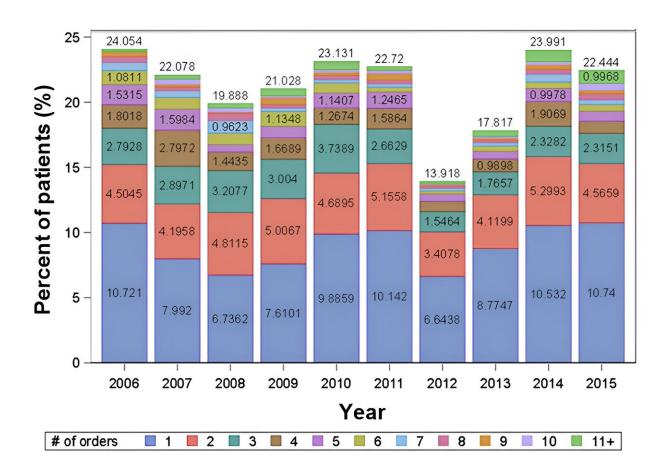


Examining the use of opioids for chronic cough

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Opioid-containing cough suppressant (OCCS) prescriptions for patients with chronic cough, by year and number of prescription orders. OCCS drugs were prescribed in 21% of patients. Credit: *Therapeutic Advances in Respiratory Disease* (2024). DOI: 10.1177/17534666241259373



Chronic cough, with symptoms lasting more than eight weeks, affects approximately one in 10 adults. Cough is among the most common reasons for seeking medical care in the United States, yet chronic cough is difficult to treat.

One of the largest studies of chronic cough and one of the first to explore the use of opioids, which are known to suppress cough, to treat these patients, has found that 20% of patients with chronic cough received a prescription for a cough suppressant containing an opioid.

With the goals of estimating <u>opioid prescriptions</u> in the chronic cough population and of informing alternative treatment strategies, a research team led by Michael Weiner, M.D., MPH, of Regenstrief Institute and the Indiana University School of Medicine, found that the odds of an opioid being prescribed were twice as great for chronic cough as for non-chronic cough.

"Prescriptions of opioid-containing drugs in patients with chronic cough" is published in the journal *Therapeutic Advances in Respiratory Disease*.

Chronic cough is a symptom, a condition that can have a variety of causes including asthma, acid reflux, "postnasal drip," neurological issues or a reaction to a drug.

"The magnitude of use and prescription of opioids for chronic cough is really very high. As we learned from our study, some subgroups were especially likely to be prescribed these drugs. Patients who had Medicaid insurance—typically low-income individuals—were more likely to be prescribed these drugs. Older patients were more likely to be prescribed these drugs than younger patients," said Dr. Weiner.

"Although over one-third of patients with chronic cough had at least three prescriptions for cough suppressants containing opioids, more than



10 prescriptions for these drugs were ordered for only half a percent of patients with chronic cough. This indicates that opioids, which play an important role in chronic cough care, are not used as long-term therapy in most cases."

Opioid-containing cough suppressants were defined as drugs with codeine, dihydrocodeine, or hydrocodone. All opioids carry a risk of addiction.

The researchers studied the <u>electronic health records</u> of 23,210 patients seen by clinicians for cough at least three times over a period of about two to four months and 229,538 patients with non-chronic cough, ages 18 to 85. The deidentified data were obtained from the Indiana Network for Patient Care (INPC), one of the nation's first and largest clinical data repositories. It was created by Regenstrief Institute and is managed by the Indiana Health Information Exchange (IHIE). Regenstrief Data Services is the custodian of data for research purposes.

Chronic cough does not have a diagnostic code, which has made it difficult to track the condition at both the individual and population levels.

"With our decades of experience with electronic health records, we were well aware that symptoms, such as cough—both chronic and non-chronic—are hard to identify. But using a <u>natural language</u> processing method that we developed and tested in a previous study of chronic cough, helped us identify these cases of chronic cough in the clinical notes," said study co-author Regenstrief Institute Research Scientist Paul Dexter, M.D., a biomedical informatician who has conducted multiple prior studies using natural language processing.

"Chronic cough is a significant problem—at home, at work and when out in the community—for a very large number of patients and warrants



not only better diagnosis plans and management pathways, but also a larger array of treatment options so that we don't have to rely on opioids to such a great extent," added Dr. Weiner, who studies the effects of health information and information technology on physician practice and patient outcomes.

"We may, for example, discover <u>chemical compounds</u> with new mechanisms of action to suppress cough or attack its root causes. There are drugs already in the pipeline that may be less addictive, more effective or safer with fewer side effects and complications than opioids. I'm optimistic that the future of treating patients with <u>chronic cough</u> will be brighter than it has been in the past."

More information: Michael Weiner et al, Prescriptions of opioid-containing drugs in patients with chronic cough, *Therapeutic Advances in Respiratory Disease* (2024). DOI: 10.1177/17534666241259373

Provided by Regenstrief Institute

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