



Quattrone Center for the  
Fair Administration of Justice  
UNIVERSITY of PENNSYLVANIA

## POLICY BRIEFING

### Quattrone Center Study Identifies Presumptive Field Drug Tests as Likely the Largest Generator of Wrongful Convictions in the United States -

#### Policy Implications for Criminal Legal Stakeholders

The widespread use of presumptive field drug tests is generating tens of thousands of wrongful arrests in which innocuous substances are misidentified as illegal drugs, leading to the arrest and conviction of innocent people. A recent study suggests that this is the largest generator of wrongful convictions in the country and has a disproportionate harm on communities of color. Moreover, the risks associated with these tests are well-known and well-documented, exposing jurisdictions around the country to the risk of civil liability and class action litigation. This document explains the policy issues related to the use of these tests and suggests policy changes for various stakeholders that could prevent thousands of inaccurate arrests and convictions and potentially save jurisdictions that use these tests millions of dollars in civil liability every year.

Just last month, Florida's Jacksonville Sheriff's Office (JFO) discovered that field-testing kits for cocaine had produced false positives and immediately discontinued their use. When the owner of the cocaine test kit company used by JFO was asked about the false positives, he responded that this was not the first time they had false positives and that **this is the "nature of the beast."** In another interview, he stated, **"I have no sense of the scale.** I don't know if it's been one case or five. But I can't imagine it's horribly widespread."

In fact, a national survey conducted in 2023 by the Quattrone Center suggests that tests like these – presumptive drug tests used in the field vs. controlled tests in a crime lab – are used in half of America's 1.5 million drug arrests and that the rate of error from these tests is far greater than ever imagined by the many police agencies that regularly use them. As a result, it appears that:

- **These drug tests are the single largest known cause of wrongful convictions in the United States by a huge margin;** and
- **On a per capita basis, Black people are falsely arrested as a result of inaccurate drug field tests at a rate 3X higher than white people.**

People might understandably wonder why the use of an unreliable field test is of such great concern if a lab test in a controlled setting can confirm or discredit a presumptive test. The problem is that the confirmatory tests are often not conducted because the threat of detention during the time in which a person would wait for a confirmatory test is too much for most people to bear, causing innocent people to plead guilty to avoid jail time and its immediate consequences, like loss of job, housing, or parenting rights. That plea agreement generally sacrifices any opportunity to conduct a

confirmatory test of the supposed drug in an accredited forensic laboratory and saddles the person forever with that conviction on their record. The implications are stark: in the United States, 95% of cases are adjudicated through plea agreements, and in the Quattrone Center survey, 89% of prosecutors indicated they accept guilty pleas in the absence of a confirmatory drug test.

**According to the National Registry of Exonerations, 531 of the 3,396 known exonerations involved a wrongful drug arrest for substances that were not drugs.** These numbers represent the tip of the iceberg. After all, up to this point, it has been rare for a jurisdiction to audit its own presumptive field test results. But when it does, the results can be devastating.

- In Harris County, Texas, officials chose to do just that – in 2016, they lab-tested substances that had previously been presumptively tested after people charged with drug possession had pleaded guilty. To date, the National Registry of Exonerations has counted more than 100 exonerations of drug convictions in which a person originally pled guilty. More than 70% of those exonerated people were Black, despite only 20% of the population being Black. (There are about as many cases in which, based on a post-plea lab test, the Harris County District Attorney’s Conviction Integrity Unit determined that defendants had pleaded guilty to crimes they didn't commit - but the defendants could not be located and therefore could not be exonerated. And, of course, there are other cases in this pattern in Harris County that have not been found at all.)
- In 2018, the Savannah Police Department performed its own audit of 42 drug arrests where a presumptive test was used, revealing a false positive rate of 15.4%, meaning that 6 of the 39 positive field test submissions tested negative for drugs and 3 of the 42 were determined to be false negatives when tested later in a lab. This prompted local reporters from the FOX 5 I-Team in Atlanta to conduct their own statewide audit. They obtained every negative test from the state crime lab and confirmed 145 false positives for a range of narcotics, including heroin, ecstasy, cocaine, and methamphetamines, for one year alone. (Georgia remains the only state where presumptive field tests are admissible at trial for non-marijuana cases.)

Police departments that continue to use these error-prone presumptive tests will continue to see high rates of wrongful arrest and wrongful conviction, with people of color overwhelmingly bearing the brunt. It will also lead to the deterioration of the community’s trust in law enforcement and civil exposure to jurisdictions that deploy these tests in their communities.

To reduce or prevent the prevalence of wrongful convictions generated by the use of the presumptive field drug test and offer other protections to the criminal legal system, the Quattrone Center extends the following policy considerations to various stakeholders:

### **POLICE AGENCY/SHERIFF’S OFFICE:**

1. Consider the impact of:
  - a. The very real possibility of securing wrongful arrests, incarcerations, and convictions through the use of a test that has been shown to have an unacceptably high error rate.

b. The fiscal implications of a potential class action or civil lawsuit centered on the persistent use of an unreliable drug test (particularly if your police agency is self-insured). A large settlement is likely to take resources away from other policing priorities.

c. The persistent use of an unreliable field test on community trust and the public safety implications of an untrusting community unlikely to partner with law enforcement in helping to solve crimes.

2. If, after considering all of these factors, a police agency persists in using presumptive field drug tests, it should:

a. Conduct a confirmatory test of any substance recovered in an accredited forensic toxicology laboratory under controlled conditions prior to arrest or charging.

b. Coordinate with its forensic lab, whether it is internal or external, to conduct regular blind audits of cases where presumptive tests have been used to establish error rates in its given jurisdiction based on the type of testing kit employed, contextual factors, and conditions in the region.

Regardless of the method used to establish grounds for initial charges in simple possession drug cases (e.g., a presumptive test or observations by an officer), a policy of citation and release should be implemented. The coercive effects of pre-trial detention on defendant decision-making and case outcomes are well known: detention significantly increases the likelihood that innocent people will plead guilty to crimes they did not commit.

3. If a police agency persists in using presumptive field drug tests despite evidence of a high rate of faulty results, colorimetric field tests, which have the highest error rates of all the field tests, should be replaced with a more accurate and reliable field test technology. (While some argue that the more reliable tests are more expensive, a [recent study](#) indicates that “portable presumptive drug testing instruments and single-use, color-based tests have comparable costs over time, despite the large up-front price difference...because portable field testing instrumentation can be used for multiple years, the total cost of these instruments may be quite comparable to the total cost of color-based tests.”) Again, the use of any field test should be coupled with a “cite and release” policy to avoid detention of the innocent and coerced pleas.

4. For any kind of presumptive field drug test, officers should receive periodic in-service training on how to administer and analyze the results of the test, as well as environmental conditions that might impact the test’s validity. That training should explicitly include information about the frequency of false positive rates.

5. No drug testing training manual should encourage police to defend the presumptive drug test as “reliable” in any court proceeding.

## PROSECUTOR'S OFFICE:

1. If a “cite and release” policy has been implemented by law enforcement in your jurisdiction, and there are no deleterious effects (e.g., detention) that would otherwise potentially coerce plea agreements, consider a policy that rejects the acceptance of plea agreements based on presumptive field drug tests without first securing a confirmatory test from an accredited toxicology laboratory.
2. If your jurisdiction has not implemented a “cite and release” policy, consider offering only conditional plea agreements, which can be withdrawn in cases where laboratory tests invalidate presumptive field test results.
3. For those whose existing convictions for drug possession were based on an unconfirmed presumptive drug test, consider implementing an initiative that would expunge their convictions.

## CORRECTIONS OFFICIALS:

The use of presumptive drug tests is not limited to policing. Presumptive tests used in correctional settings have resulted in faulty results in jails and prisons, leading to punishments ranging from solitary confinement to the loss of good time credits. These tests have had substantial negative effects on people falsely accused of drug possession behind bars and promise to invite civil litigation like the class action lawsuit filed by people incarcerated by the Massachusetts Department of Correction based on faulty drug tests.

1. Corrections officials should consider abandoning the use of a presumptive drug test. If it still elects to employ presumptive field tests, it should consider abandoning the use of colorimetric tests, which produce the highest error rates.
2. Any substance recovered should receive confirmatory testing in an accredited forensic toxicology laboratory under controlled conditions before any sanction is levied against an incarcerated person based on the presumptive possession of drugs.
3. Corrections officials should coordinate with their forensic lab to conduct regular blind audits of cases where presumptive tests have been used to establish error rates in its given jurisdiction based on the type of testing kit employed, contextual factors and conditions in the region.
4. For any kind of presumptive field drug tests, corrections officers should receive periodic in-service training on how to administer and analyze the results of the test, as well as environmental conditions that might impact the test's validity. That training should explicitly include information about the frequency of false positive rates.

## THE JUDICIARY:

1. Given the overall high rates of unreliability of presumptive drug tests, courts should consider making any unverified presumptive test inadmissible as evidence in any court proceeding. The California Superior Court did this in 2018, ruling that a subset of unconfirmed presumptive tests was inadmissible and that “there was no evidence...that the relevant scientific community would

agree that [these tests are] scientifically acceptable for making a determination that a substance is a controlled substance.”

2. The Judiciary should also consider the use of presumptive tests in correctional settings and consider issuing a ruling that prohibits unconfirmed tests from being used to sanction people behind bars. In Massachusetts, the Suffolk Superior Court issued such an opinion, noting “the overwhelming evidence before this Court is that the . . . test, by itself, is a highly unreliable means of determining whether a particular . . . item actually contains an illicit [substances].”

### CITY COUNCILS/COUNTY COMMISSIONERS/STATE LAWMAKERS:

Municipal, county, and state governments may also wish to take action, banning the use of presumptive field tests or, short of a pure ban, prohibiting, at a minimum, the use of particularly problematic colorimetric presumptive drug tests. Legislation that requires “cite and release” and conditional plea policies, as well as regular audits with publicly available assessments, should be considered if the tests are to remain in use. In instances where the error is identified in specific cases, the person convicted of the crime and their attorney of record should be notified through certified delivery of the error and consideration of restitution/ expungement, and a “clean slate” provision should be included.

### RISK MANAGERS/MUNICIPAL ASSURANCE GROUPS:

As we learn more empirical data about the inaccuracies of these tests, risk managers and insurers of police agencies, sheriffs’ offices, and correctional entities would do well to consider options for ensuring that presumptive field drug tests do not result in inaccurate incarceration and/or conviction for drug possession. Potential options might include increasing coverage rates for those agencies that employ the tests.

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For more information about how to advance policy and system impact in your jurisdiction, please contact the Quattrone Center’s Policy Advisor Rebecca Brown at [rebecca@maatstrategies.com](mailto:rebecca@maatstrategies.com).

[The Quattrone Center for the Fair Administration of Justice](#) is a national research and policy hub created to catalyze long-term structural improvements to the US criminal legal system.