






Clinical Drug Monitoring is a critical tool to help combat the **evolving drug misuse epidemic**

Monitoring patients for medication adherence can help:

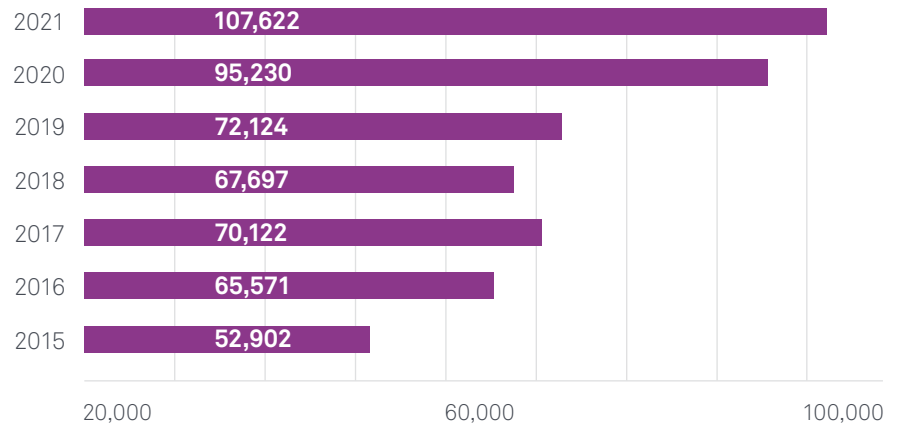
-  **Identify** prescribed and nonprescribed substances
-  **Prevent** harmful drug interactions
-  **Assist** in the early detection and prevention of substance use disorder

Drug overdose deaths have been increasing

Nearly 108,000 people died of drug overdoses in 2021, and about two-thirds of those deaths involved fentanyl or another synthetic opioid.¹ That's an increase of nearly 50% vs the same time period in 2019, pre-COVID-19 pandemic.



Overdose deaths in the United States, 2015-2021¹

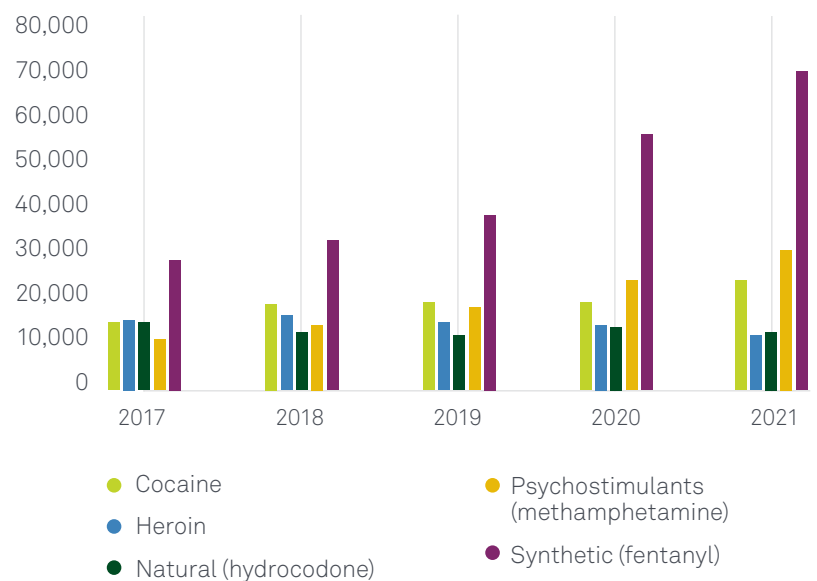


Overdose deaths involving synthetic opioids such as fentanyl, psychostimulants such as methamphetamine, and cocaine all increased between 2020 and 2021.²

These troubling data are compounded by new warnings from the DEA about a sharp increase in fake prescription pills containing fentanyl and methamphetamine.³

The COVID-19 pandemic has worsened drug misuse and the overdose death rate,⁴ and the CDC is calling for implementing strategies to combat this serious public health issue.⁵

Overdose deaths by drug class¹
(Multiple drugs can be involved/implicated in an overdose death)



There has been an increase in patients suffering from mental health conditions

State of mental health in America

1 in 4



people over 18 are prescribed mental health medications⁶ representing

nearly 50 million Americans

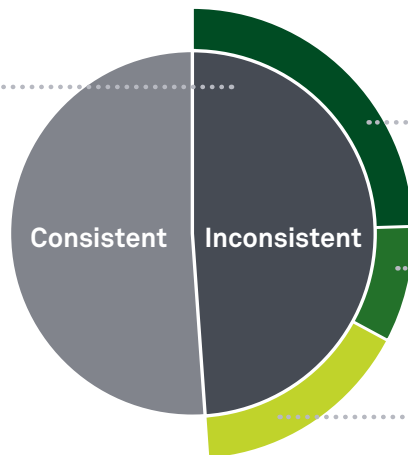
↑ **20%**

The average number of people taking prescription mental health medication **has gone up by nearly 20%** in the last year⁶

Data from Quest Diagnostics Health Trends[®] report show that nearly half of patients misuse their medications⁷

48%

of Quest's drug monitoring tests showed signs of misuse



Additional drugs are found

49% combined prescribed drug(s) with at least one other nonprescribed or illicit drug

Different drugs are found

18% did not show prescribed drugs, but were positive for at least one other nonprescribed or illicit drug

No drugs are found

33% did not show the prescribed drugs or any other tested drug

Drug misuse continues to be a leading public health issue. This may be attributed to a number of factors, including patients who:

- Don't follow prescription instructions
- Underestimate the addictiveness of pain medication and other controlled substances
- Assume prescriptions are safe under all circumstances
- Share prescription drugs with friends or family
- Allow other people access to medications by failing to secure them
- Increase dosage without a physician's approval
- Forget to notify their doctor of prescriptions from other healthcare providers
- Fail to consider the dangers of dangerous drug combinations when using prescriptions and/or illicit drugs
- Turn to counterfeit pills or purchase prescription drugs outside of a licensed pharmacy

The important role of **Drug Monitoring**

Using drug testing to monitor medication adherence can help to:

- Identify prescription drug use or non-use (medication adherence)
- Complement PDMPs to provide a fuller picture of patient status
- Identify substance use disorder early which can improve treatment success
- Identify potential drug-drug interactions and harmful poly-substance use
- Detect use of illicit substances
- Meet expectations of medical boards and regulatory agencies
- Maintain patient access to prescription therapies
- Identify drug diversion
- Mitigate risk and keep patients and communities safe while protecting clinician practices

Clinical drug testing is the only objective tool available to determine what substances patients are actually taking.

Numerous medical and public health organizations **support drug testing**

The American Association for Clinical Chemistry (AACC)

Academy-laboratory medicine practice guidelines: using clinical laboratory tests to monitor drug therapy in pain management patients (November 2017)⁸

“Based on level II evidence, baseline drug testing should be performed prior to initiation of acute or chronic controlled substance therapy. In addition, random drug testing should be performed at a minimum of one to two times a year for low-risk patients (based on history of past substance abuse/addiction, aberrant behaviors, and opioid risk screening criteria), with increasing frequency for higher-risk patients prescribed controlled substances.”

Centers for Disease Control and Prevention (CDC)

Guidelines for prescribing opioids for chronic pain (March 2016)⁹

“When prescribing opioids for chronic pain, clinicians should use urine drug testing before starting opioid therapy and consider urine drug testing at least annually to assess for prescribed medications as well as other controlled prescription drugs and illicit drugs.”

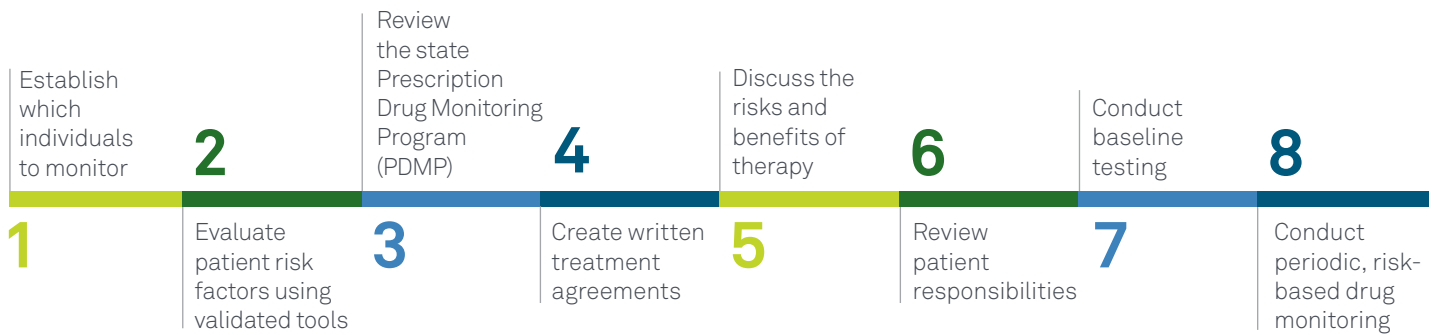
The American Society of Addiction Medicine (ASAM)

Appropriate use of drug testing in clinical addiction medicine, consensus statement (April 2017)¹⁰

“Drug testing should be a routine part of initial and ongoing patient assessment of recent substance use in all addiction treatment settings.”



Considerations for implementing a responsible drug testing protocol



Who to test

All patients:

- Prescribed controlled substances or scheduled drugs, as well as those suspected of or at risk for, drug misuse disorders
- With mental health conditions including anxiety, depression, schizophrenia
- With substance use disorder
- With medication-assisted treatment
- With chronic pain
- With ADHD



How to test

Best practices include presumptive testing and confirmation of positives with definitive testing.

This helps minimize over-testing while providing the right level of information needed to make informed decisions.

- **Presumptive drug testing** includes rapid point-of-care (POC) devices as well as more sensitive laboratory immunoassays. While presumptive testing provides rapid and inexpensive qualitative results, it often has lower sensitivity, which may lead to false-negative and false-positive results
- **Definitive drug testing** uses highly complex laboratory instruments to identify and quantify prescription medications, illicit substances, and specific parent drugs and their metabolites often missed by POC testing. Definitive testing provides greater sensitivity, can confirm or refute presumptive test results, and reduces the occurrence of false-positive/false-negative results



Which drugs to test for

Drugs should be selected based on patient history, treatment plan, health condition, and community usage.

Common drug class tests may include, but are not limited to, the following⁴:

- Alcohol metabolites
- Amphetamines
- Barbiturates
- Benzodiazepines
- Buprenorphine
- Cocaine
- Fentanyl
- Heroin
- Marijuana
- Methadone
- Opiates
- Oxycodone



Frequency of testing

Identify patients at high risk for drug misuse disorders, or those who may benefit from more intensive monitoring⁴

- Validated risk assessment and stratification
- Clinician's documented medical necessity
- Patient history, clinical presentation, and/or community usage

Why Quest?

Quest Diagnostics is far more than a lab. We're an industry leader in laboratory diagnostics and information services with clinical experts, resources, and services to help you meet your patients' needs. With Quest at your side, you can be confident you'll have the insights you need to better the health of your patients and your practice.



Health plan access. Broad health plan coverage with most major insurers makes testing more accessible and can encourage adherence



Convenient testing locations. Our expansive network of more than 2,250 nationwide Patient Service Centers makes it easier for patients to follow through with testing



Complete diagnostic menu. Our comprehensive menu of tests—from routine to specialized—was built with your varied needs and those of your patients in mind



Options for underserved patients. We offer a patient assistance program to help ensure that uninsured patients receive care, with each case handled personally



Seamless EHR integration. Manage all your lab testing needs with the comprehensive Quantum® Lab Services Manager platform; exceptional service and connectivity with over 800 EHR systems

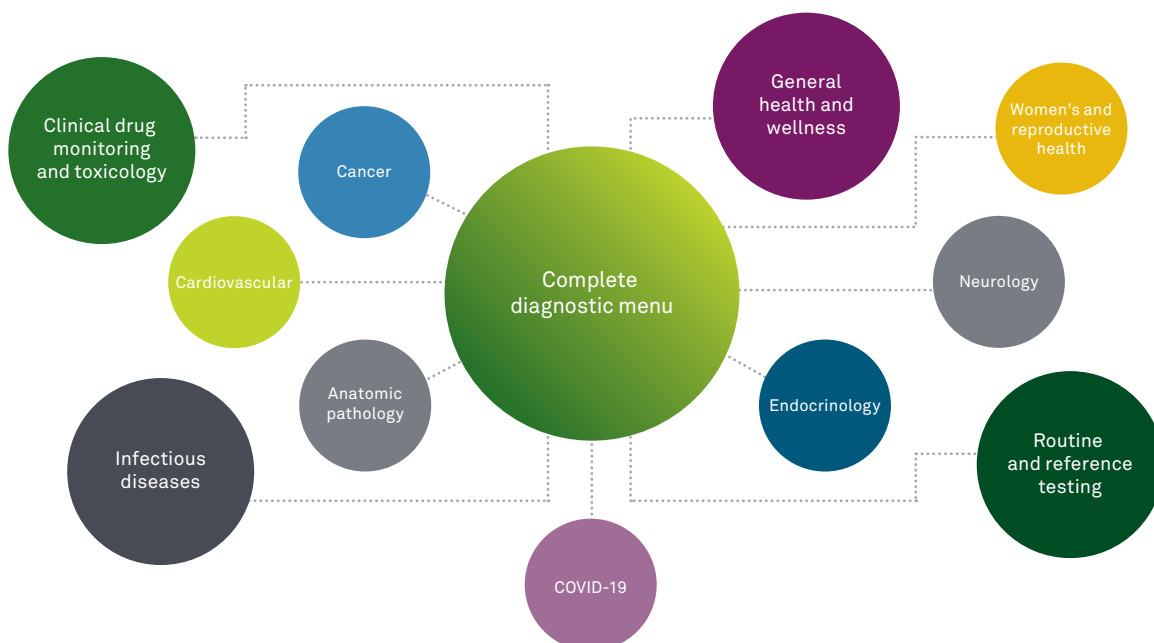


Access to expertise. With more than 650 MDs and PhDs, and dozens of genetic counselors, our team is available for consultation on test selection and results interpretation

Complete diagnostic menu

Lab testing for the primary care practice—from routine to specialty

Whether you need basic CBCs and thyroid testing as part of an annual wellness visit, infectious disease testing, or specialty cardiac or neurological testing, you can get it all with Quest Diagnostics Drug Monitoring. Our comprehensive menu helps you order the right test for the right patient at the right time, to help you make the right decisions for your patients' care.



Take advantage of our medMATCH® reports

Our medMATCH® reports are designed to provide actionable insights with the goal of “at-a-glance” interpretation. The reports provide a summary of your patient’s consistent and inconsistent results for prescribed drugs, and also include reporting on nonprescribed, inconsistent drugs. This allows you to have a complete view of drugs that your patient is taking, address any noncompliance issues, and receive alerts of any potential drug misuse or dangerous drug combinations.

medMATCH reports offer providers an intuitive, streamlined process from ordering to the delivery of the final report.

medMATCH® Drug Monitoring Report			
medMATCH Summary			
Legend	medMATCH indicates presence or absence of prescribed and non prescribed drugs. Prescribed drugs are provided by the ordering clinician.		
✓ = Consistent	Prescribed Consistent Drugs prescribed and detected	Prescribed Inconsistent Drugs prescribed but not detected	Not Prescribed Inconsistent Drugs detected but not prescribed
✗ = Inconsistent	✓ = Buprenorphine Nalox	✗ = Gabapentin	✗ = Ethyl Sulfate (ETS)
◆ = Prescribed			
Prescriptions reported by client with no testing ordered:		Zolpidem	
DRUG MONITORING, PANEL 8 WITH CONFIRMATION, URINE			
Alcohol Metabolites		POSITIVE	500 ng/mL
Ethyl Glucuronide (ETG)		NEGATIVE	500 ng/mL
Ethyl Sulfate (ETS)		100	100 ng/mL X INCONSISTENT
Alcohol Metab Comments: See Alcohol Metab Notes, LDT Notes			
Amphetamines		NEGATIVE	500 ng/mL
Benzodiazepines		NEGATIVE	100 ng/mL
Buprenorphine		POSITIVE	5 ng/mL
◆ Buprenorphine	101	2 ng/mL	✓ CONSISTENT
◆ Norbuprenorphine	105	2 ng/mL	✓ CONSISTENT
◆ Naloxone	110	2 ng/mL	✓ CONSISTENT
Buprenorphine Comments: See Buprenorphine Notes, LDT Notes			

medMATCH Summary expanded to 3 categories

Alerts clinician to nontested prescription drugs

Inconsistent results are flagged

Drug class-specific notes and lab-developed test (LDT) notes are consolidated and listed at the end of report

Consistent results for prescribed drugs are flagged



Quest Diagnostics Clinical Drug Monitoring

Rely on a trusted and reliable drug testing laboratory

Quest Diagnostics helps you protect your practice and patients with state-of-the-art testing, including an extensive menu for prescription pain medications, other controlled substances, and illicit drugs. With fast turnaround, accurate results, an industry-leading testing portfolio, and an array of on-staff toxicologists and medical experts, Quest is committed to working with you to provide the services, results, and insights you need at each stage of your patient's care.

Our state-of-the-art drug testing offering



Comprehensive menu—Prescription drugs used in treatment of chronic pain, ADHD, anxiety, depression, and substance use disorder; other controlled medications, and substances of abuse



Performance—High-sensitivity, low cut-off levels designed to detect drugs at typical dosage levels. Fast turnaround time and results confirmation



Reporting—Optional medMATCH results interpretation: “Inconsistent” when results do not match prescriptions provided by clinician. Quarterly practice-level data and analytics



Connectivity and service—Exceptional service and efficiency that align with your workflow. Connectivity with over 800 EMR systems



Expert support—Toxicology experts to answer questions on test selection and results interpretation at 1.877.40.RXTOX (1.877.407.9869)



The right price—In-network for >90% of lives nationwide and preferred lab network status with major health plans

Stay current in drug monitoring with new insights, blog posts, and updated resources available at [QuestDrugMonitoring.com](https://www.questdiagnostics.com/questdrugmonitoring)



Contact your Quest Diagnostics sales representative:
call **1.866.MYQUEST (1.866.697.8378)** or visit [QuestDiagnostics.com](https://www.questdiagnostics.com)

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