

Microdosing

Modern Primary Care Diagnostic Sequences

Why the Future of Care Hinges
on Faster, Smarter Diagnostics

Paul Schrimpf, Christine Arbesman

Microdosing delivers short, fact-driven reports that distill today's trending healthcare topics, and add fresh perspectives that are grounded in expert insights and credible data. For more information, as well as an audio version of this report, go to: www.md-pod.com

Traditionally, and still in many practices today, some of the most important parts of a primary care visit happen after the patient leaves the exam room. Diagnosis is often delayed, follow-up decisions are disconnected from the visit itself, and early opportunities for intervention can be missed.

The diagnostic sequence may be the least celebrated yet the most essential part of a primary-care visit. Whether it's a healthy 25-year-old seeking reassurance or a 45-year-old at risk for diabetes, the pattern is the same: see the doctor, get the labs, wait for results, then discuss what it all means. This four-step routine isn't just tradition, it's the structure payers recognize, the basis on which health-system workflows are built, and the process clinicians rely on to deliver care.

But the model is showing its age. For healthy patients, it can feel like bureaucracy: a drawn-out path just to hear that everything is fine. For those at risk of cardiometabolic diseases (e.g., rising cholesterol, borderline glucose, early hypertension), it delays conversations that could be more immediate, actionable, and motivating. These delays are not trivial. The CDC estimates that more than 96 million U.S. adults – over 38% of the population – have prediabetes, most undiagnosed. For these patients, waiting even a few days for feedback risks lost engagement and missed opportunities.

Modern Diagnostics, Long Time Coming

Depending on how one defines a true point-of-care diagnostic, some argue it has existed since the 1950s. Over the last several decades, primary care teams have debated what can be diagnosed during, after, or even before a visit.

COVID-19 accelerated the already growing category of rapid diagnostics. What began with simple flu and strep tests has expanded. Today, clinics routinely offer rapid testing for strep, flu, and STIs, with major manufacturers now developing multiplex platforms that can detect multiple pathogens at once.

Dr. Anne Peters, professor of medicine and endocrinology at USC, explains, “Primary care is most effective when the diagnostic moment and the counseling moment happen together. If you wait days or weeks to inform a patient about prediabetes or early hypertension, the urgency and impact of that conversation is diminished.”

“Primary care is most effective when the diagnostic moment and the counseling moment happen together.”

Dr. Anne Peters
Univ Southern California

Patient expectations are evolving quickly. A 2023 Deloitte survey found that 63% of U.S. consumers now expect same-day test results – up from just 38% a decade ago. Diagnostics are shifting from a

background process to a central feature of both annual and planned visits. While not all conditions can be diagnosed same-day, the trend toward more same-visit capabilities continues.

Despite growing availability of rapid diagnostic tools, adoption remains inconsistent. Not all providers use available tools, with barriers ranging from reimbursement gaps to clinical inertia.

The Traditional 4-Step Sequence: Visit → Lab → Wait → Results

In the traditional model, patients see their doctor, complete lab work separately, wait while results are processed, and finally hear back days later. This approach aligned with the centralized infrastructure of decades past, but in today's environment, it fragments care and delays intervention.

A 2022 *JAMA* study found that approximately 20% of patients fail to complete ordered diagnostics, often due to scheduling conflicts, forgotten instructions, or insurance-related barriers. As a result, nearly one in five diagnostic opportunities are missed.

Despite its inefficiencies, the 4-step model persists for reasons beyond inertia. Some tests are unavailable at the point of care and require external labs. Some patients prefer the familiar process. And many providers continue using established workflows tied to longstanding reimbursement structures.

The 3-Step Sequence: Doctor Visit + Onsite Phlebotomy

Some practices now offer onsite blood draws, eliminating the need for patients to make a separate trip to a lab. This model improves convenience, increases test-completion rates, and gives clinics more control over specimen handling and logistics.

Although results may still take time to process, this approach helps patients stay engaged and feel confident that their care team is actively managing their health. For those balancing work, childcare, or transportation challenges, combining the visit and lab draw into a single appointment can be critical for ensuring follow-through.

The 2-Step Sequence: Labs Before Care Visit

Some progressive care models flip the traditional sequence by having patients complete lab work before their visit. This allows results to be available during the appointment, enabling real-time discussion and decision-making. The result is a more impactful, personalized encounter, especially for patients at risk for chronic conditions.

This approach benefits providers, too. Instead of spending the visit catching up on lab results, clinicians can focus on strategy, education, and treatment planning.

“Pre-visit laboratory testing...can save time by reducing the need to review, report, and act on lab results between visits, out of context.”

Christine A. Sinsky, MD, MACP
The American Medical Association

According to Christine A. Sinsky, MD, MACP of the AMA, “Pre-visit laboratory testing...allows for shared decision-making and care planning based on the results during a scheduled face-to-face conversation between a patient and their physician. This process can save time by reducing the need to

review, report, and act on lab results between visits, out of context. It can also improve patient care by making pertinent data available for medical decision-making at the time of a scheduled visit.”

The 1-Step Sequence: Point-of-Care Testing

The most advanced model integrates everything into a single encounter: labs, results, and discussion, all while the patient remains in the exam room. Point-of-care (POC) testing now includes rapid HbA1c, lipid panels, and more, delivering results in under 10 minutes. This provides immediate reassurance for healthy patients and enables on-the-spot action planning for those with early risk factors. “Point-of-care testing is an area that is really exploding,” says Sheldon M. Campbell, MD, PhD of Yale Medicine.

The business case for POC testing is growing. According to Global Market Insights and other industry research, the global point-of-care diagnostics market is projected to double – from \$44 billion in 2024 to \$88 billion by 2032 – driven by demand for faster chronic and infectious disease screening. However, challenges remain, including reimbursement issues, clinical standards, and staff training that lag behind technological advances. As Dr.

Michael Mina, Chief Science Officer at eMed, explains, “The pace of primary care is unforgiving. When results are immediate, physicians can deliver care in one loop, which is transformative both for workflow and patient trust. We’ve seen this with COVID, and now it’s expanding into everything.”

“The pace of primary care is unforgiving. When results are immediate, physicians can deliver care in one loop, which is transformative...”

Dr. Michael Mina
Chief Science Officer at eMed

A System Under Transformation

These evolving models represent a larger transformation in diagnostics across the healthcare system, with enormous stakes involved. Chronic diseases cost the U.S. healthcare system approximately \$4.5 trillion annually, according to the CDC, and earlier interventions remain among the few proven strategies to reduce this burden.

Whether it's confirming health more quickly, identifying prediabetes before it progresses to diabetes, or diagnosing patients sooner, the diagnostic sequence is fundamental to effective primary care. With the rise of rapid point-of-care testing, this process is accelerating and becoming more central than ever.

Dr. David Nash of Jefferson Health declares, "I think if you give doctors, nurses, pharmacists, good, timely information in a non-punitive way, delivered by a peer about their own performance...you better get out of the way because these clinicians will stampede to improve."

Barriers and Accelerants

The success of diagnostic sequencing models often depends on the structure and culture of primary care delivery. Practices within larger health systems may inherit legacy workflows that either accelerate or impede progress. In some cases, these processes persist due to strategic choices; in others, simply due to inertia.

Culture is also a powerful determinant. Many clinicians were trained to view diagnostics as someone else's responsibility; a task delegated to labs or specialists, not part of the day-to-day work of primary care. Shifting this mindset is essential. Diagnostics must be seen as central to both individual patient management and broader population health goals. A practice focused on managing one patient at a time, rather than reducing population-level risk (such as prediabetes or hypertension), is far less likely to change its approach to testing.

In closing, the most progressive providers and health system leaders now view diagnostics not merely as sequential steps, but as fully integrated components of every patient encounter. Seeing new technologies, care models, and clinical standards as parts of a unified system, rather than a series of disconnected add-ons, will define the next era of primary care.

Those who embrace this integrated approach will deliver care that is not only more efficient for providers, but also more effective, timely, and engaging for patients.

Acknowledgements & Citations

This report draws insights and direct quotes from:

- Centers for Disease Control and Prevention. “National Diabetes Statistics Report, 2022.”
- Centers for Disease Control and Prevention. “Chronic Disease Costs in the U.S.,” 2023 update.
- JAMA Network. “Patient Nonadherence to Diagnostic Testing: Patterns and Implications,” 2022.
- Deloitte Insights. “2023 Consumer Healthcare Survey: Expectations in a Digital World.”
- Anne Peters, MD. Interviewed remarks, USC Keck School of Medicine, 2023.
- Michael Mina, MD, PhD. Keynote and public remarks, eMed/LeadingAge, 2022.
- Darshak Sanghavi, MD. Public comment, UnitedHealthcare CMO Panel and ARPA-H profiles, 2021–2025.
- Global Market Insights, Databridge, and Dimension Market Research. “Point of Care Diagnostics Market, 2023–2032.”
- HealthCentral. “The Cost of Chronic Care: A 2023 Special Report.”
- The Value-Based Healthcare Podcast: David Nash 2019
- Sheldon M. Campbell, MD, PhD, YaleMedicine.com: Lab Testing With Quick Results
- Christine A. Sinsky, MD, MACP, AMA – Steps Forward: Pre-Visit Laboratory Testing Save Time and Improve Care