At-Home Diagnostics

Published – June 2022 • 10-min read

Key takeaways

• Home tests – also called self-tests or home-use tests – are typically sold over the counter and allow users to test self-collected specimens and interpret the results on their own without the help of trained health professionals.

• Most recently, the Covid-19 pandemic has increased the demand for, patient familiarity with, and investment in home testing technologies.

• At home diagnostic tests are disrupting two elements of healthcare: care delivery, and cost and payment models.
Home tests – also called self-tests or home-use tests – are typically sold over the counter and allow users to test self-collected specimens and interpret the results on their own without the help of trained health professionals.

Biomarker testing (also known as mutation, genomic, or molecular testing) uses laboratory tests to help the health care team gather as much information as possible about a patient's disease state.

Deep Brain Stimulation (DBS) is the implantation of a device that sends a signal to brain areas responsible for body movement to improve the lives of patients with Parkinson's, other neurodegenerative diseases, and behavioral and mental health disorders.

Pharmacogenomics (PGx) is the science of understanding the influence of a person's genome (i.e., their complete set of DNA and genes) on drug treatment outcomes.

Psychedelic-assisted therapy entails using a high dose of a psychedelic substance to treat a variety of behavioral and mental health issues such as addiction, mental health conditions.

Ultra high-cost drugs (UHCDs) are expensive, potentially durable, or curative therapies currently approved to treat conditions that are orphan and rare disease.

TABLE OF CONTENTS

What is it? ................................................................. pg. 3

Why does it matter? ..................................................... pg. 4

What makes it disruptive? .......................................... pg. 5

Conversations you should be having ................................ pg. 6

Related content ........................................................ pg. 7
What is it?

Home tests – also called self-tests or home-use tests – are typically sold over the counter and allow users to test self-collected specimens and interpret the results on their own without the help of trained health professionals. There are also types of at home-collection tests that require patients to collect samples at home, mail them to a laboratory or clinic for analysis and obtain the results later.

Most recently, market growth for at-home testing has been spurred by the global Covid-19 pandemic. However, FDA-approved home tests have existed in the US for the detection, diagnosis, or management of various health conditions for several years.

Home tests have many applications. According to the FDA, some examples include:

• Detecting possible health conditions when you have no symptoms, so that you can get early treatment and lower your chance of developing later complications such as Covid-19, cholesterol testing, and hepatitis testing.

• Detecting specific conditions when there are no signs so that you can take immediate action and seek care such as pregnancy testing.

• Monitoring conditions to allow frequent changes in treatment such as glucose testing to monitor blood sugar levels in diabetes.
Why does it matter?

During the Covid-19 pandemic, with millions of workers furloughed and laid off, many individuals lost income and health insurance, making them less likely to seek traditional care, which has influenced people’s demand for at-home health care.

There are several trends that aided in accelerating at-home diagnostic adoption:

- **Advancements in home testing technology** that limit the potential for error when patients collect their own samples. Lab vendors are exploring different technologies such as biometric patch sensors in lieu of at-home blood draws. Research will need to rigorously evaluate the quality and safety of these technologies to inform practice and policy.

- **Provider involvement in home testing**. Technology and patient preference shifts motivated some health systems to create a home testing business that lends credibility to at-home options. In addition, at-home diagnostics can help hospital capacity and alleviate provider burnout by allowing clinical staff to work more top of license.

- **Increased accessibility and affordability of "lite" lab tests** that can easily be administered at home, paid for out-of-pocket, and serve as an addition (rather than a substitution) to regular testing.

- **Increased public health awareness**: At-home testing holds many public health benefits, for infectious diseases like Covid-19. Self-testing at home can substantially reduce or eliminate the risk of people spreading the virus, as well as being more convenient than traditional diagnostics.

Source: Advisory Board interviews and analysis.
What makes it disruptive?

Areas of disruption

Care delivery

Although health systems have embraced at-home diagnostics by embedding testing results into provider workflows and care pathways, they see home testing for labs as a potential liability, fearing low quality and high costs. Similarly, lab directors are often concerned about proper protocols for follow-up care and patient education. Often primary care providers are more willing to use home testing to screen patients before clinic visits, but they still feel it is necessary to confirm the tests in-office for those with positive or concerning results to advance appropriate use and reduce anxiety.

Cost/payment models

At-home diagnostics may have implications on downstream care, as well as reducing avoidable costs for patients and providers such as delayed treatment and recurring readmissions.

Prior to Covid-19, payment models typically involved patients paying out-of-pocket for at-home diagnostics. However, during the pandemic, we quickly transitioned to a model where the government and other insurers moved to cover these. How payment models evolve will have implications for general uptake and use by consumers.

A note on health equity

If at-home diagnostics are administered at home, paid for out-of-pocket, and serve as an addition (rather than a substitution) to regular testing this could lead to increased accessibility and affordability of lab tests and alleviate costs for underserved groups. However, the technological demands of some diagnostic tests could create barriers to adoption and widen digital inequities.
# CHEAT SHEET

## Conversations you should be having

<table>
<thead>
<tr>
<th>Sector</th>
<th>Conversations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payers</td>
<td>• How is my organization conveying efficiency in our value proposition to health systems and patients?</td>
</tr>
<tr>
<td></td>
<td>• How can we encourage the equitable adoption of at-home diagnostics?</td>
</tr>
<tr>
<td></td>
<td>• How do we make at-home diagnostics accessible to the targeted populations by collaborating on risk-mitigating contracts with manufacturers?</td>
</tr>
<tr>
<td>Health systems</td>
<td>• How can we educate internal and external stakeholders on where and how at-home testing fits into their care pathways?</td>
</tr>
<tr>
<td></td>
<td>• How does at-home testing fit into my system’s long-term strategy?</td>
</tr>
<tr>
<td>Labs</td>
<td>• How does my organization compare when it comes to helping health systems manage the logistics of home-collection tests?</td>
</tr>
</tbody>
</table>
Related content

Advisory Board resources

■ BLOG POST
   Is home testing the future of labs?
   Read now

■ RESEARCH
   Home based care market scan
   Read now

■ RESEARCH
   How Covid-19 will impact the financial outlook for the health care industry
   Read now

■ RESEARCH
   What providers and health plans still find challenging about lab services
   Read now

■ RESEARCH
   What health systems are looking for in lab partnerships
   Read now
LEGAL CAVEAT

Advisory Board has made efforts to verify the accuracy of the information it provides to members. This report relies on data obtained from many sources, however, and Advisory Board cannot guarantee the accuracy of the information provided or any analysis based thereon. In addition, Advisory Board is not in the business of giving legal, medical, accounting, or other professional advice, and its reports should not be construed as professional advice. In particular, members should not rely on any legal commentary in this report as a basis for action, or assume that any tactics described herein would be permitted by applicable law or appropriate for a given member’s situation. Members are advised to consult with appropriate professionals concerning legal, medical, tax, or accounting issues, before implementing any of these tactics. Neither Advisory Board nor its officers, directors, trustees, employees, and agents shall be liable for any claims, liabilities, or expenses relating to (a) any errors or omissions in this report, whether caused by Advisory Board or any of its employees or agents, or sources or other third parties, (b) any recommendation or graded ranking by Advisory Board, or (c) failure of member and its employees and agents to abide by the terms set forth herein.

Advisory Board and the “A” logo are registered trademarks of The Advisory Board Company in the United States and other countries. Members are not permitted to use these trademarks, or any other trademark, product name, service name, trade name, and logo of Advisory Board without prior written consent of Advisory Board. All other trademarks, product names, service names, trade names, and logos used within these pages are the property of their respective holders. Use of other company trademarks, product names, service names, trade names, and logos or images of the same does not necessarily constitute (a) an endorsement by such company of Advisory Board and its products and services, or (b) an endorsement of the company or its products or services by Advisory Board. Advisory Board is not affiliated with any such company.

IMPORTANT: Please read the following.

Advisory Board has prepared this report for the exclusive use of its members. Each member acknowledges and agrees that this report and the information contained herein (collectively, the “Report”) are confidential and proprietary to Advisory Board. By accepting delivery of this Report, each member agrees to abide by the terms as stated herein, including the following:

1. Advisory Board owns all right, title, and interest in and to this Report. Except as stated herein, no right, license, permission, or interest of any kind in this Report is intended to be given, transferred to, or acquired by a member. Each member is authorized to use this Report only to the extent expressly authorized herein.

2. Each member shall not sell, license, republish, or post online or otherwise this Report, in part or in whole. Each member shall not disseminate or permit the use of, and shall take reasonable precautions to prevent such dissemination or use of, this Report by (a) any of its employees and agents (except as stated below), or (b) any third party.

3. Each member may make this Report available solely to those of its employees and agents who (a) are registered for the workshop or membership program of which this Report is a part, (b) require access to this Report in order to learn from the information described herein, and (c) agree not to disclose this Report to other employees or agents or any third party. Each member shall use, and shall ensure that its employees and agents use, this Report for its internal use only. Each member may make a limited number of copies, solely as adequate for use by its employees and agents in accordance with the terms herein.

4. Each member shall not remove from this Report any confidential markings, copyright notices, and/or other similar indicia herein.

5. Each member is responsible for any breach of its obligations as stated herein by any of its employees or agents.

6. If a member is unwilling to abide by any of the foregoing obligations, then such member shall promptly return this Report and all copies thereof to Advisory Board.