Kingston Health Sciences Centre
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ANNOUNCEMENT

Date:	October 18, 2021
Subject:	Folate Testing and Fentanyl Urine Drug Screen

Folate Testing

Background

Since 1998, when the U.S. and Canada mandated that foods with processed grains be fortified with folic acid, there has been a significant decline in the incidence of folate deficiency.

For the rare patient suspected of having a folate deficiency, simply treating with folic acid is a more cost-effective approach than blood testing.

While red blood cell folate levels have been used in the past as a surrogate for tissue folate levels or a marker for folate status over the lifetime of red blood cells, the result of this testing does not, in general, add to the clinical diagnosis or therapeutic plan.

Practice Change

On November 1, 2021, KHSC Laboratory will discontinue in-house routine testing of Folate.

This practice change is in keeping with the Choosing Wisely test utilization statement of the American Society of Clinical Pathology.

Do not order red blood cell folate levels at all. In adults, consider folate supplementation instead of serum folate testing in patients with macrocytic anemia.

In the event of a rare instance where folate testing is deemed necessary, requests are to be made in consultation with the Hematopathologist on call.

For questions or concerns to this practice change, please contact Dr. David Good (david.good@kingstonhsc.ca; 615-533-2823)

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Memorandum
Subject: Folate Testing and Fentanyl Urine Drug Screening

Fentanyl Urine Drug Screen

Background

The laboratory of KHSC has validated an assay for clinical use that detects fentanyl and norfentanyl in the urine. Validation means the laboratory has determined the assay is as described by the vendor. Thus, this assay has a cut-off for detection of fentanyl at 20 ng/mL and norfentanyl at 20 ng/mL in urine samples. Norfentanyl is the most prevalent form of fentanyl excreted in the urine.

This cut-off is similar to several point-of-care devices used in opioid replacement clinics and pain management clinics, but it has a higher cut-off than typically achieved by more specialized and less rapid testing done using chromatography and mass spectrometry equipment, which is typically 1 – 2 ng/mL.

The consequence of the 20 ng/mL detection limit for norfentanyl and 20 ng/mL detection limit for fentanyl is a detection period of 72 hours post-ingestion of the drug. Additionally, a urine sample collected from a patient who received a low dose of fentanyl (for example, single use < 200 micrograms of fentanyl) would not be expected to have a positive result using the testing at KHSC for fentanyl. While dosing is not often explicitly quantifiable with illicit fentanyl use, as a comparison, it is expected most users of illicit fentanyl would have a positive fentanyl result during the time course of the clearance of the drug post-last use and if tested using the KHSC assay.

The KHSC assay is only designed for detection of fentanyl use and it is not known if this assay can detect for use of other fentanyl analogs. Additionally, it is not expected that this assay will detect the nitazene class of opioids.

Going Forward

The fentanyl screening test will be done in addition to the other tests in the urine drug screen test when a urine drug screen request is made (UFENT).

It is highly encouraged to use of the urine drug screen (inclusive of the fentanyl screening test) within the following framework:

1. Like all screening tests, the urine drug screen does not have the performance characteristics to act as a rule-in or rule-out test. It is not a diagnostic test.
2. The urine drug screen testing should not be used for forensic purposes. The samples received by the laboratory do not comply with chain-of-custody requirements.
3. Research and practice has shown that urgent urine drug screens do not alter the management nor obviate the need for other investigations in ED patients.
4. Research and practice has shown that urgent urine drug screens do not alter the management of patients with psychiatric symptoms and is thus not required in patients awaiting psychiatric consultation or admission from an ED.
4. The management of most poisoned patients, whether from licit or illicit substances is supportive care – support and maintenance of airway, breathing and circulation.
5. Drug screens do not direct antidote therapy. The indications for antidotes are:
    a. Specific blood concentrations – for a limited group of poisons such as acetaminophen (acetylcysteine).
    b. Presence of a specific toxidrome – such as miosis, bradypnea and decreased level of consciousness (naloxone).

Please contact Dr. Curtis Oleschuk, Service Chief Clinical Biochemistry (KHSC extension 2836) if you have any questions or concerns.