# The Geisinger Opioid Prescription Reduction Initiative

## A National Opioid Crisis

Opioid addiction and opioid-related deaths have skyrocketed in the United States. According to the Centers for Disease Control and Prevention (CDC), deaths from overdoses in the U.S. totaled more than 63,600 in 2016, with 42,249 of those deaths attributed to opioids (1, 2). The death rate from opioid overdoses was five times higher in 2016 than in 1999. In a state-by-state analysis, in 2016 West Virginia had the highest death rate per 100,000 population, followed by Ohio, New Hampshire and Pennsylvania.

## A Drilldown to Pennsylvania

In 2017, the Philadelphia division of the U.S. Drug Enforcement Agency and the University of Pittsburgh jointly released an analysis of 2016 drug overdose deaths in Pennsylvania (3). Of the state's overdose deaths, 85 percent involved opioids, with one in four being prescription opioids. Many of the counties with the highest death rates were served by Geisinger Health System, whose reach includes more than 3 million residents in 45 counties in central, south-central and northeast Pennsylvania and southern New Jersey. Geisinger, recognized as an innovator in the use of electronic health records and care delivery models, determined that the health system had an opportunity to reverse these trends.

## Geisinger's Multifaceted Approach

By limiting or eliminating the prescribing of opioids in a clinical setting, Geisinger's physician leadership proposed, Geisinger could minimize or prevent a patient's exposure to the drugs and the consequent risk of the patient developing an addiction that might lead to an overdose and death. Reducing opioid addictions also could ease the burden on the health system. An analysis of 942 patients in the Geisinger system who overdosed on opioids found a steep increase in the use of acute care, and especially emergency department services, prior to an overdose (4).

Geisinger developed and initiated several approaches that focused on changing physician practice patterns to reduce the prescribing of opioids. That included creating a provider dashboard linked to their EHR to identify current practice patterns among Geisinger providers. With their baseline data, they found that providers varied greatly in their opioid prescribing patterns, with a relatively small number being heavy prescribers. They then used that information to first target the outliers and provide them with best practices for pain management.

In the surgical setting, they designed a pain management program in which patients and their families were counseled to expect some manageable pain after relatively minor procedures. At discharge, providers were encouraged to offer nonaddictive alternatives to opioids for managing pain, such as Tylenol, nonsteroidal anti-inflammatory drugs or other novel medications. If a physician decided an opioid prescription was in the best interest of a patient, the physician was encouraged to use the smallest effective dosage prescribed for three days or less.

For chronic pain patients and patients at risk of addiction, Geisinger recommended therapies such as rehabilitation, exercise, cognitive behavioral therapies, acupuncture, yoga and tai chi rather than

opioids. That recommendation was supported by a study published by two Geisinger palliative care physicians that determined opioid therapy to treat chronic pain sometimes did more harm than good. Besides the risk of addiction, the researchers cited depression, impaired wound healing, disordered breathing in sleep, fractures, improper functioning of the hypothalamus and pituitary glands and even death. (5)

Other initiatives included:

- Tracking documentation within the EHR and dashboard that shows providers reviewed the state-run Prescription Drug Monitoring Program, as mandated by the state, if they considered prescribing a controlled substance
- Documenting findings in the patient's medical records
- Integrating data from a pain app that measures physical activity, patient-reported pain and other metrics into the dashboard and the patient's medical record
- Enabling electronic prescribing for controlled substances, as of Aug. 23, 2017. By February, 2018, 74 percent of Geisinger's controlled medications were e-prescribed, with all 126 clinics using e-prescribing. Adoption had reached 82 percent in outpatient settings and 20 percent in in-patient settings.

**The Results**

Geisinger reported that it has reduced prescriptions for opioids by about half after launching these initiatives, from a monthly average of 60,000 opioid prescriptions to 31,000. They also reported e-prescribing for controlled substances created $1 million in savings within five months due to greater efficiencies. Geisinger plans to integrate the multifaceted approach for reducing opioid prescriptions across the enterprise.

They are continuing to look for other innovative ways to address the opioid crisis in Pennsylvania. For instance, Geisinger has pioneered an opioid takeback program, which gets unused opioids out of a home medicine cabinet where they potentially could be abused. Families of a terminal cancer patient who had been prescribed opioids for pain and had died can use the program to return unused opioids. Or a patient who had been prescribed opioids, didn't need all of them but held onto the remaining pills as a crutch, can get rid of them through the program.

**A Model for Other Healthcare Organizations**

Although the dashboard may be unique to Geisinger, Geisinger's Chief Information Officer John M. Kravitz says other health systems and hospitals can generate similar reports on opioid prescribing through their EMR or clinical order entry systems. He and Richard Taylor, M.D., Geisinger's chief medical information officer, say the initiatives rolled out by Geisinger are broadly generalizable to healthcare systems across the U.S., and they encourage others to apply these strategies in their organizations. To succeed, though, organizations will need support from their physician leadership and a commitment to eliminating all unnecessary opioid prescribing.

**References**

1. Hedegaard, H, Warner, M., & Miniño, A. M. (2017). Drug Overdose Deaths in the United States, 1999–2016. NCHS Data Brief
2. Drug Overdose Death Data, Centers for Disease Control and Prevention, available at www.cdc.gov/drugoverdose/data/statedeaths.html
3. Analysis of Overdose Deaths in Pennsylvania, 2016. Joint Intelligence Report, U.S. Drug Enforcement Agency and the University of Pittsburgh
4. Maeng, D. D., Han, J. J., Fitzpatrick, M. H., & Boscarino, J .A. (2017). Patterns of Health Care Utilization and Cost Before and After Opioid Overdose: Findings from 10-year Longitudinal Health Plan Claims Data. *Substance Abuse and Rehabilitation*, 8:57-67.
5. Davis, M. P., & Mehta, Z. (2016). Opioids and Chronic Pain: Where Is the Balance? *Current Oncology Reports*, 18(12), [71]. DOI: 10.1007/s11912-016-0558-1