

## Implementation of Urine Fentanyl Testing

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**Background & Significance:** Emerging new substances of abuse have highlighted the limitations of current toxicology testing practices. Each substance of abuse poses unique challenges in providing care for our patients. At our community hospital we only had the ability to screen for fentanyl by utilizing a third-party lab. Results would be obtained after multiple days and impacted our ability to adapt our plan of care for a patient prior to their discharge.

**Clinical Question:** Would implementation of urine fentanyl testing on patients at a community hospital increase the number of tests ordered in comparison to when the organization was required to send samples to a third-party lab?

**Evidence:** According to the Vermont Department of Health in 2021, fentanyl was related to 93% of the overdose deaths. Per our local law enforcement drug task force, most substances being abused and seized are laced with fentanyl. After encountering two pediatric sibling patients with acute overdose in our Emergency Department, it became evident that we were missing key testing capabilities. The result of one urine toxicology test was negative for opiates; however, that child responded to naloxone. Due to the synthetic composition of fentanyl, we discovered it was not being detected on a standard opiate drug screening. Having the ability to capture fentanyl on our urine drug screening is vital.

**Intervention Implementation:** Once the question had been identified, we implemented a fentanyl testing pathway that allowed our providers to add fentanyl to their standard urine drug screen utilizing a third-party lab. We began by collaborating with the laboratory leadership team, shared governance, unit leadership, our chief nursing officer, and providers to share our concerns about the testing limitations at our rural community hospital. As a team, we developed a plan to implement fentanyl testing by acquiring the equipment, reagent, documentation, training, and financial support. Initially, we utilized a third-party lab until June 6, 2023, when our facility implemented fentanyl testing in the lab at our community hospital.

**Evaluation:** Our goal was to increase the number of fentanyl tests ordered. The lab is providing the number of samples sent to the third-party lab from March–May 2023 during our pre-implementation phase and the number of tests completed at our facility from June-August 2023 after the implementation of fentanyl testing at our facility.

**Results:** Preliminary data suggests an increase in fentanyl tests ordered after implementation.

**Significance/Conclusion:** Implementation of fentanyl testing at our facility will allow results within 1-24 hours in comparison to 3 or more days when sent to the third-party lab. With this reduction in turnaround time, appropriate plans of care can be established prior to discharge, including referrals and discharge planning, provide education, resources for harm reduction, and involvement of family services when appropriate. Ultimately this should positively impact the health of our community.