sharetek

SMARTER DRUG TESTING
THE EVIDENCE

THE PROBLEM: THE STATUS QUO

- Drug testing is a common and routine practice for employment, athletic teams, as a part of substance use treatment and legal sentences following substance related citations.

- As many as six million urine-based drug tests are performed each year by Quest Diagnostics alone and workplace drugs tests saw an all-time high positivity rate in 2022[1] which is expected to climb in coming years.

PRIVACY VIOLATIONS IN OBSERVED COLLECTION

- Today, drug tests may be done by a trained collector who visits your workplace to collect specimens, or employees may go to a certified laboratory. To ensure accuracy, the specimen's chain of custody must be continuous from receipt until disposal (SAMHSA, 2022).[2] This process adds unnecessary administrative burden, compliance, validity concerns and re-work due to spoiled samples, breaks in the chain of custody etc.

- Today, observed sample collection is wrought with personal privacy violations and cumbersome processes to ensure validity of sample collection, including but not limited to[3]:
    - Some programs insist that a staff member of the same sex accompany a client into the bathroom to observe urine collection.
    - Others find that monitoring through an open door and having clients leave packages and coats outside are sufficient.
    - A sink that is separate from the toilet area also discourages attempts to dilute samples (Bureau of Justice Assistance 1999).
    - Many programs use temperature strips to make certain that urine specimens are produced on site and are body temperature.
    - Tests of creatinine or specific gravity can determine whether a sample has been diluted with water or the client is consuming excessive fluids to lower the concentration of drugs below detectable levels (Preston et al. 1999).
    - Some require a private lavatory should be used for collecting samples, with no access by staff or the general public (OJP, 2022[4]).

- Others require A blue or green coloring agent, such as a toilet bowl cleaner, or food coloring, should be added to the water in the commode, or the bowl itself (OJP, 2022[5]).
- The collector must **observe** and process only one collection at a time (OJP, 2022[6]).
- Prior to obtaining a specimen from any defendant, pretrial services personnel must confirm the defendant's identity (OJP, 2022[7]).
- Defendants should be asked to remove outer garments, such as coats and jackets (OJP, 2022[8]).
- When possible, defendants should roll up their sleeves, and wash their hands with cold water before submitting a specimen (OJP, 2022[9]).
- The defendant's hands must be thoroughly dry before proceeding (OJP, 2022[10]).
- **These procedure subject specimen providers to inhumane exposure and violations of their privacy**. These requirements are antiquated and unnecessary violations of personal privacy.

EASY SPECIMEN TAMPERING

- Furthermore, Information about how to beat the drug testing system is widely available.
  - Web sites advertise inexpensive products that can be added to urine specimens to absorb toxins as well as herbal remedies for consumption for a few hours before testing to cleanse the urine.
  - Concentrated, “clean” specimens can be purchased for mixing with warm water at the test site.
  - A variety of low-cost, self-testing kits also are available to preview likely results from more formal testing procedures (SAMHSA/CSAT 2006).

- Disadvantages of Urine Drug Testing (ASAM, 2017)[11]:
  - There are 2 major drawbacks to UDT:
    - (1) the ease of sample tampering through substitution, dilution, and adulteration,
    - (2) the invasiveness and resource intensity of witnessed sample collection, the primary means of countering sample tampering.
  - If appropriate measures to reduce urine sample tampering are not able to be taken and tampering is of high concern, providers should consider testing an alternative specimen. The use of alternative matrices to complement UDT

could take place in a number of ways, including on a clinic-wide basis by rotating the collection of specimen types (see Matrix advantages and disadvantages, p. 7) or on an individual collection by- collection basis.

SCREENING TESTS ARE LESS RELIABLE

- There are two categories of urine tests (SAMHSA/CSAT 2006):
  - **Screening tests** - These detect only the presumptive presence or absence of a class of drugs in the urine specimen, return results rapidly, are relatively inexpensive ($1 to $5 per assay), can be set to detect low concentrations of drugs (have high sensitivity), and are relatively simple to perform. But these screening tests… do not distinguish specific drug metabolites (only groups), provide only qualitative results (yes or no), and may mistake other chemically similar medications, OTC preparations, or substances for the target drug class (Preston et al. 1999).
    - Simple point of sale tests, such as urine dipstick technologies, are prone to lower accuracy and precision (ASAM, 2017)[12]
  - **Confirmatory tests** - These provide more definitive information about the quantitative concentrations (nanograms/milliliter) of specific drugs or their metabolites in urine specimens and are more accurate than drug screens (have higher specificity and sensitivity). They are much more expensive (up to $100 per assay), technically complex, labor intensive, and time consuming—often taking days to complete.
    - For high stakes testing (eg, testing that will inform an irreversible clinical decision), formal laboratory analysis remains the ‘‘gold standard’’ testing methodology (ASAM, 2017)[13]
    - **Sharetek offers the most comprehensive and accurate tests, using confirmatory testing methods.**

- Urine-Testing Techniques
  - Most screening tests are immunoassays that take advantage of antigen-antibody interactions—using enzymes, radioisotopes, or fluorescent compounds—and compare the specimen with a calibrated quantity of the substance being tested (Bureau of Justice Assistance 1999).
  - **Sharetek uses more advanced liquid chromatography-mass spectrometry (LC-MS), which couples two chemistry techniques to achieve more accurate results14.**

THE SOLUTION: SHARETEK SMARTER DRUG TESTING AND SPECIMEN VALIDATION

ASAM ENDORSED SMARTER DRUG TESTING

- The American Society of Addiction Medicine (ASAM, 2017) advocates for the use of 'smarter drug testing' which includes[15]:
  - "Smarter testing means improved sample collection and detection technologies to decrease sample adulteration and substitution. Designing appropriate steps to respond to the efforts of individuals trying to subvert the testing process must be considered when evaluating the costs/benefit ratio of different testing matrices, recognizing that such countermeasures may have a dramatic impact on the usefulness of testing.
  - Smarter drug testing means careful consideration of the financial costs of testing in relationship to the value and in many cases, medical necessity, of the test results. It means considering the advantages and limitations of the many testing technologies available today[16]."
  - ''Smarter'' drug testing means that providers actively address these factors in the process of choosing a drug test, rather than defaulting to perceived organizational or industry norms[17].
  - **Definitive testing should always include specimen validity** (ASAM, 2017)

- In response to the COVID-19 public health emergency, the American Society of Addiction Medicine (ASAM) recommended (ASAM 2020[18]): The COVID-19 pandemic and related physical distancing practices may go on for many months. Treatment providers should explore options for drug testing at a distance… such as using oral fluid-based tests and/or home breathalyzer tests monitored via telehealth.

PROTECTING PRIVACY AND DIGNITY IN DRUG TESTING

- Sharetek offers, a patented at-home urine drug testing service that utilizes DNA authentication technology known as Tox Direct. **The service allows patients, who are directly sent kits, to provide urine samples from home unobserved**.

SPECIMEN VALIDATION IN CLIA CERTIFIED LABORATORY

- All Sharetek smarter drug testing is completed in a CLIA certified lab, meeting the highest standards of the federal government.
- **Sharetek utilizes a patented process to validate urine specimens using 16 single nucleotide polymorphisms (SNP).** This method efficiently utilizes the minimum number of pairs in DNA to identify a match.
- **Sharetek utilizes a patented process to detect synthetic urine, eliminating specimen validation concerns.** The samples are DNA authenticated to the donor, and the screening identifies attempts to substitute synthetic urine, as well as pill scraping, dilution and oxidizer adulteration.

COMPREHENSIVE TESTING AND FAST RESULTS

- The test detects 110 drugs of abuse, medications and metabolites with a detection window of three to seven days.
- A comprehensive report with clear, easy to read results by substance, are provided with 48 hours.

Features	 Sharetek Kit	 Urine Collection Cup	 Saliva Collection	 Blood Sample
Can it be cheated?	NO. Worlds first Un-Cheatable drug test. Detects dilution, stored clean urine, frozen urine, and substituted sample.	With fake urine designed specifically for cheating drug tests (easily found online) With somebody else's pee. Easily manipulated with flushes and dilution.	With mouthwash masking agents (easily found online) Results altered with lemon juice, ice, Altoids, etc.	With detox pills and beverages (easily found online) With Flushing.
How many substances tested for?	We test for over 100+ substances. This is the most comprehensive toxicology test on the market. We test for molecules and metabolites.	1-12	6-14	60
How accurate is it?	This is a lab-based test reviewed by a PhD when resulted for accuracy. Clients receive a report showing levels and frequency of use.	Extremely inaccurate. High false positive and false negative rates. Cannot determine frequency of use. Cannot measure level of use.	High rate of false positives. Requires frequent testing to be accurate. Extremely short detection window. Only 48 hour look back.	Accurate only if the complex procedure of keeping the sample refrigerated and the chain of custody are followed. Expensive procedure that requires a needle.
How convenient is it?	Requires NO observing party. Requires NO trip to lab. Requires NO interpreting of lines on a cup. Test from anywhere.	Must be observed by another person to prevent manipulation. Stigmatizing to be watched while peeing.	Can be performed at home, but only valid if the test taker is being watched while providing the sample.	Requires scheduled lab visit. Lobby waiting room. Slow results back. Needles in the arm.
How easy are the results to read?	Report is color coded with drug descriptions for easy-to-read results. Intentionally designed for non clinicians to understand.	Difficult to read and understand. (i.e., Is there a line or not?)	Somewhat difficult to read. Small colored lines. Often faint lines leading to confusing.	Must be interpreted by a professional. Make another appointment.

END NOTES

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