

Getting to zero harm in controlled substance prescribing: Increasing the accuracy of prescription compliance monitoring through enhanced drug testing support



UNIVERSITY HOSPITALS CLEVELAND, CLEVELAND, OHIO | USA

45.5% increase in the number of drug screen orders in the ambulatory setting with appropriate confirmatory testing

113% increase in the number of physician offices providing appropriate opiate/benzodiazepine prescription compliance monitoring.

Identification of false positives in **20%** of presumptive positive drug screens and **4%** of specimens identified as diluted

The burden of the opioid epidemic in the U.S. cannot be overstated, with drug overdose deaths steadily climbing over the past five years. In 2021, the Centers for Disease Control and Prevention recorded 107,622 drug overdose deaths – a 15% increase from 2020, with opioids accounting for the largest proportion of fatalities.

As responses to the crisis have evolved at the national, state and regional levels, healthcare organizations and their providers have been instrumental in developing local responses to provide safe care to patients while also maintaining compliance with evolving regulatory and legal guidelines for opioid prescribing.

Assessing the challenge and driving change

At Cleveland-based University Hospitals, a process was in place for monitoring controlled substance use among patients, but there were significant limitations, according to Jaime Noguez, Director of Chemistry and Toxicology at University Hospitals Cleveland Medical Center. For example, unclear language in the electronic health record (EHR) was an obstacle for physicians to order the correct tests and accurately interpret results. Additionally, the traditional screening method only detected the broader drug class, not the exact drug, which led to difficulties for clinicians in identifying the specific drug(s) patients were taking. To pinpoint the individual drugs being taken by a patient, a second, more advanced test was required. Due to this added step, sometimes necessary follow-up testing was missed. Importantly, this potential gap prevented clinicians from making fully informed treatment decisions, posing a risk to patient safety and to maintaining compliance with legal and regulatory guidelines for opioid prescribing.

An iterative process for improved screening

Upon identifying these process barriers, University Hospitals Pain Management Institute and Department of Pathology responded by creating a prescription compliance monitoring program as part of a larger statewide strategy to combat opioid addiction in Ohio. An interdisciplinary committee of organizational stakeholders – including emergency medicine, addiction recovery services, primary care and pain management – was convened to help enhance their controlled substance monitoring program. This included determining which illicit controlled substances should be incorporated into testing panels, as well as providing input on how tests are displayed in the EHR to physicians.

In addition to establishing the committee, University Hospitals gathered real-time feedback from physicians through the implementation of a consultation phone line. Physicians were encouraged to call the line with questions about lab ordering and results, which guided the process improvements.

Through this iterative exchange of ideas, University Hospitals rolled out an initiative that equips physicians with laboratory insights to assess controlled substance use among patients efficiently and accurately. Specifically, the program establishes urine drug screening as a tool to help identify potential substance use disorder and confirm appropriate medication use.

“When providers are prescribing controlled substances to their patients, it is imperative that they can assess the entire clinical picture to feel comfortable and confident to safely prescribe. To that end, urine drug screening is one of the integral tools to complete a thorough assessment,” said Heidi DeVecchio, Ambulatory Market Manager, Quality, at University Hospitals Physician Services.



(Left to right) Christine Schmotzer, Jaime Noguez, Sean Hoynes, Heidi DeVecchio, Jeanne Lackamp

Through the new program, when a traditional drug test generates a positive result, the system automatically orders a secondary drug screening that identifies specific drugs, including illicit substances. This automation enables a physician to quickly determine if the patient is taking only what has been prescribed.

“We have a very extensive panel of substances that we are testing for,” said Noguez. “It is representative of the prescribing environment, but also the illicit drugs that are being used in our region, so physicians can feel confident that we’re truly capturing the relevant drugs used.”

Outstanding outcomes for scalable impact

The program has led to a three-fold increase in the number of patients who receive comprehensive and appropriate controlled substance testing and prescription monitoring. Additionally, University Hospitals has achieved 98% compliance for appropriate follow-up of positive test results, decreased drug testing costs to patients by 25%, and increased patient convenience by reducing repeat collection for 25% of patients. Importantly, clinical compliance with the testing guidelines has increased by 35%, with physicians reporting increased confidence in their ability to use drug testing as part of their care for patients who are prescribed controlled substances.

The success of the program is in part due to clinicians across the health system being included in its development and implementation. Dr. Sean Hoynes, a family medicine physician at University Hospitals, shares, “As a prescriber of controlled substances for my patients, I find that I am able to confidently prescribe the controlled substance when I am using the program.”

Opening the door to vital communication between patient and prescriber

Hoynes discusses with each patient he prescribes a controlled substance that he will be testing their urine to ensure they are taking only the medication prescribed.

Explaining the program usually opens a dialogue between Hoynes and his patients to discuss other prescribed medications they are taking and illicit or recreational drugs they are using. This communication gives Hoynes the opportunity to explain to his patients how the combination of drugs could cause an accidental overdose or unwanted side effects. It also opens up the opportunity for Hoynes to refer patients to an addiction recovery specialist, when needed.

This critical improvement reduces missed opportunities for follow-up while also enabling a personal touchpoint with the clinician for a greater impact on patient health.

In addition to clearer language when physicians order and receive lab results, University Hospitals has kept open the physician consultation line and created an internal website that contains information about controlled substance prescribing and physician guidelines. The resources have helped physicians gain greater confidence, ease and accuracy in prescribing.

“We made it very easy for physicians to know what test to order when prescribing a certain medication,” Noguez said. “By taking the guesswork out of it, the program enhanced compliance to the guidelines and mitigated risk for the hospital – while increasing the number of patients receiving comprehensive and appropriate controlled substance testing and prescription monitoring.”

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