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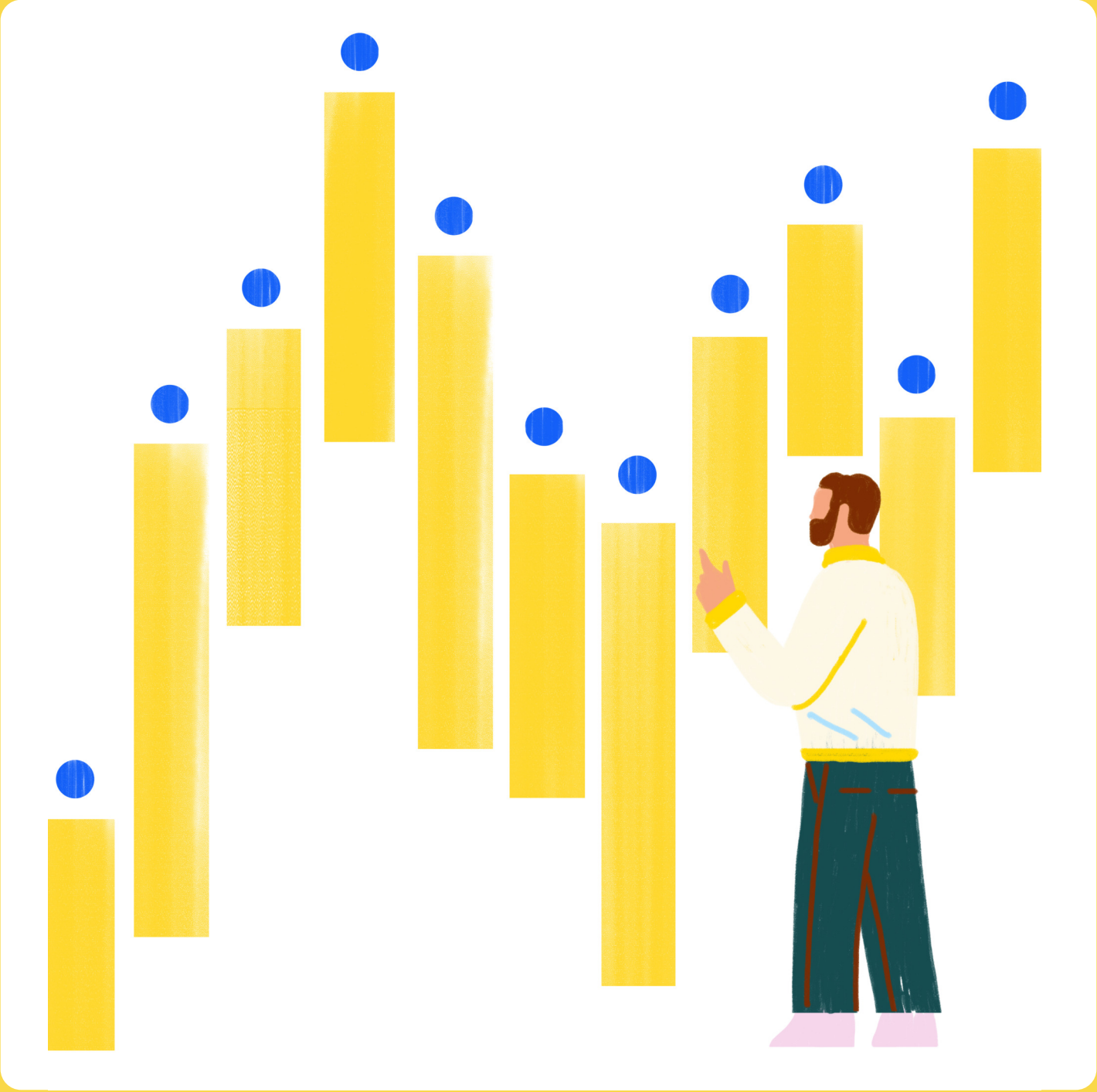


Insights into Medication Challenges in Populations with Low Incomes

The Scene Medication Survey

See this report online.

Introduction

The problem of medication nonadherence: challenges and consequences

Medication adherence is the most important factor in the successful management of chronic conditions. Defined as the extent to which patients take their medication as prescribed, medication adherence is critical to achieving optimal health outcomes, preventing disease progression, and enhancing quality of life. Nevertheless, nonadherence remains a significant challenge for millions of people in the United States.

It's **consistently estimated** that 50% of filled prescriptions are taken incorrectly, contributing to a range of negative consequences.[1] In the United States alone, medication nonadherence is responsible for approximately **125,000 deaths** and up to 10% of hospitalizations annually.[2]

The consequences of medication nonadherence extend beyond the individual, impacting our healthcare system as a whole. Treatment failures and avoidable hospitalizations cost our health system more than **$500B** annually, burdening patients and providers.[3]

Medication nonadherence has an outsized impact in low-income communities and is a growing problem among individuals in these populations who often face unique challenges, including financial and socioeconomic barriers. These individuals are not only more likely to be nonadherent, they are also at a **higher risk** for complications and death when they are nonadherent to their medications.[4]

Gathering insights into medication adherence in low-income communities

To understand patient perspectives on medication adherence in populations with low incomes, Scene engaged The Bliss Group to conduct an internet survey. Responses were collected in English from February 9 — February 10, 2023, among a nationally representative sample of 1,000 adults aged 18 or older with household incomes below $25,000. A majority of the medication-taking respondents were on government-run insurance plans: Medicare (29%), Medicaid (27%), or dual-enrolled (16%), making the survey helpful for health plans charged with improving care and reducing costs for Medicare, Medicaid, and dual enrolled beneficiaries.

The survey answers three key questions:

1. **What is the scope of the medication nonadherence problem?**
2. **What keeps patients from taking their medication(s) correctly?**
3. **What tools would be most helpful in overcoming barriers to medication adherence?**

Key Takeaways

This report highlights three key takeaways regarding medication adherence in populations with low incomes in America.

1. **Nonadherence is exacerbated by gaps in the healthcare system** which leave room for error, specifically between when patients leave the clinical setting, fill their prescription, and go home.

2. **Patients are actively seeking support** and are open to interventions that can help improve their medication adherence.

3. **Addressing barriers to adherence necessitates the addition of touchpoints** beyond traditional doctor visits, effectively bridging gaps in care.

These points underscore the importance of implementing a comprehensive solution that addresses systemic issues, provides patient support, and introduces additional opportunities for patients to connect with healthcare professionals in order to enhance medication adherence rates and improve patient outcomes.

"We often ask plans how to improve adherence; why don't we ask patients? What do people need? That's where we need to anchor our work. It's the investment that best informs what people will actually use."

Adimika Arthur

Executive Director Health Tech 4 Medicaid

2023 MHPA Roundtable, How to Improve Quality Measures and Reduce Disparities in Medication Adherence[5]

Understanding Medication Use by Chronic Condition

Prevalence of medication use

Chronic conditions, such as hypertension, asthma, and diabetes, and medication use for these conditions is prevalent among Americans with lower incomes, as indicated by the survey findings.

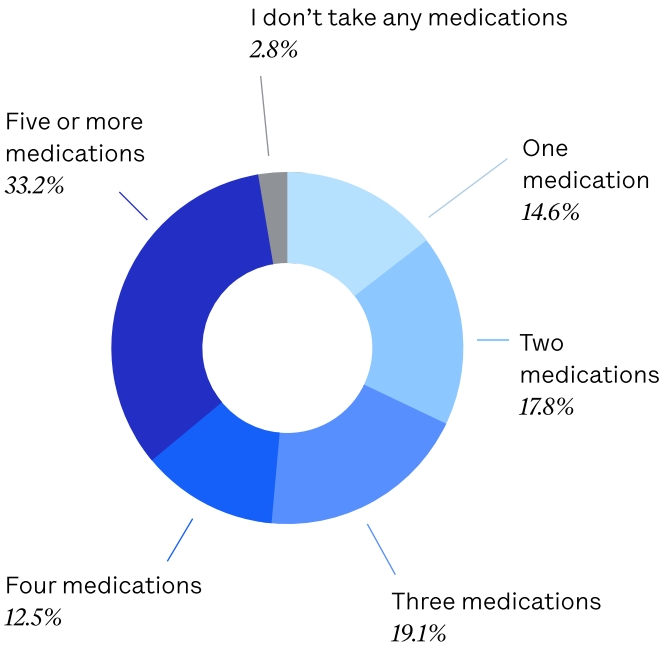
65.8%
of respondents reported taking medications to manage one or more chronic conditions.

The survey reveals that 65.8% of respondents reported taking medications to manage one or more chronic conditions, and of those taking medications, anxiety/depression was the most common condition (48.2%), followed by high blood pressure (42.8%), asthma (31.3%), diabetes (25%), and bipolar I or II (11.5%).

Further, 33.2% of medication-taking respondents reported taking five or more medications, demonstrating a high medication burden in this population (see Figure 1). These findings reveal that a significant portion of Americans with lower incomes face the complexity of simultaneously adhering to multiple medications for multiple conditions, which can further exacerbate challenges associated with medication adherence.

Figure 1

Percentage of patients who take medications for one or more chronic conditions by medication count

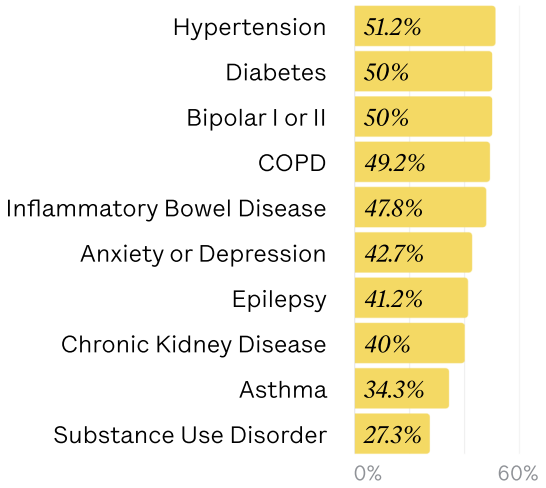


Prevalence of polypharmacy

Polypharmacy, which involves taking multiple medications, presents a significant challenge to medication adherence. The complexity and confusion associated with managing multiple medications can lead to difficulty following a prescribed regimen.[6] The survey reveals that Americans with lower incomes are disproportionately affected by polypharmacy for chronic conditions that require complex medication regimens. A majority of respondents with hypertension (51%) said they take five or more medications, followed closely by those with type 2 diabetes and bipolar I or II, with 50% of those with these conditions saying they take five or more medications (see Figure 2).

Figure 2

The top ten conditions for which patients take five or more medications, and the percentage of patients who do



Uncovering Medication Adherence Issues

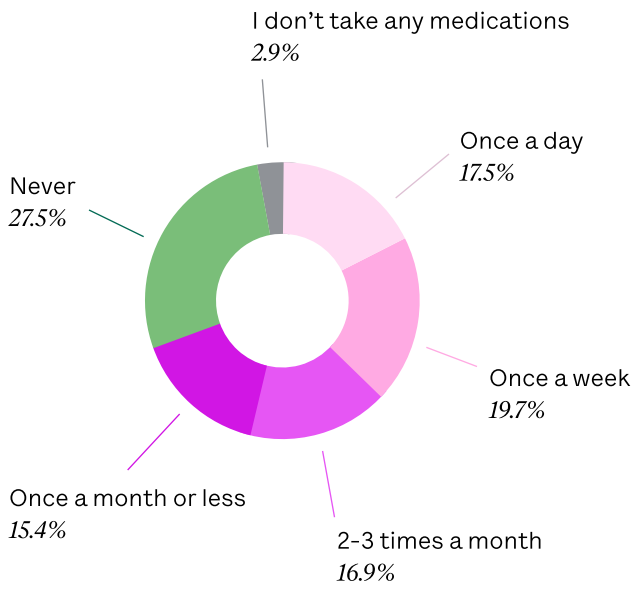
A high instance of complex medication regimens coupled with various interconnected factors, including limited access to healthcare services, financial constraints, educational disparities, and other challenges related to Social Determinants of Health, contribute to low medication adherence rates among Americans with lower incomes.[7] This is supported by the survey findings.

When asked to select all of the medication adherence issues they face, the medication-taking respondents indicated that failure to take medication at the same time every day as directed (38.5%), missed dose (37.8%), late dose (30.4%), and failure to take medication with or without food as directed (29.7%) were the most common issues.

More than half of the medication-taking respondents (69.5%) reported missing a dose or taking their medications at the wrong time, with 17.5% doing so daily and 19.7% doing so weekly (see Figure 3).

Figure 3

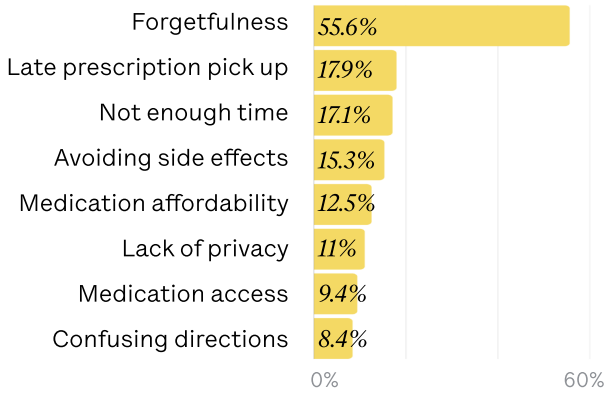
Frequency of missed doses or inconsistent timing



An overwhelming majority of the medication-taking respondents listed forgetfulness (55.6%), followed by late prescription pick up (17.9%), and not enough time (17.1%) as the top three reasons that contribute to missing a dose or taking their medication improperly (see Figure 4). Taken alone, the solution to forgetfulness — medication reminders — is deceptively simple. But since the survey results show that late prescription pick-up and not enough time co-occur with forgetfulness, it is clear that a more comprehensive solution is necessary.

Figure 4

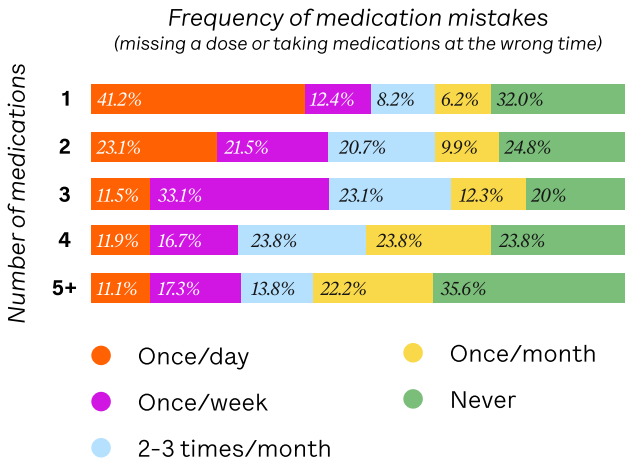
Reasons for missing a dose or taking medications improperly



Surprisingly, medication-taking respondents that reported taking five or more medications said they made fewer mistakes than those taking four or fewer medications, with 35.6% saying they never missed a dose and always took their medications at the right time. Respondents taking five or more medications also had the lowest frequency of daily adherence issues, with 11.1% saying they missed a dose or failed to take their medication at the right time once a day. Contrastingly, 40.4% of those who said they only took one medication had daily adherence issues, followed by those taking two medications (23.1%) (see Figure 5).

Figure 5

Frequency of medication mistakes by medication count



These results contradict research that holds polypharmacy as a contributing factor to nonadherence due to the increased complexity of medication regimens, potential drug interactions and adverse effects, financial burdens, and psychological factors such as medication fatigue. Further exploration is needed but the findings may indicate that patients taking one to two medications per day may need the most support.

The Devastating Impact of Nonadherence

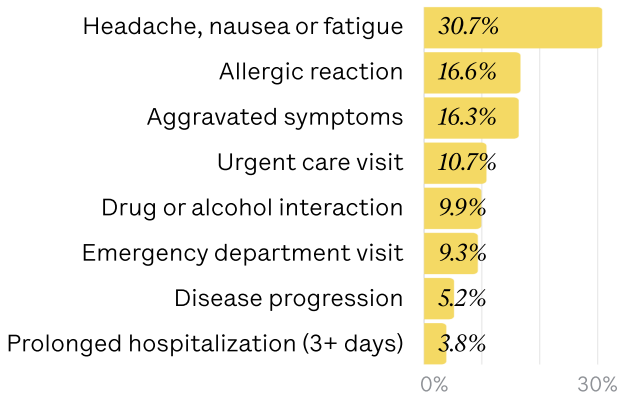
Nonadherence can lead to increased hospitalizations and other avoidable health complications, as supported by the survey findings, which reveal that more than half of the medication-taking respondents (57.4%) experienced an adverse medical event due to a medication error. Regardless of the number of

57.4% *of medication-taking respondents reported experiencing an adverse event due to a medication error.*

medications respondents reported taking, 10.7% reported visiting urgent care, 9.3% reported visiting an emergency department, and 3.8% reported having a resulting hospital stay of three or more days as a result of medication errors (see Figure 6).

Figure 6

Frequency of adverse medical events as a result of medication errors



Respondents with cancer, epilepsy, HIV/AIDs, tuberculosis, and inflammatory bowel disease, were likelier to experience adverse events resulting from medication nonadherence (see Figure 7). This reflects the critical importance of addressing adherence challenges in these specific populations.

But when it comes to mitigating nonadherence, the survey reveals that patients lack regular opportunities for proactive communication with their providers, limiting opportunities to correct medication techniques and habits. Despite the frequency of medication adherence issues and the negative health impacts, a significant number of medication-taking respondents (32.4%) reported not informing their doctor at all if they made a medication mistake, with 22.9% saying they only told their doctor if their mistakes impacted their symptoms, 20% saying they only told if they made multiple mistakes, and 24.7% saying they told if they made any medication mistake. These findings reveal that periodic glimpses into patients' medication regimens during appointments do not provide an adequate or accurate picture of their overall health experience.

32.4% *of medication-taking respondents reported not informing their doctor at all if they made a medication mistake.*

Figure 7

Frequency of adverse medical events by condition

Condition	Headache, Nausea or Fatigue	Allergic Reaction	Aggravated Symptoms	Drug or Alcohol Interactions	Urgent Care Visit	Emergency Department Visit	Prolonged Hospitalization (3+Days)	Disease Progression	None
	Adverse medical event								
Diabetes (286 respondents)	67 *39.4%*	33 *19.4%*	30 *7.7%*	24 *14.1%*	23 *13.5%*	19 *11.2%*	10 *5.9%*	14 *8.2%*	66 *38.8%*
Asthma (401 respondents)	86 *40.4%*	56 *26.3%*	55 *25.8%*	44 *20.7%*	41 *19.3%*	30 *14.1%*	14 *6.6%*	20 *9.4%*	55 *25.8%*
Hypertension (434 respondents)	83 *28.5%*	49 *16.8%*	48 *16.5%*	25 *8.6%*	28 *9.6%*	24 *8.3%*	13 *4.5%*	16 *5.5%*	148 *50.9%*
COPD (130 respondents)	17 *27.9%*	17 *27.9%*	20 *32.8%*	15 *24.6%*	14 *23%*	12 *19.7%*	8 *13.1%*	6 *9.8%*	21 *34.4%*
HIV/AIDS (82 respondents)	9 *32.1%*	10 *35.7%*	11 *39.3%*	15 *53.6%*	10 *35.7%*	10 *35.7%*	7 *25%*	6 *21.4%*	4 *14.3%*
Tuberculosis (92 respondents)	16 *69.6%*	11 *47.8%*	14 *60.8%*	14 *60.9%*	16 *69.6%*	8 *34.8%*	7 *30.4%*	6 *26.1%*	0 *0%*
Cancer (77 respondents)	10 *41.7%*	9 *37.5%*	9 *37.5%*	13 *54.2%*	10 *41.7%*	10 *41.7%*	7 *29.2%*	6 *25%*	3 *12.5%*
Inflammatory Bowel Disease (127 respondents)	24 *52.2%*	13 *28.3%*	17 *37%*	12 *26.1%*	15 *32.6%*	16 *34.8%*	9 *19.6%*	10 *21.7%*	11 *23.9%*
Bipolar I or II (165 respondents)	35 *44.9%*	17 *21.8%*	18 *23.1%*	18 *23.1%*	16 *20.5%*	15 *19.2%*	8 *10.3%*	9 *11.5%*	29 *37.2%*
Chronic Kidney Disease (88 respondents)	15 *56%*	14 *56%*	10 *40%*	14 *56%*	13 *52%*	8 *32%*	5 *20%*	5 *20%*	4 *16.0%*
Epilepsy (114 respondents)	17 *50%*	15 *44.1%*	14 *41.2%*	11 *32.4%*	11 *32.4%*	14 *41.2%*	10 *29.4%*	7 *20.6%*	15 *14.7%*
Anxiety or Depression (497 respondents)	118 *36%*	47 *14.3%*	58 *17.7%*	28 *8.5%*	34 *10.4%*	37 *11.3%*	14 *4.3%*	21 *6.4%*	140 *42.7%*
Sickle Cell Disease (65 respondents)	6 *33.3%*	13 *72.2%*	10 *55.6%*	10 *55.6%*	7 *38.9%*	7 *38.9%*	6 *33.3%*	5 *27.8%*	1 *5.6%*
Hepatitis C (66 respondents)	12 *63.2%*	7 *36.8%*	11 *57.9%*	9 *47.4%*	7 *36.8%*	8 *42.1%*	5 *26.3%*	4 *21.1%*	3 *15.8%*
Substance Use Disorder (90 respondents)	17 *51.5%*	9 *27.3%*	13 *39.4%*	10 *30.3%*	11 *33.3%*	8 *24.2%*	5 *15.2%*	7 *21.2%*	10 *30.3%*

Patient-Requested Solutions to Nonadherence

The respondents favored one-on-one interactions with healthcare professionals as the number one resource to help them improve their medication adherence. When asked who they currently turn to for help answering their medication-related questions between doctor visits, an overwhelming majority of medication-taking respondents (52.6%) said they turn to their doctors. This finding supports the point that doctor-patient interactions are crucial to ensure medication adherence as they provide personalized education, guidance, and

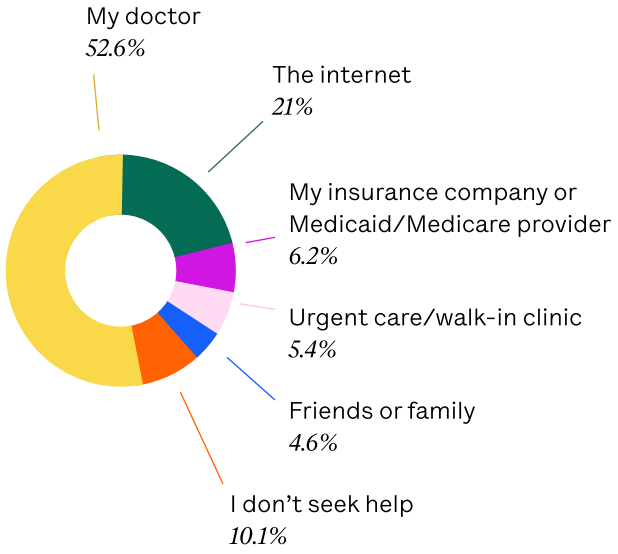
52.6% *of medication-taking respondents said they turn to their doctors for help answering their medication-related questions between visits.*

support tailored to the individual's needs, address concerns or misconceptions, and establish a therapeutic relationship that fosters trust and accountability in medication management.

Unsurprisingly, the second most reported resource patients turn to for medication adherence support was the internet (21%). This is problematic for a host of reasons, including the potential for misinformation and the potential to delay patients from seeking appropriate medical attention (See Figure 8).

Figure 8

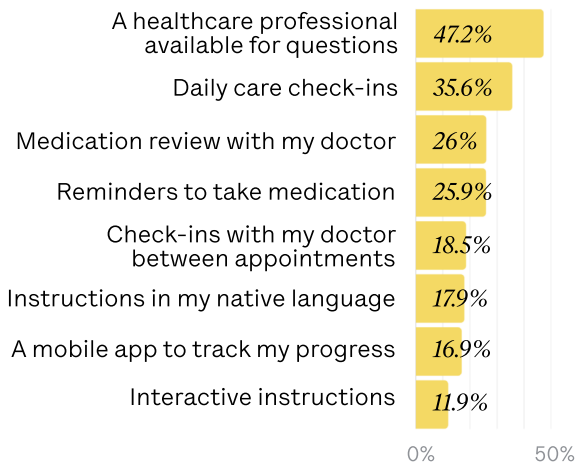
Where respondents turn to when they have questions about their medications



Still, when asked to rank the resources they found most helpful, again, the medication-taking respondents showed an eagerness to receive medication adherence support from one-on-one interactions with healthcare professionals; 47.2% ranked having a healthcare professional readily available to answer their questions as one of the top two most helpful resources. This was followed by 35.6% of respondents who favored daily care check-ins. Additionally, 26% of participants ranked medication reviews with their doctor as one of the top two most helpful resources (see Figure 9).

Figure 9

Percentage of respondents who ranked each resource type as the most helpful



Unfortunately, various factors can limit the amount of time doctors can spend with each patient. Factors including increased patient volume, the burden of administrative tasks, financial pressures, and other systemic issues can prevent doctors from delivering effective, patient-centered care.[8] These issues are exacerbated for patients who rely on Medicaid and/or Medicare because of lower reimbursement rates, inconsistent provider availability, and fragmented care. [9]

Bringing patients what they are asking for here requires a comprehensive technology-backed solution that optimizes clinical workflows, provides additional resources and support staff, and implements team-based care approaches to ensure patients receive the attention and support they need.

Top 3 Patient-Requested Resources for Medication Adherence Support

1. Available Healthcare Professionals
2. Daily Care Check-ins
3. Medication Review with My Doctor

Summary and Recommendations

This survey presents a unique look at the experiences of chronic disease patients with lower incomes who struggle with medication adherence issues in America today. The findings highlight the pressing need for increased focus on medication adherence across the healthcare landscape and point to significant conclusions.

Taken together, the survey shows that addressing medication nonadherence requires a comprehensive understanding of the individual barriers that patients face. This understanding can only be built by adding touch points between traditional doctor visits. The findings reveal that patients want to develop consistent routines and desire help integrating medication administration into their daily habits. The need to provide patient education and counseling regarding the importance of medication adherence and its impact on health outcomes is also evident.

It's clear that nonadherence begins when patients leave the clinical setting where adherence is assured through Directly Observed Therapy (DOT) — when a trained healthcare professional administers and observes every dose of medication. But technological innovations have enabled DOT to extend beyond the four walls of a clinical setting. Earlier this year, the CDC announced that video Directly Observed Therapy (video DOT) is **equivalent to in-person DOT** for persons undergoing treatment for tuberculosis, opening a pathway for the technology in other chronic and infectious diseases.[10] By allowing healthcare workers to observe videos of patients taking their medications anytime and anywhere, video DOT is a convenient way for patients to have constant access to a healthcare professional, daily care check-ins, and medication reminders.

Comprehensive solutions like Scene Health's medication engagement program, Panorama, go a step further by incorporating video DOT into a holistic model of care. Scene's approach not only provides constant access to a healthcare professional, daily care check-ins, and medication reminders but includes personalized video coaching, education, and motivational content.

Connect with us to request a demo of our holistic model of care or learn about partnership opportunities.

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[Scene]

Care. Every day.

Scene's (formerly emocha) 360° model of care enhances
the gold standard of medication adherence, Directly Observed Therapy.
Combining personalized video coaching, education, and motivational content,
we bring healthcare professionals, patients, and their families together
to solve the $500B medication nonadherence problem.

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