

## Limited Use of Opioid Risk Reduction Strategies in Primary Care

Starrels JL, Becker WC, Weiner MG, et al. Low use of opioid risk reduction strategies in primary care even for high risk patients with chronic pain. *J Gen Intern Med* 2011 Feb 24. [Epub ahead of print]

### Study Overview

**Objective.** To determine frequency of use of opioid risk reduction strategies among primary care patients receiving opioids for chronic noncancer pain, and to determine whether patient-related risk factors for opioid misuse were associated with receipt of risk reduction strategies.

**Design.** Retrospective cohort study.

**Setting and participants.** The study sample was made up of patients from 8 urban or suburban primary care practices within the University of Pennsylvania Health System. Eligible patients were 18 and older and had completed 3 or more visits at the practice, received long-term opioid treatment (3 or more opioid prescriptions written at least 21 days apart within 6 months), and had a diagnosis of neuropathic or musculoskeletal pain. Patients with cancer-related pain were excluded. Predictor variables were 5 risk factors for opioid misuse: (1) age < 45 years at the time of first opioid prescription, (2) current or past drug use disorder, (3) current or past alcohol use disorder, (4) current or past tobacco use, (5) current or past mental health disorder including anxiety, depression, bipolar disorder, post-traumatic stress disorder, or schizophrenia. The authors examined each risk factor separately and created an ordinal variable for the number of each patient's risk factors, categorized as none, 1, 2, 3 or more opioid misuse risk factors. The study time frame was January 2004 to April 2008.

**Main outcome measures.** The outcome variables were (1) receipt of urine drug testing, (2) regular office visits, and (3) restricted early refills. Urine drug testing was defined as having a complete urine drug evaluation at any time during long-term treatment with opioid analgesics. Regular office visits was defined as having at least 1 visit during the 6-month time frame of being on long-term opioid treatment or within 30 days of a dose or medication change. An early refill was defined as prescribing opioid analgesics at least 7 days before the previous prescription for the same medication should have been finished. Restricted early refills allowed up to 1 early refill during long-term treatment with opioid analgesics.

**Main results.** Of the 4057 patients who were eligible for the study, 1612 were included in the analysis. Most patients were female and African American. Low back pain and osteoarthritis were the 2 most common causes of chronic noncancer pain. A third of the sample had more than 3 medical comorbidities. The mean duration of opioid treatment was 1.9 years, and patients received on average 20.2 opioid prescriptions during the study time period. The prevalence of opioid misuse risk factors was 29.1% for age < 45 years, 7.6% for drug use disorder, 4.5% for alcohol use disorder, 16.1% for tobacco use disorder, and 48.8% for mental health disorder. Few (8.4%) patients had 3 or more opioid misuse risk factors.

Within the sample, 8.0% had urine drug testing, 49.8% had regular office visits, and 76.6% had restricted early

### Outcomes Research in Review SECTION EDITORS

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Brigham and Women's Hospital  
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refills. Few (2.7%) patients received all 3 opioid risk reduction strategies. Having a drug use (adjusted odds ratio [AOR], 3.18; 95% confidence interval [CI], 1.94–5.21) or mental health disorder (AOR, 1.73; 95% CI, 1.14–2.65) was associated with increased odds of receiving urine drug testing after adjusting for covariates. Patients with 3 or more opioid misuse risk factors had sixfold greater odds of receiving urine drug testing. After adjustment of covariates, none of the opioid misuse risk factors was associated with regular office visits. Having a drug use disorder (AOR, 0.56; 95% CI, 0.34–0.92) was associated with lower odds of receiving restricted early refills. None of the other opioid misuse risk factors was associated with restricted early refills.

**Conclusion.** Among a sample of patients receiving long-term opioid analgesic treatment for chronic pain, fewer than 10% received urine drug testing, only half had regular office visits, and one-fourth had an early refill for prescription opioids. Drug use and mental health disorders were the only 2 opioid misuse risk factors associated with receipt of urine drug testing. None of the opioid misuse risk factors was associated with regular office visits. Patients at increased risk of misuse were more likely to receive early refills. These results suggest limited use of existing opioid risk reduction strategies in primary care settings, especially among patients at high risk of misuse.

### **Commentary**

Chronic noncancer pain is among the leading causes of primary care visits in the United States. Opioid analgesics are widely used for the treatment of chronic noncancer pain [1] despite rising rates of misuse and abuse [2]. The rate of use has increased faster among high-risk patients with mental health and substance use disorders, as these patients are more likely to report chronic pain refractory to nonopioid therapy [3].

Limited good-quality evidence exists on the use of opioid analgesic risk reduction strategies in primary care settings. Clinicians can use urine drug testing to measure adherence to prescribed opioids and monitor for use of illicit substances or nonprescribed opioids [4]. However, a recent systematic review highlighted problems with use of urine drug testing for monitoring for opioid misuse because of difficulties interpreting negative tests, which could indicate diversion, poorly controlled pain, or inadequate test sensitivity [5]. Clinicians can also use pain agreements or risk-stratification tools to identify patients at high risk of misuse; however, their effectiveness and applicability to primary care settings are unclear [5,6].

Experts support the use of opioid risk reduction strategies, even though they are imperfect, to reduce opioid misuse [7]. In the current study, the authors evaluated 3 opioid risk

reduction strategies: urine drug testing, regular office visits, and early restricted refills. Only 2 of the 5 opioid misuse risk factors—drug use and mental health disorder—were associated with receipt of urine drug testing. Patients with opioid misuse risk factors were no more likely to be seen in clinic regularly than those without any risk factors. Contrary to their hypothesis, the researchers also found that people with a prior history of a drug use disorder were more likely to receive early refills.

Findings from this study highlight clinical equipoise in the use of these opioid risk reduction strategies in primary care settings. It is unclear if limited use of these tools is a reflection of inadequate evidence to support using them in primary care settings, or if primary care providers (PCPs) lack a systematic way of identifying high-risk patients who need to be monitored closely [8]. Regardless of the reasons for the lack of wide adoption of these practices in primary care, the results of this study highlight the issue of opioid analgesics in primary care and the relative absence of high-quality tools to identify patients at high risk of misuse. In the absence of good-quality tools, this study suggests that PCPs should use all the existing, albeit imperfect, opioid risk reduction strategies to monitor for opioid analgesic misuse.

The results of the study should be viewed in light of a few limitations. The data are based on administrative data and have the potential of misclassification of outcome and predictors. The prevalence of opioid misuse risk factors may be underestimated given the reliance on ICD-9 codes for diagnosis. Because the time frame for evaluating opioid misuse risk factors and receipt of opioid risk reduction strategies overlapped, the authors were unable to determine if the use of opioid risk reduction strategies preceded or followed the diagnosis of opioid misuse risk factors.

### **Applications for Clinical Practice**

Expert opinions recommend the use of opioid risk reduction strategies despite weak evidence on their overall effectiveness in identifying patients at high risk of misuse. This study evaluated 3 such strategies and found low rates of use among PCPs caring for patients with chronic pain. These findings suggest the need for better quality tools to identify patients at risk of misuse and a more standardized approach to addressing chronic pain management in primary care. The Opioid Renewal Clinic, a multidisciplinary model where PCPs were supported by a nurse practitioner/pharmacist pain management team and backed by a multispecialist consultant team, was feasible for treating chronic pain patients at risk for substance abuse at a Veterans Administration medical practice [9]. This model resulted in increased adherence by PCPs to urine drug testing and opioid treatment agreements, improved patient adherence to pain agreements, and better differentiation of

patients engaging in opioid misuse or abuse [9]. Such multidisciplinary models are promising and should be validated in other health care settings.

*--Review by Maya Vijayaraghavan, MD*

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