Reasons not to use standard cutoffs
Defining the cutoff according to a method’s analytical sensitivity offers several advantages. An increase in positivity rate will be seen for many drugs and/or metabolites using the lower limit of quantitation (LLOQ) or lower limit of detection (LLOD), which is particularly helpful in detecting aberrant drug use. A recent study in our laboratory, where cutoffs are validated at the LLOQ or LLOD depending on the drug, demonstrated an increased rate of detection of all illicit drug combinations (13).

Furthermore, using the LLOQ or LLOD will reduce the number of false negative results associated with dilute urines or matrix effects. Pesce et al. reported an approach to define cutoffs and a target for the LLOQ in which they calculated the lower 2.5% of drug concentrations in patients positive for several medications, which may assist other laboratories switching to LC-MS/MS (17).

Result Interpretation
Misinterpreting UDT can have important negative consequences, and laboratory directors must partner with providers to avoid adverse outcomes. Patients may be falsely accused of aberrant behavior, potentially resulting in discontinuation of necessary medications. Moreover, illicit drugs, undisclosed prescription use, or simulated compliance—patients diluting their urine or dropping their medication directly into their urine—may go undetected if results are misinterpreted, perpetuating the opioid crisis.

The scientific literature suggests that both attending and resident physicians from a variety of specialties do not understand opioid metabolism or cross-reactivity of immunoassays and are therefore not proficient in interpreting UDT (18,19). As laboratories transition to definitive testing and possibly reporting both free and glucuronidated drugs, we postulate this knowledge gap will widen. Consequently, clinical laboratory professionals need to educate providers so that they interpret results correctly.

At a minimum, laboratories performing this testing should have a director with expertise to assist providers in interpreting results (9). Laboratories might offer formal clinical pathology consultations for more complex cases in which medical records need to be reviewed.

In our opinion, laboratories should provide more systematic interpretations of results in conjunction with medications. This will ensure providers can effectively manage patients. Importantly, these interpretations must be documented in patients’ medical records.

Conclusions
Until we have definitive guidelines on how to approach whether quantitative or qualitative results should be reported, whether specimens should be hydrolyzed prior to analysis, and whether standard cutoffs should be utilized, clinical laboratories need...