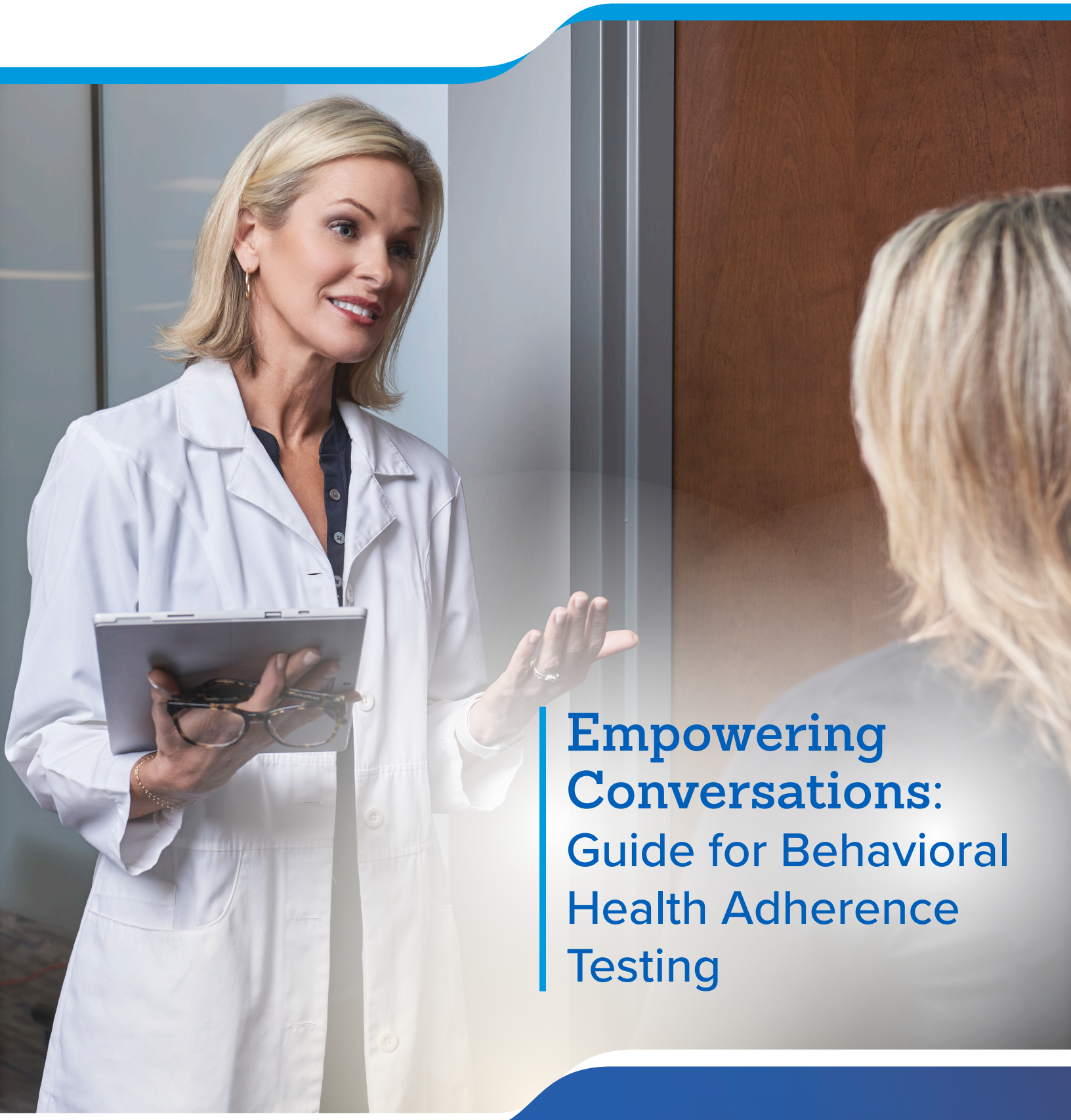

Empowering Conversations: Guide for Behavioral Health Adherence Testing

AEGIS® Sciences Corporation

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Objective

Provide a structured, standardized framework and practical guide to support meaningful discussions around medication adherence challenges in behavioral health settings by leveraging objective tools and evidence-based practices to enhance clinical decision-making and improve patient outcomes.

Purpose

To establish that definitive drug testing in behavioral health offers an objective, accessible, and clinically meaningful way to understand adherence and guide treatment decisions.

The Importance of Medication Adherence in Behavioral Health

Psychotropic medication adherence is a critical determinant of outcomes in behavioral health because it directly impacts symptom control, relapse prevention, and overall functioning.[1] In conditions such as schizophrenia, bipolar disorder, and major depressive disorder, inconsistent or missed medication use is strongly associated with symptom exacerbation, increased risk of relapse, and higher rates of hospitalization.[2-5]

Schizophrenia[7,8]

50–80%

Non-Adherence Rate

Bipolar Disorder[9]

44–50%

Non-Adherence Rate

Major Depressive Disorder[10]

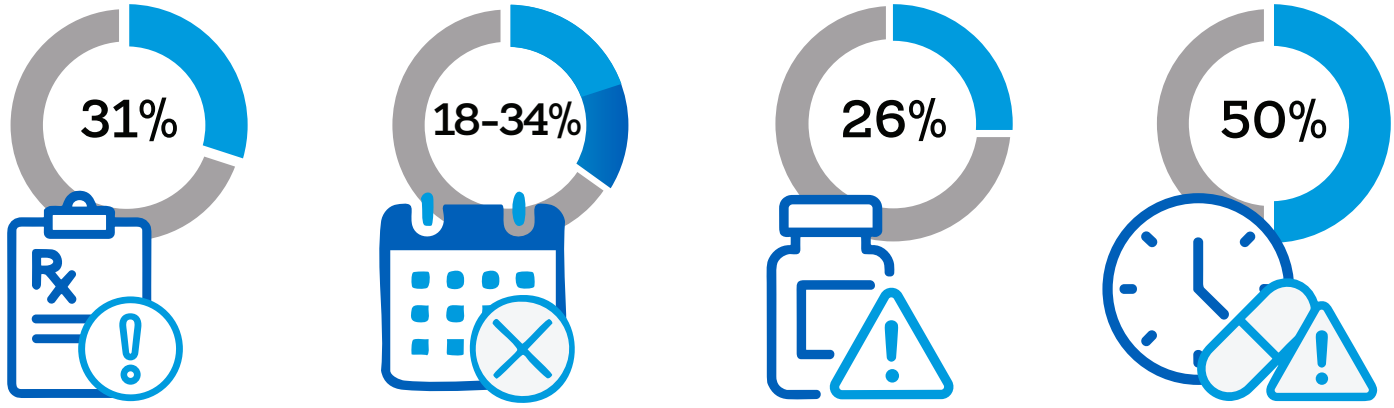
30–50%

Non-Adherence Rate

Medication nonadherence is common and can affect up to 50% of individuals with serious mental illness (SMI).[6] Nonadherence has been shown to increase healthcare utilization and costs and to worsen long-term functional outcomes, including reduced ability to maintain employment and social stability. It also introduces safety concerns including elevated risks of suicide, behavioral destabilization, and substance use relapse in co-occurring disorders. From a clinical perspective, self-reported adherence may complicate treatment decisions by making it difficult to distinguish between true medication inefficacy and inconsistent use, often leading to unnecessary medication changes or polypharmacy.

Patient self-report and clinician assessment have been shown to be unreliable in accurately measuring adherence, highlighting the value of objective assessments. When addressed in a structured, transparent, and non-punitive manner, adherence monitoring can also strengthen patient-provider communication and support more informed, collaborative care.[1]

Prevalence of Medication Nonadherence in Behavioral Health



Up to 31 percent never fill initial perscription

18 to 34 percent self-discontinue treatment early

Vulnerable populations adherence rates are as low as 26 percent

Nearly half not taking medications as prescribed

Medication adherence is a major, modifiable driver of poor clinical outcomes, including relapse, hospitalization, and reduced functional stability.[11,12]

Gaps in Traditional Approaches to Medication Adherence Assessment

Several traditional methods for assessing medication adherence in behavioral health have been utilized over the years; However, each possess well documented limitations that may lead to misinterpretation or suboptimal treatment decisions.

Patient self-report is one of the most common approaches to assess medication adherence. It has consistently been shown to be unreliable due to recall bias, social desirability bias, and lack of insight particularly in populations with SMI. Studies have demonstrated weak or no correlation between self-reported adherence and objective measures such as serum drug levels or electronic monitoring systems. Clinician assessment similarly lacks accuracy and often overestimates adherence.[1,4]

Pharmacy fill records provide only indirect evidence of adherence and cannot confirm ingestion. These records may also be misleading in cases of early refills, medication stockpiling, use of multiple pharmacies, or fragmented care across systems. This method of adherence assessment fails to capture non-prescribed medication use, diversion, or self-medication, which are particularly relevant in behavioral health populations with high rates of comorbid substance use.[13]

Lastly, certain treatment modalities may further complicate traditional assessment methods. Long-acting injectable (LAI) medications are often prescribed to ensure adherence, but may be complicated by missed or delayed injections, improper administration, or discontinuation between visits. These variations may not be apparent without systematic tracking methods in place. Transitions in level of care such as movement between inpatient, residential, partial hospitalization (PHP), and outpatient settings may also disrupt medication continuity and documentation, making adherence difficult to verify across care environments.[13-15]

These traditional approaches lack timeliness and objectivity, limiting the ability to inform real-time clinical decision-making. Collectively, these gaps highlight the need for more reliable, objective, and integrated methods to accurately assess adherence and guide treatment in behavioral health settings.

Role of Definitive Testing in Behavioral Health

Available literature supports the integration of definitive drug testing, particularly liquid chromatography tandem mass spectrometry (LC-MS/MS) based methods, into behavioral health practice as a critical tool to improve medication adherence, optimize treatment, and enhance patient outcomes.[1] Definitive testing addresses the gaps discussed previously by providing objective, specific, and sensitive identification of prescribed and non-prescribed substances. This critical information allows clinicians to detect nonadherence, partial adherence, polypharmacy, and unexpected drug exposure.[16-30]

Consensus recommendations emphasize definitive testing should be implemented both at the time of treatment initiation and during maintenance treatment, with structured patient education and feedback loops to maximize clinical utility and engagement. It has been shown that definitive testing improves clinical decision-making by accounting for several different barriers, including pharmacokinetic variability, polypharmacy, and high prevalence of drug-drug interactions.[16,28] As these barriers are highly prevalent in the behavioral health population, the importance of objective monitoring to individualize treatment and reduce adverse effects can not be overstated.

In contrast, presumptive immunoassay-based urine drug screens are limited by high rates of false positives and false negatives. The incidence of cross-reactivity with psychiatric, as well as many medical, medications and an inability to provide quantitative or drug-specific information significantly limits the utility of these tests in clinical decision-making. As such, these rapid tests are insufficient standalone tools and reinforce the need for confirmatory definitive testing to ensure accurate interpretation.[18] Comparatively, definitive testing allows for simultaneous detection of multiple medications and metabolites with high accuracy, even from small sample volumes. These tests are adaptable to both urine and oral fluid matrices which offers a less invasive testing option compared to traditional serum testing.

Overall, the literature supports definitive drug testing as an important clinical tool in behavioral health care. When combined with clinical context, patient engagement strategies, and ongoing monitoring, it provides a powerful, evidence-based approach to improving adherence, reducing risk, and enabling personalized psychiatric treatment.

Urine and oral fluid definitive testing are not appropriate substitutes for serum therapeutic drug monitoring of medications such as divalproex and lithium.

Barriers Eliminated by Adherence Testing

- Inaccurate pill counts
- Incomplete prescription refill histories
- Missed Long Acting Injectable (LAI) doses
- Incomplete or inaccurate individual recall
- Lack of medication continuity during transitions of care
- Inability to detect non-prescription substances

Aegis Behavioral Health Client Survey and Interview Results

Five providers were identified based on their utility of adherence testing in a behavioral health population. They were polled on their previous and current use of adherence assessments and were then scheduled for a follow up interview to discuss their experiences. The results of the poll can be seen in Table 1. These clinicians showed unanimous support for definitive drug monitoring, with 100% rating it as "very appropriate" for assessing medication adherence. Each provider reported observing strong clinical value in ongoing testing, with 100% reporting it as useful for guiding treatment decisions. Overall, the survey reflects broad agreement definitive testing is a practical and impactful tool in behavioral health care. Providers represented in this survey practice in outpatient settings and treat patients with a range of psychiatric conditions, including mood disorders, thought disorders, and anxiety disorders, with some also managing co-occurring substance use disorders. The most prescribed classes of psychotropic medications among respondents were antidepressants, antipsychotics, anxiolytics, sleep aids, and mood stabilizers.

Interviews with four of these behavioral health providers indicate prior to implementation at their practice sites, medication adherence assessment relied heavily on inconsistent external lab testing or unreliable point-of-care screens, often leading to adherence challenges and clinical uncertainty. Following implementation of definitive testing, providers adopted flexible, risk-based protocols commonly incorporating baseline testing and periodic or trigger-based follow-up. Testing is now integrated as a routine, collaborative, and non-punitive component of their care, often facilitated by clinical staff workflows that enable real-time discussion during visits. Providers consistently reported improved ability to objectively assess adherence, detect undisclosed substance use or drug interactions, and make safer, more informed prescribing decisions. While challenges include occasional delays in results, interpretation limitations, and potential patient resistance, these are often mitigated through transparent communication and individualized approaches. Overall, testing is viewed as enhancing patient safety, strengthening clinical decision-making, and in many cases improving trust and therapeutic engagement by fostering open, informed conversations.

Table 1: Aegis Provider Survey

Question	Ranking	Percentage of Responses
How appropriate do you feel drug monitoring is for assessing medication adherence in your patient population?	Very appropriate, Somewhat appropriate, Neutral, Somewhat inappropriate, and Very inappropriate	100% - Very appropriate
In your clinical practice, how often do you order adherence testing during initial evaluations for patients with mental illness (e.g., new symptoms, unclear adherence, co-occurring SUD)?	Routinely, Frequently, Sometimes, Rarely, and Never	40% - Routinely 40% - Frequently 20% - Sometimes
How confident are you in your clinic's ability to provide patient education about adherence monitoring (purpose, adherence importance, costs) prior to testing?	Very confident, Somewhat confident, Neutral, Somewhat unconfident, and Not confident	60% - Very confident 40% - Somewhat confident
How feasible is it for your team to discuss monitoring results with patients in a timely and clinically appropriate manner?	Very feasible, Somewhat feasible, Neutral, Somewhat difficult, and Very difficult	80% - Very feasible 20% - Somewhat feasible
How useful do you find repeat or periodic monitoring (triggered by clinical change, unexpected results, or routine intervals) in guiding treatment decisions for patients with mental illness?	Very useful, Somewhat useful, Neutral, Somewhat useful, and Not useful	80% - Very useful 20% - Somewhat useful

Role of Oral Fluid Testing in Behavioral Health

Oral fluid testing plays an important role in behavioral health settings by offering a non-invasive, easily observed method of specimen collection that aligns with trauma-informed care principles. This approach is particularly beneficial for vulnerable populations including children, individuals with a history of trauma, and members of the LGBTQIA+ community, as it helps avoid situations that may feel intrusive or triggering. By eliminating the need for restroom facilities or direct observation during urine collection, oral fluid testing supports a more respectful and patient-centered experience.

Additionally, the collection process is typically faster than urine testing which may help improve workflow efficiency in clinical settings. While the risk of adulteration is lower compared to urine, it is not entirely absent. Methods such as “cheeking” or recent consumption of substances may impact results. Proper collection procedures remain essential to ensure accuracy and reliability.

Used in a Wide Range of Clinical Settings

- Substance Use Treatment
- Pain Management
- Behavioral Health
- Primary Care
- Telehealth-Supported Monitoring

Clinically Relevant Test Menu

Clinics can rely on a menu that mirrors the breadth of Aegis’s urine testing. Modern oral fluid technology delivers a clinically relevant test menu with options for novel psychoactive substances (NPS) and drug-to-drug interaction testing.

Testing for Medication Adherence: Decision Guide for Behavioral Health Providers[1]

This guide is intended for demonstration and educational purposes only and is not a substitute for clinical judgment or for applicable state, federal, or payer-specific guidelines regarding testing frequency. All testing decisions should be based on individual patient needs and medical necessity, as determined by the treating clinician.

Initial Evaluation

Potential Indications for Testing:

- Has new or unclear symptoms
- Has a known serious or chronic illness
- Has risk factors for poor adherence
- Is homeless or unstably housed
- Has a co-occurring substance use disorder
- Is elderly with complex medication needs

Ongoing Treatment

Potential Indications for Testing:

- There were concerns on a previous test
- There is clinical deterioration or inadequate response
- There is a major change in situation
- Your clinic uses periodic or random testing
- The patient is stable with a prior normal test → test annually

How to Implement Testing

- Collect specimen at the prescribing site
- Provide education before testing
- Share results with the patient promptly
- Discuss concerns in a timely, supportive manner

Conclusion/Summary

This document outlines the significant impact of medication adherence on clinical outcomes in psychiatric populations, where nonadherence affects nearly half of patients and contributes to relapse, hospitalization, and poor functional outcomes. It highlights the limitations of traditional adherence assessment methods such as self-report, clinician assessment, and pharmacy records which are often unreliable and lack objectivity. The toolkit emphasizes the value of definitive drug testing, particularly urine and oral fluid LC-MS/MS methods, as an evidence-based approach to accurately assess adherence, detect non-prescribed substance use, and guide clinical decision-making. It also highlights the importance of integrating testing into routine care in a non-punitive, patient-centered manner, supported by education and transparent communication. Additionally, oral fluid testing is presented as a practical, trauma-informed alternative to urine testing. Overall, behavioral health adherence testing promotes objective monitoring combined with clinical judgment to improve adherence, enhance treatment outcomes, and support personalized behavioral health care.

> *Aegis testing is an integral part of every one of my patient's treatment plans.*
>
> **Christina Jones, MD**
> Medical Director
> Louisiana

> *I find it [Aegis definitive adherence testing] helps support an objective assessment of our medication adherence as so much of our information is subjective. It is a really good tool to help us clarify whether lack of clinical improvement is related to nonadherence versus treatment resistance. It identifies if substance use may be interfering with psychiatric stability…and it ultimately strengthens clinical decision making and risk mitigation.*
>
> **Sarah Ramsey, PMHNP**
> Nurse Practitioner
> Arkansas

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The Aegis Advantage

Providing Clinicians with the Clarity to Make Better Decisions

The Aegis Clinical Team

Pharm.D. and Ph.D.-credentialed Aegis clinical team members are available to answer questions regarding test results. Better test interpretation means better care decisions for your patients.

Personalized discussions to answer your questions when needed:

- Results questions? We help review and explain findings
- Screening vs confirmatory testing and interpretation differences
- Frequently asked questions: what causes positives for ethyl sulfate, d-methamphetamine, and cocaine?
- Advanced insights: drug interactions and metabolism
- Ask about new and emerging drug trends

Data, research, and presentations:

- Evidence-based research and answers
- Local drug trends and novel psychoactive substances (NPS) insights
- Client specific reviews on practice trends
- One-on-one or group presentations
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