



### PATIENT AGE

Patients screened in emergency care had a slightly lower average age than patients screened in primary care (43 versus 45 years, respectively). In emergency care, the average ages of patients who screened positive for misuse of prescription opioids and heroin were 37 and 36 years, respectively. In primary care, the average ages of patients who screened positive for misuse of prescription opioids and heroin were 43 and 40, respectively. Figure 2 provides the percentage of patients who screened positive for misuse of opioids by age categories. For example, 5% of the 269 patients who screened positive for prescription pain medication misuse in emergency care were between the ages of 18 and 20.

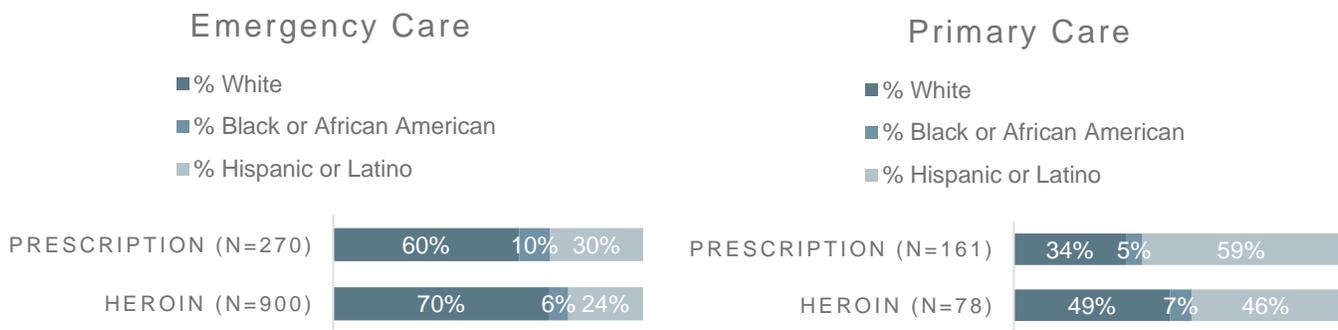
Figure 2: Age of Patients who Screened Positive for Opioid Misuse



**PATIENT RACE/ETHNICITY**

Patients could select more than one racial category and also selected whether or not they were of Hispanic or Latino ethnicity. Very few individuals identified a race/ethnicity other than White, Black or African American, or Hispanic/Latino. Thus, we restrict our examination of race/ethnicity to these three categories. In emergency care, overall, 51% identified as White, 16% identified as Black or African American, and 33% identified as Hispanic/Latino. In primary care, 46% identified as White, 8% identified as Black or African American, and 42% identified as Hispanic/Latino. Figure 3 shows the race/ethnicity proportions for patients who screened positive for opioid misuse in each setting. In both settings, a higher proportion of patients who screened positive for heroin use were white than who screened positive for prescription pain medication.

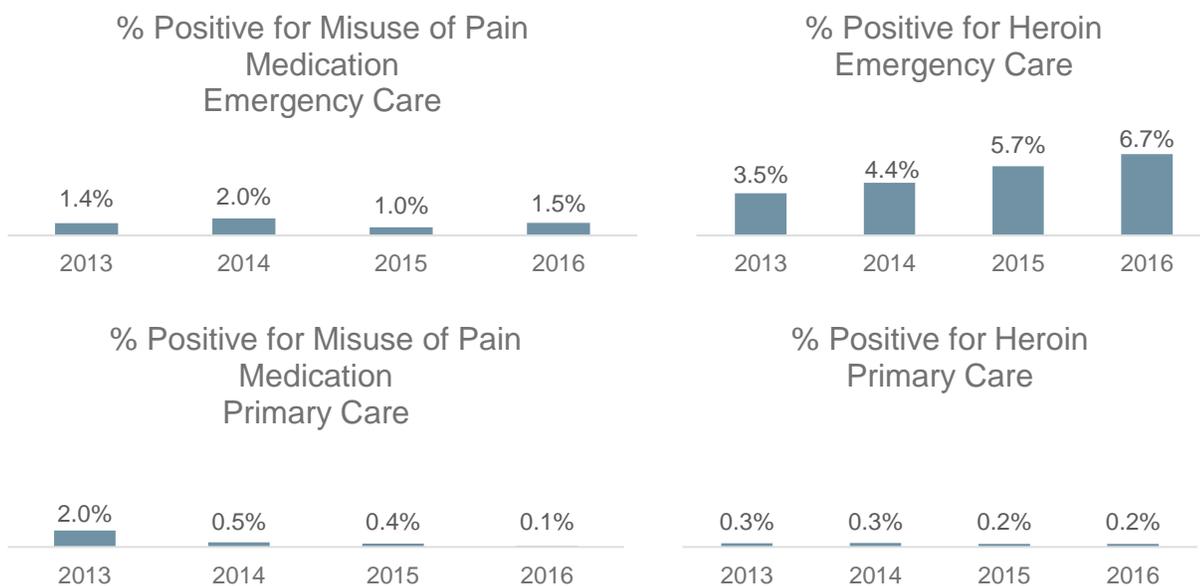
Figure 3: Race/Ethnicity of Patients who Screened Positive for Opioid Misuse



**PATTERNS OF USE OVER TIME**

Figure 4 shows the percentage of patients who screened positive for misuse of prescription pain medication or heroin use by setting and year (only partial data are available for 2013 and 2016). In emergency care, rates of detection of prescription pain medication misuse are roughly between 1 and 2% of all patients screened each year. However, in emergency care, we see a general increase each year in the percentage of patients screening positive for heroin use, with 3.5% screening positive in 2013 and 6.7% screening positive in 2016. In general, in primary care, rates of positive screens for both types of opioids are less than 1%, with one exception – in 2013, 2% of patients screened positive for misuse of pain medications. It is unclear why this rate would have been higher in 2013.

Figure 4: Percentage of Positive Screens by Year, Type, and Setting



## CONCLUSIONS

Patients screened in emergency care were more likely than those screened in primary care to screen positive for opioids, a finding that is consistent with SBIRT Colorado data on other substances – patients screened in SBIRT Colorado emergency care sites, most of whom are seeking care from a large urban safety net emergency department, tend to have higher rates of positive screens for alcohol and other substances than patients screened in SBIRT Colorado primary care sites, and this pattern held for detection of opioids.

Among those who screened positive for opioids, heroin use was more common in emergency care whereas prescription opioid misuse was relatively more common in primary care. Furthermore, men were more likely than women to screen positive for either substance; and men were relatively more likely to screen positive for heroin than for prescription pain medications whereas women were somewhat more likely to screen positive for prescription pain medications than heroin, particularly when screened in primary care. Younger patients tended to be overrepresented among positive screens in emergency care. Patients identifying as White tended to be overrepresented among those screening positive for either substance, with the exception of being underrepresented (and Hispanics overrepresented) among those in primary care settings screening positive for prescription pain medication misuse.

In both settings, concurrent risk for both substances was fairly low – because assessments are designed to capture current risk, this does not mean that users of one substance would not have a history of use of the other. In order to better understand histories/trajectories of use, future analyses should examine, for example, the proportion of those screening positive for heroin use who have a history of misusing prescription pain medications.

Overall, these results underscore the importance of substance use screening as an effective way to initiate conversations regarding alcohol and other substance use between a health care provider and a patient to better identify problematic substance use that would otherwise go undetected. SBIRT may be a useful strategy to not only identify and intervene with current problematic opioid use but also to provide healthcare professionals with information regarding patients' substance use before prescribing pain medications. Specifically, individuals with a history of substance use disorders (including abuse of alcohol, nicotine, and illicit drugs) are at increased risk of an opioid use disorder and identification of risky tobacco, alcohol and other drug use can help guide providers' prescribing practices, such as looking for potential alternatives to opioid prescriptions or close monitoring of patients' use of the prescriptions. Furthermore, screening can help detect when patients are using substances, such as alcohol, that may dangerously interact with opioids.

While trends observed in this SBIRT Colorado sample should be viewed with caution as they may or may not generalize to different populations of patients, the data suggest that screening will identify a small but important number of patients misusing prescription pain medications, and in emergency care settings, identification of heroin use through screening may be increasing.

SBIRT Colorado is funded by the Substance Abuse and Mental Health Services Administration (SAMHSA) and is an initiative of the State of Colorado, Office of the Governor. It is implemented and managed by Peer Assistance Services, Inc., and administered by the Colorado Department of Human Services, Office of Behavioral Health. For more information, see [www.improvinghealthcolorado.org](http://www.improvinghealthcolorado.org).

## END NOTES

---

<sup>i</sup> The Department of Health and Human Services (2016). FACT SHEET: The opioid epidemic – by the numbers. Retrieved from <https://www.hhs.gov/sites/default/files/Factsheet-opioids-061516.pdf>.

<sup>ii</sup> Muhuri PK, Gfroerer JC, Davies C. Associations of nonmedical pain reliever use and initiation of heroin use in the United States. CBHSQ Data Review, 2013.

<sup>iii</sup> Centers for Disease Control and Prevention. Increases in Drug and Opioid Overdose Deaths – United States, 2000–2014. MMWR 2015; 64;1-5

<sup>iv</sup> Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) developed for the World Health Organization (WHO) - [http://www.who.int/substance\\_abuse/activities/assist/en/](http://www.who.int/substance_abuse/activities/assist/en/)

<sup>v</sup> Volkow, N. and McClellan, T. Opioid abuse in chronic pain. The New England Journal of Medicine 2016;374:1253-63. <http://www.nejm.org/doi/pdf/10.1056/NEJMra1507771>