

2023

State of Telemedicine Report

By Doximity

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Report

Introduction

Today, the U.S. faces an aging population and a growing physician shortage.¹ This comes at a time when our health care workers are facing crisis levels of overwork and increasing demands for a more equitable health care system.²

Despite the finite nature of health care resources, advances in technology — from virtual care solutions to remote patient monitoring devices — have forged a new, more flexible path for remote health care delivery, or mobile medicine, with telemedicine at the forefront. With telemedicine, patients can now receive medical advice, diagnosis, disease management and treatment from the comfort of their homes, increasing their access to care and eliminating physical barriers created by hospital capacity, distance or transportation.

This report examines the continued adoption of telemedicine, its applications across various specialties and health care services, and its effects on physician well-being, patient access, and continuity of care. Study findings show that 88% of physicians surveyed believe telemedicine has increased patient access to health care, with many reporting reduced wait times, improved adherence to treatment plans, and decreased no-show rates. Additionally, a considerable portion of physicians surveyed reported that telemedicine has improved their ability to manage their schedules and positively impacted their feelings

of autonomy and work-life balance. Beyond expanding access to health care, telemedicine may also be increasing patients' willingness to seek medical attention. The majority of all patients surveyed (70%) said they may be more likely to consult with a doctor if they can do so virtually, with convenience and efficiency being primary drivers of adoption.

Among patients who participated in a telemedicine visit in the past year, 85% said it resulted in equivalent or superior quality of care, with the majority reporting increased satisfaction.

As the digitization of health care continues, telemedicine is poised to maintain a pivotal role in health care delivery. Telemedicine and in-person care are not mutually exclusive, and uniting both can help reduce costs, expand access, and improve care for everyone. With further identification and implementation of best practices, telemedicine's capacity to personalize care models, promote continuity of care, and improve patient outcomes will only get stronger.



Physician Adoption of Telemedicine

Physician Insights

Telemedicine Insights from Doximity's Physician Membership

An analysis of fee-for-service Medicare telemedicine claims throughout 2022 revealed that nearly 47% of billing physicians were users of Doximity's telemedicine platform. In the last quarter of 2022 (October to December) alone, Doximity's telemedicine tools were used by over 375,000 unique clinicians.*

To gain a deeper understanding of the progression and sustained utilization of telemedicine, Doximity conducted an analysis of how its physician members, across all specialties and practice areas, used its telemedicine tools throughout 2022.

To supplement this data, Doximity conducted a survey of over 1,200 of its physician telemedicine users across nine specialties: cardiology, oncology, gastroenterology, nephrology, neurology, endocrinology, rheumatology, pulmonology, and psychiatry.

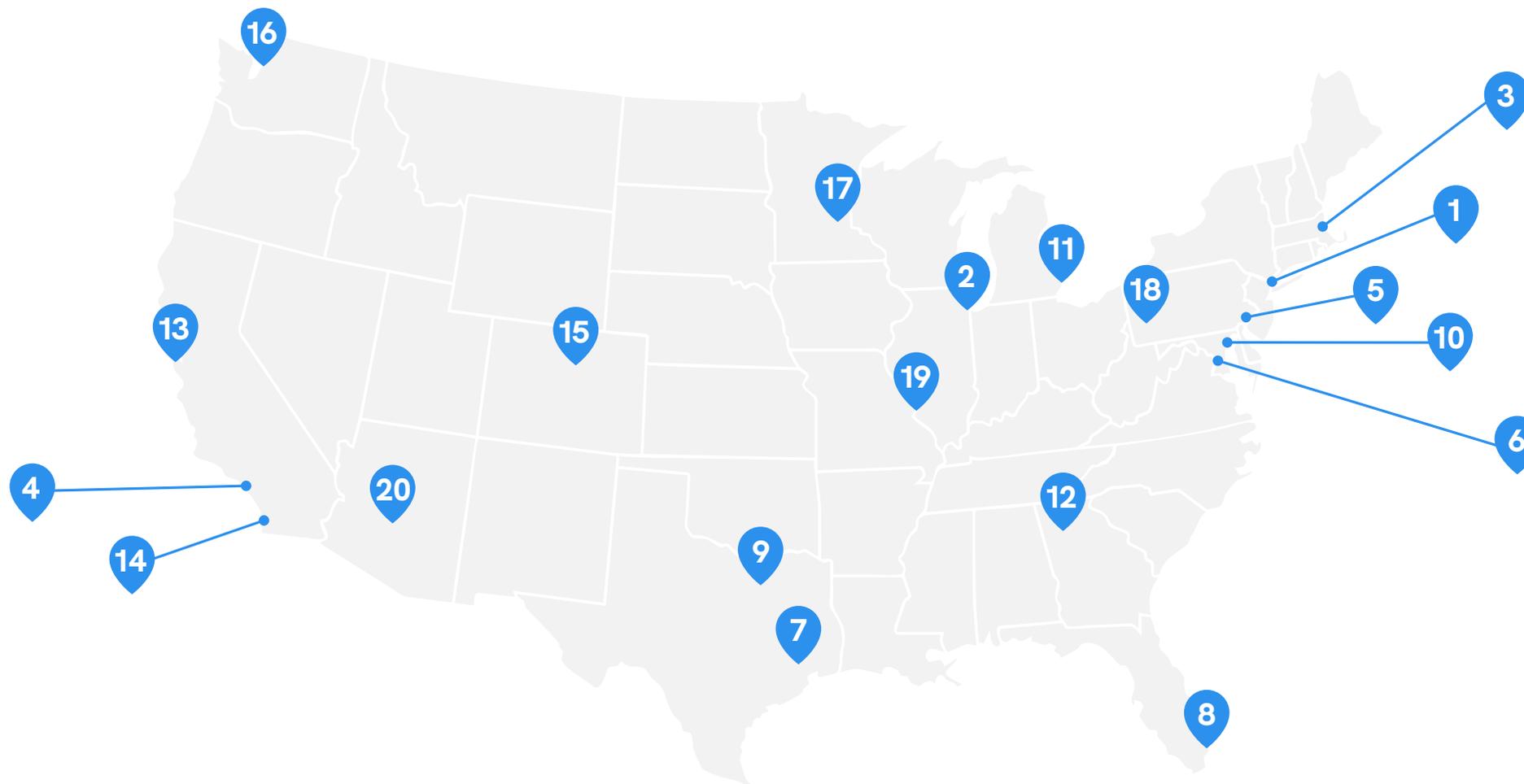
*As reported on February 9, 2023 during Doximity's Fiscal 2023 Fourth Quarter earnings call



Adoption by Metro Area

Top Metro Areas Widely Distributed Across the U.S.

The metro areas with the highest physician adoption of Doximity’s telemedicine platform in 2022 ranged across all regions of the U.S. New York had the highest overall adoption of telemedicine among physicians, followed by Chicago and Boston.



Metro Areas with the **HIGHEST** Adoption

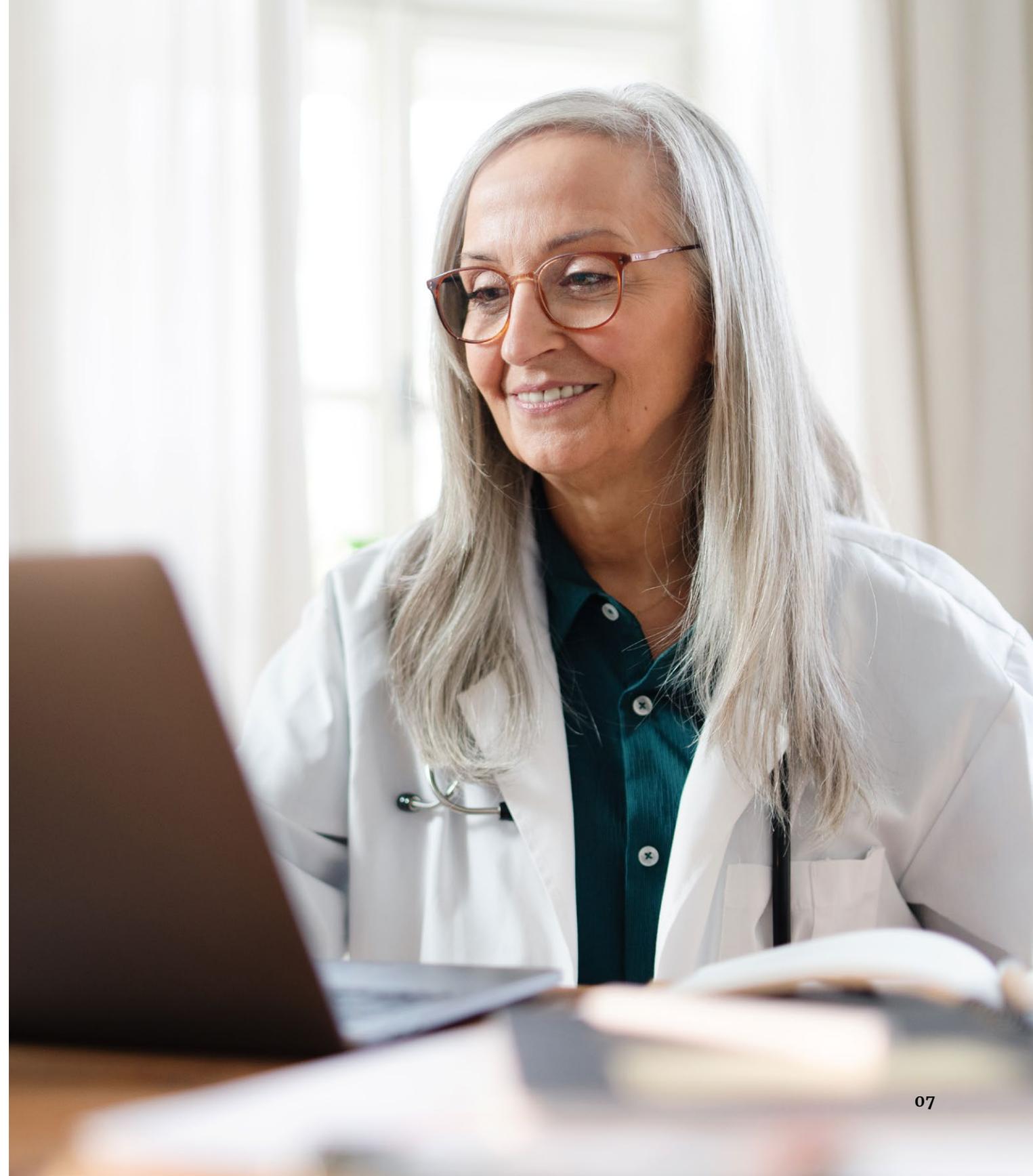
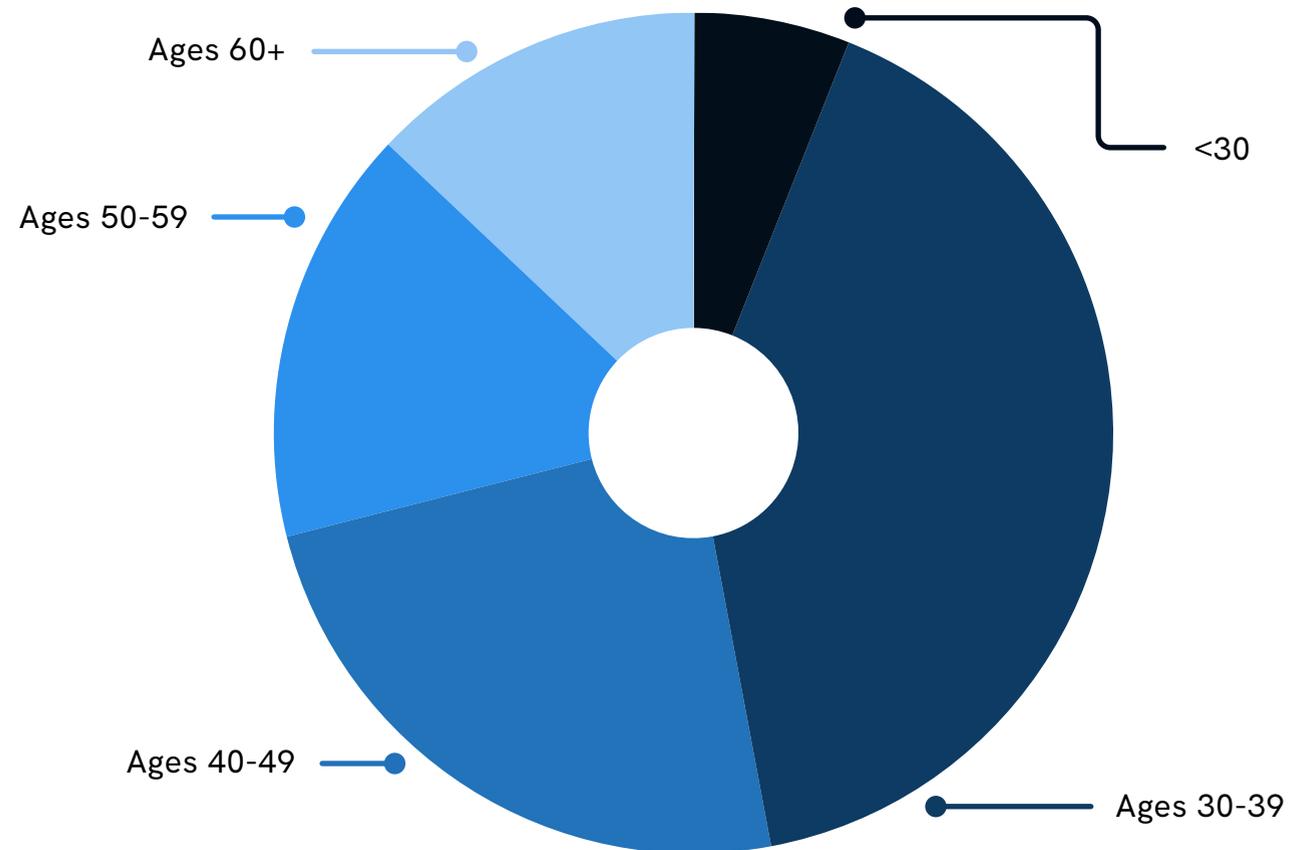
City & State
1. New York, NY
2. Chicago, IL
3. Boston, MA
4. Los Angeles, CA
5. Philadelphia, PA
6. Washington, DC
7. Houston, TX
8. Miami, FL
9. Dallas, TX
10. Baltimore, MD
11. Detroit, MI
12. Atlanta, GA
13. San Francisco, CA
14. San Diego, CA
15. Denver, CO
16. Seattle, WA
17. Minneapolis, MN
18. Pittsburgh, PA
19. St. Louis, MO
20. Phoenix, AZ

Adoption by Physician Age

Telemedicine Use Strong Across All Age Groups

Telemedicine adoption remained strong across all physician age groups in 2022, beginning with training and extending to retirement.

Telemedicine Physician Users by Age



Adoption by Specialty

Adoption of Telemedicine Highest in Specialties that Manage Chronic Illness

Physicians in specialties that manage a significant number of patients with chronic illnesses continue to show some of the highest adoption rates of telemedicine. This trend may be attributed to telemedicine's ability to promote continuity of care and long-term patient-physician relationships. Among all physicians surveyed, over 83% reported they found telemedicine useful in enhancing continuity of care for patients with complex or chronic conditions, and nearly two-thirds (65%) said telemedicine improved communication with their patients.

Top Specialty by Adoption Rate

1. Endocrinology
2. Urology
3. Gastroenterology
4. Rheumatology
5. Neurology
6. Otolaryngology (ENT)
7. Nephrology
8. Cardiology
9. Dermatology
10. Pulmonology
11. Internal Medicine
12. Allergy & Immunology
13. Family Medicine
14. Hematology/Oncology
15. Psychiatry

"I'm an advanced heart failure cardiologist, and there are not many of us in the state. With telemedicine, patients now have access to subspecialists which may not be available in their area. In addition, follow ups for things like adjusting a heart failure therapy can be done via telemedicine, eliminating the need for patients to drive long distances for a short office visit.

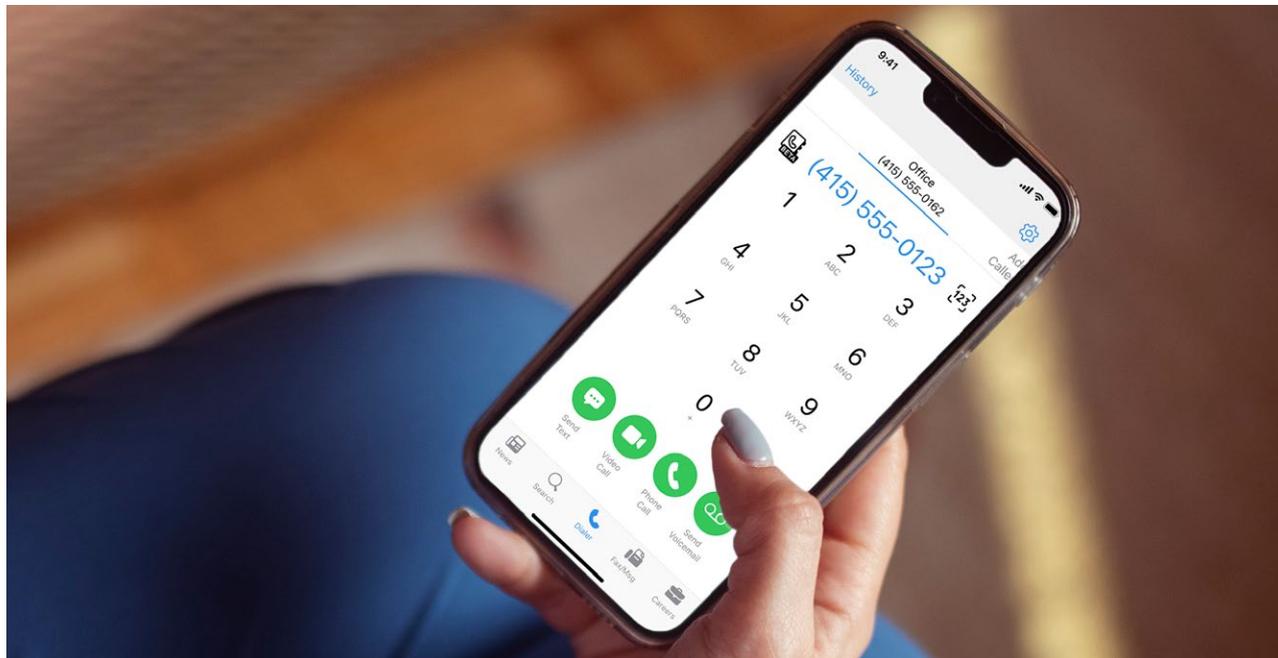
Over the past few years, we've learned telemedicine is not a replacement, but a complement to our practices.

- Munir Janmohamed, MD,
Medical Director Heart Failure,
Dignity Health Medical Foundation

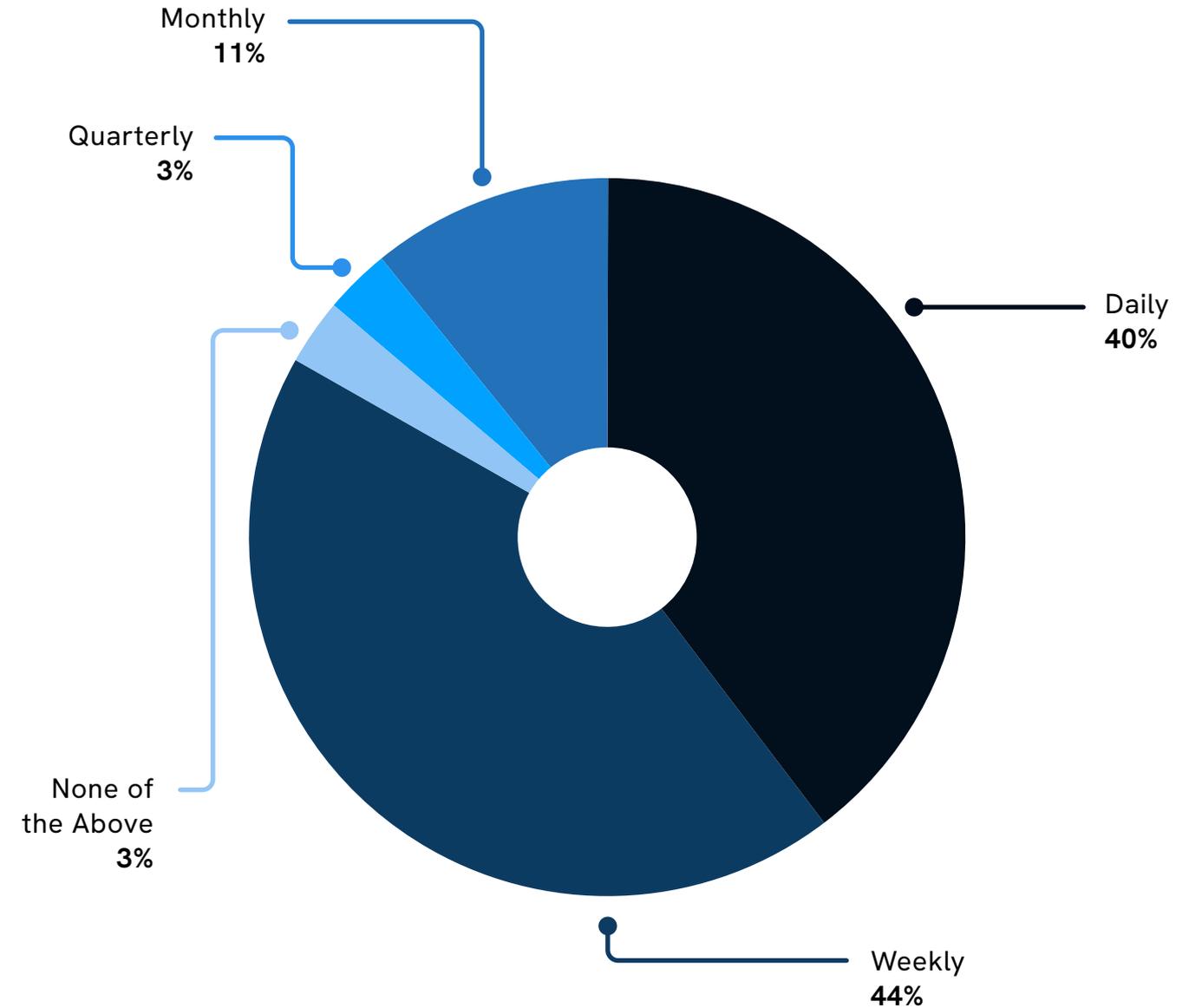
Frequency of Use

Many Physicians Incorporating Telemedicine into Daily, Weekly Practice

As health care becomes more digitized, physicians across specialties are integrating telemedicine into their practices. In a survey of Doximity's telemedicine users, nearly 84% of physicians reported using telemedicine at least weekly, with 40% incorporating it into their daily clinical practice. The highest reports of daily use were among psychiatrists at 84%, followed by endocrinologists at 57%. Looking ahead, the increasing popularity of mobile medicine and remote patient monitoring devices — estimated to reach 60.6 million U.S. patients by 2024³ — is likely to drive further demand for reliable and complementary telemedicine solutions.



How often do you use telemedicine (via voice, video, text, etc.) in your practice?*



*May not sum to 100 due to rounding numbers.

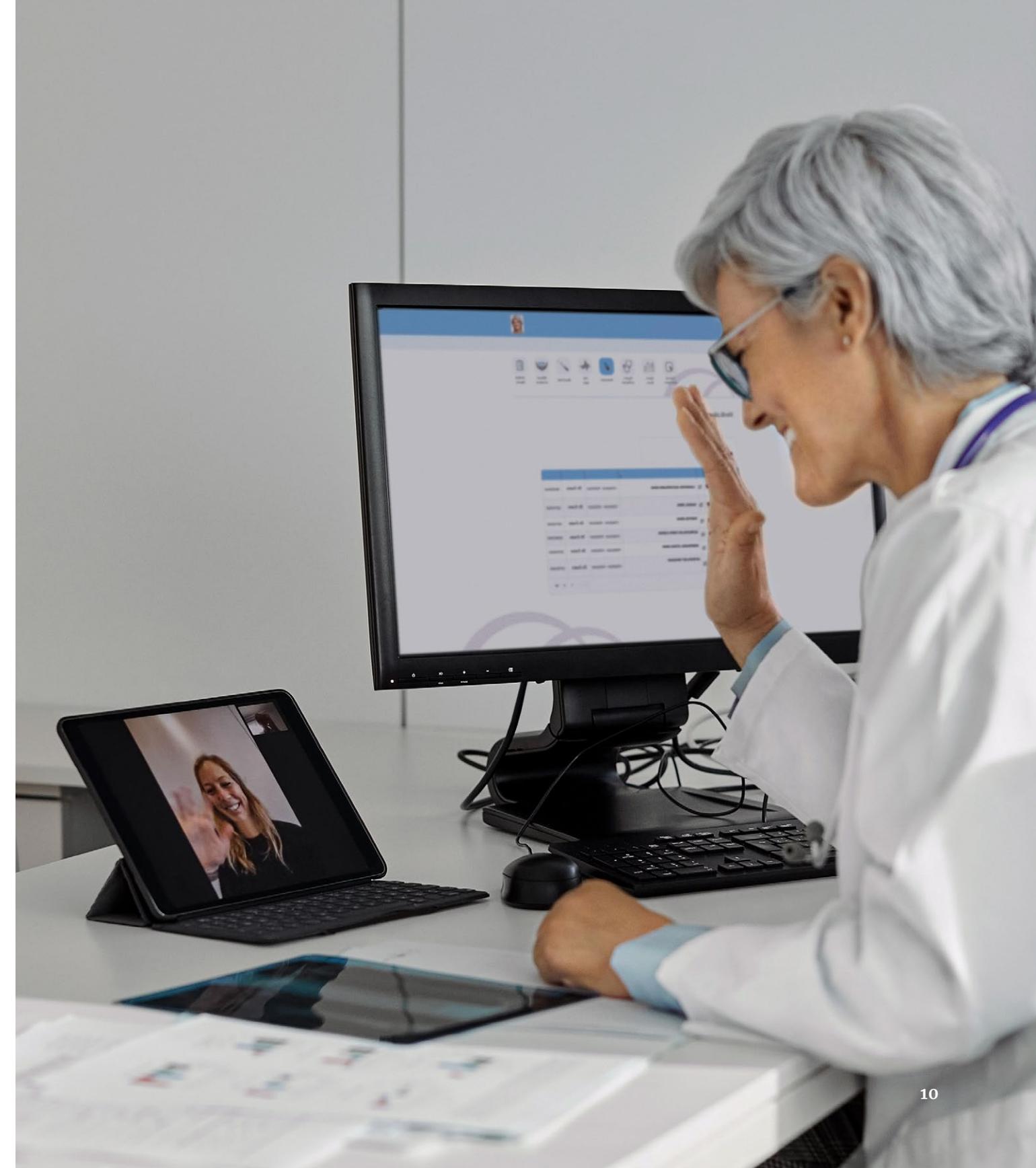
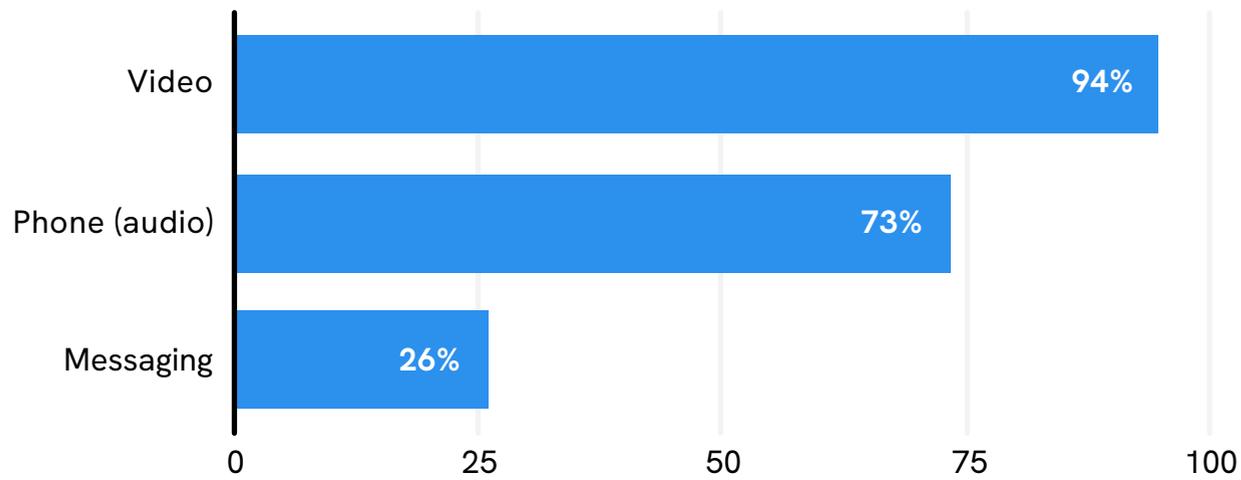
Adoption by Modality

Physicians Embracing Multiple Telemedicine Modalities

As physicians lean into digital, they are embracing multiple telemedicine modalities, with video emerging as the most predominant among physicians surveyed. Audio-only phone visits are also widely employed, demonstrating the need for telemedicine tools that are versatile and adaptable to patients' needs.

According to a study published in *JAMA Network Open*, Medicare patients with less technology access, lack of video experience, Latinx ethnicity, or limited English proficiency, were all more likely to be offered telephone visits compared to video visits.⁴ These findings underscore the importance of audio-only options and the ongoing need for inclusive, flexible, and accessible telemedicine and product features that meet the needs of an increasingly diverse patient population.

Which telemedicine modalities do you use in your practice?



Adoption by Use Case

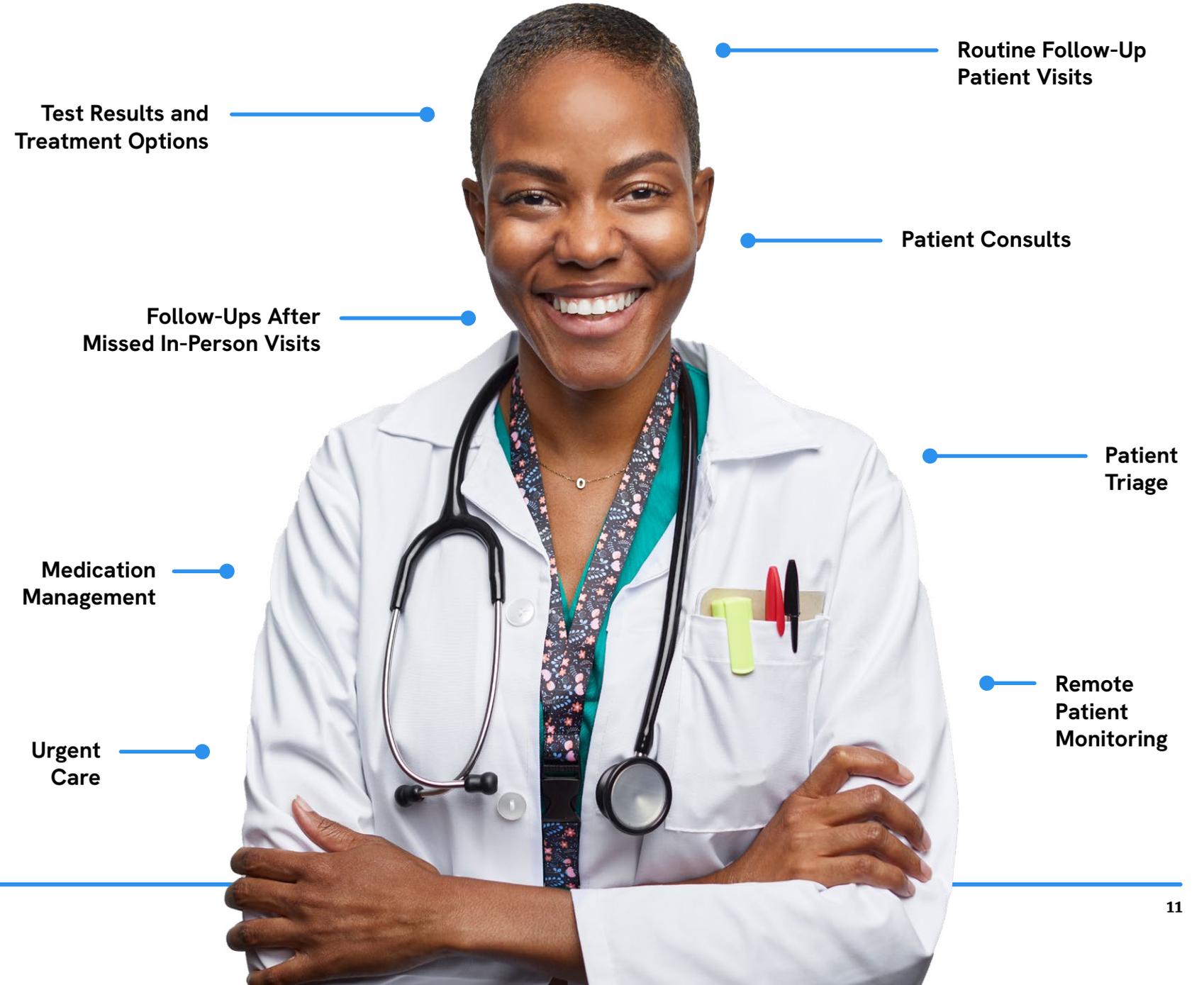
Telemedicine's Role Extends Beyond Routine Care

Telemedicine continues to showcase its versatility through a wide range of health care applications. While one of the most predominant applications among physicians is routine follow-up visits (92% of physicians surveyed), the majority of physicians surveyed (57%) use telemedicine to discuss lab and test results and treatment options with their patients, and this is even higher among oncologists (70%).

Telemedicine also offers an important channel for prescription refills and timely follow-ups after a missed in-person visit, while playing a non-trivial role in remote patient monitoring, patient triage and urgent care.

Notably, a recent study conducted by Epic Research found that most patients who had a telemedicine visit did not require an in-person follow-up appointment within the same specialty for three months. These findings suggest that telemedicine can provide effective medical attention without the need for additional in-person visits.⁵

How Physicians Apply Telemedicine in Clinical Practice:

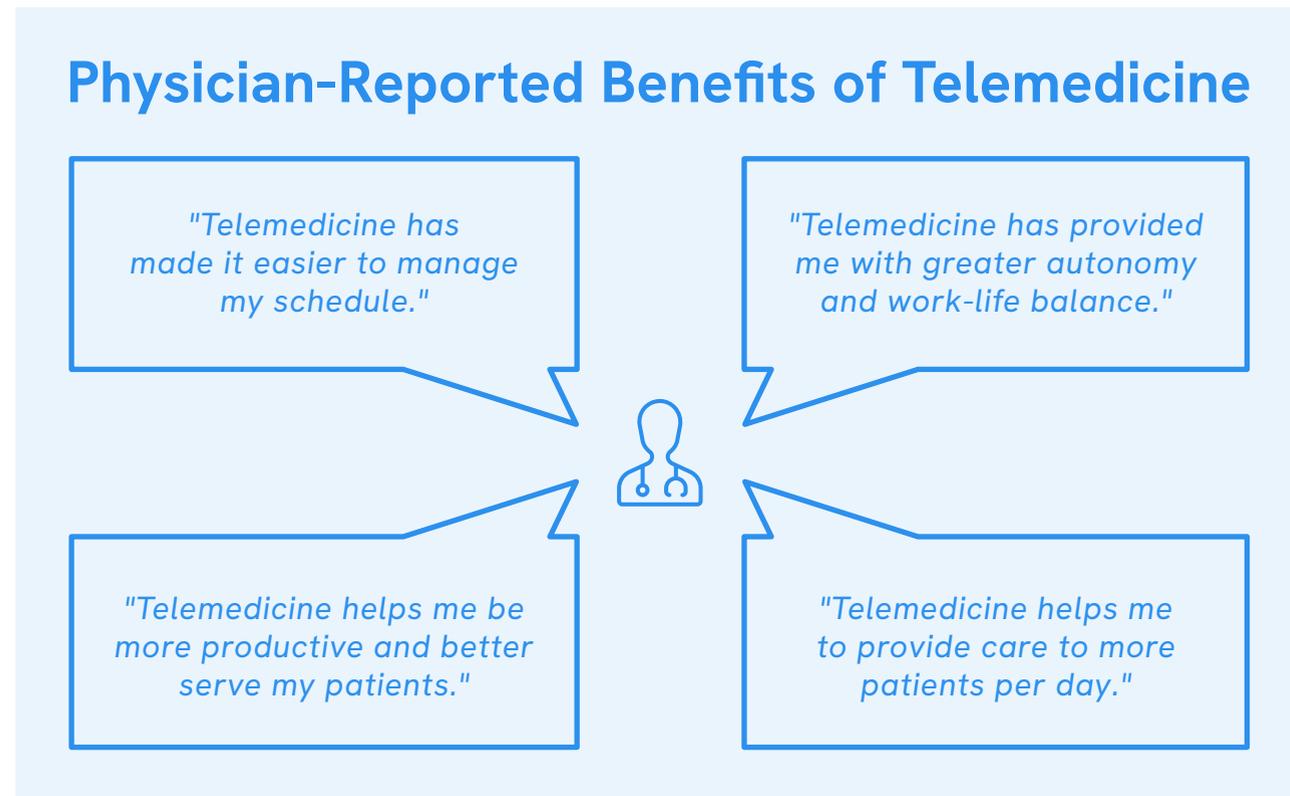


Effects on Productivity, Work-Life Balance

Physicians Report Better Time Management

While the pandemic certainly increased telemedicine use, the opportunity for better time management could help explain its continued adoption. Two-thirds of all physicians surveyed (66%) reported at least one time management benefit, such as greater autonomy and work-life balance, increased productivity, and easier schedule management.

In fact, the majority of physicians surveyed reported telemedicine has improved their ability to manage their schedules. As physicians continue to navigate burnout and overwork, these benefits could drive even greater adoption of telemedicine in the future.



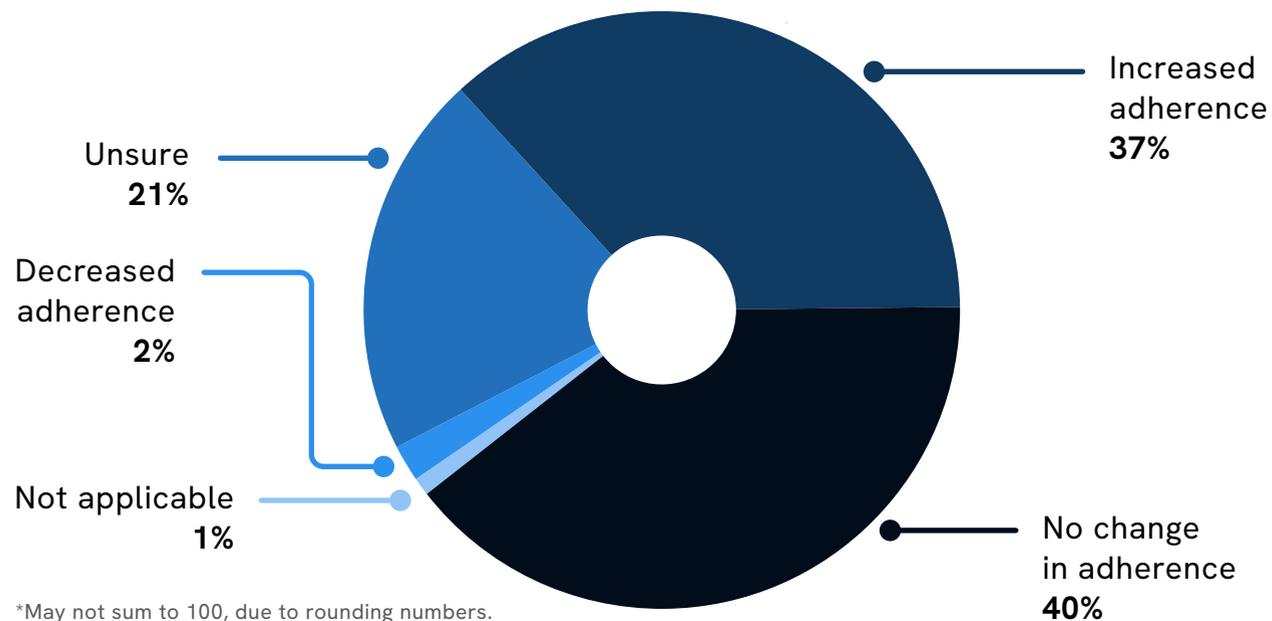
Effects on Patient Visit, Treatment Adherence

Reduces No-Show Rates, Improves or Maintains Adherence to Treatment Plans

Telemedicine is also instrumental in addressing the costly and disruptive issue of patient no-shows for doctor visits. Approximately 61% of physicians surveyed reported a reduction in their patient no-show rates as a result of telemedicine, likely due to the increased convenience, accessibility, and flexibility of virtual care visits.

Importantly, 77% of physicians said they have observed either equivalent or improved patient adherence to treatment plans through telemedicine, with less than 2% reporting decreased adherence.

How has telemedicine affected your patients' adherence to treatment plans?*

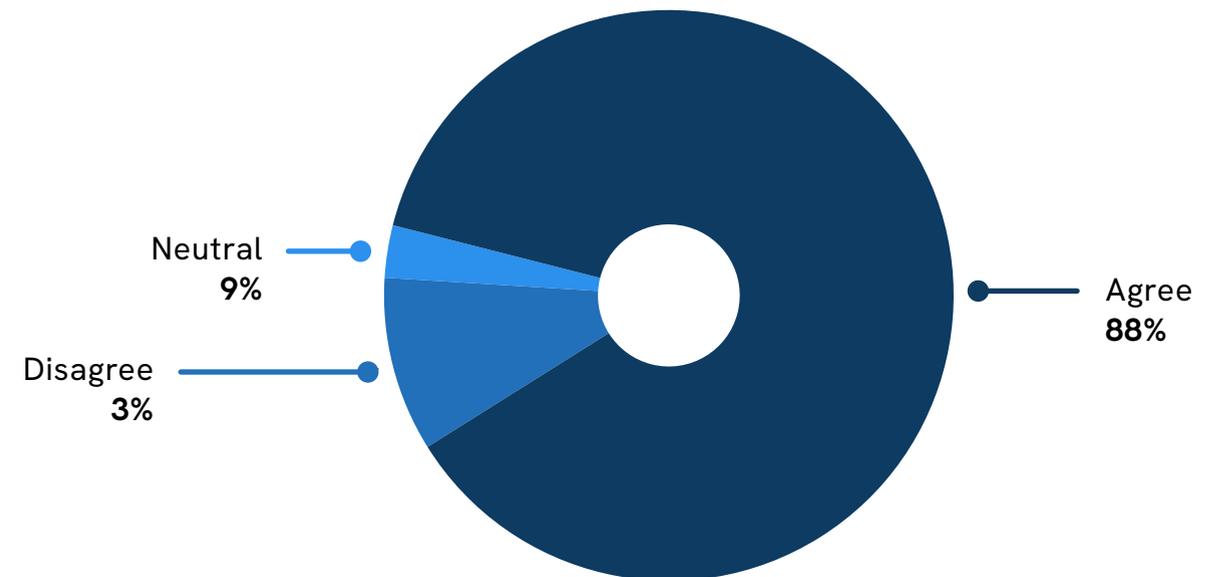


Effects on Patient Access

Physicians Report Improved Access, Reduced Wait Times for Patients

Patient access also appears to be a leading contributor to telemedicine adoption. Nearly 88% of physicians surveyed said telemedicine has increased patient access to health care, particularly among populations that may have faced barriers to care previously. Similarly, 87% of physicians reported telemedicine has enabled them to provide care to patients who face obstacles visiting their office in person. As additional benefits, nearly 44% of physicians found that telemedicine has actually reduced wait times for their patients, while 41% said telemedicine has expanded their community reach and referral networks.

Physicians Who Agree Telemedicine Has Increased Patient Access to Health Care

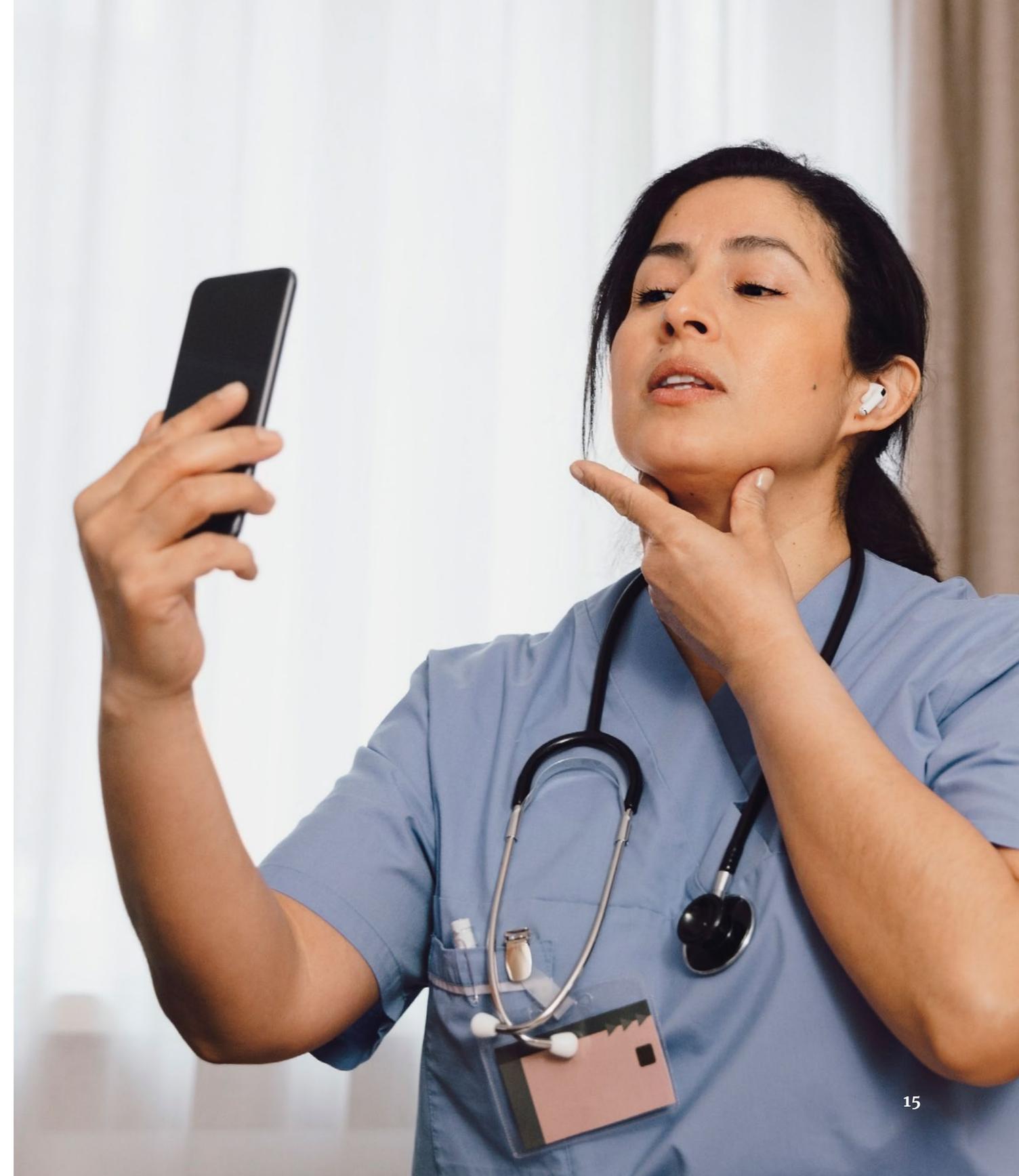
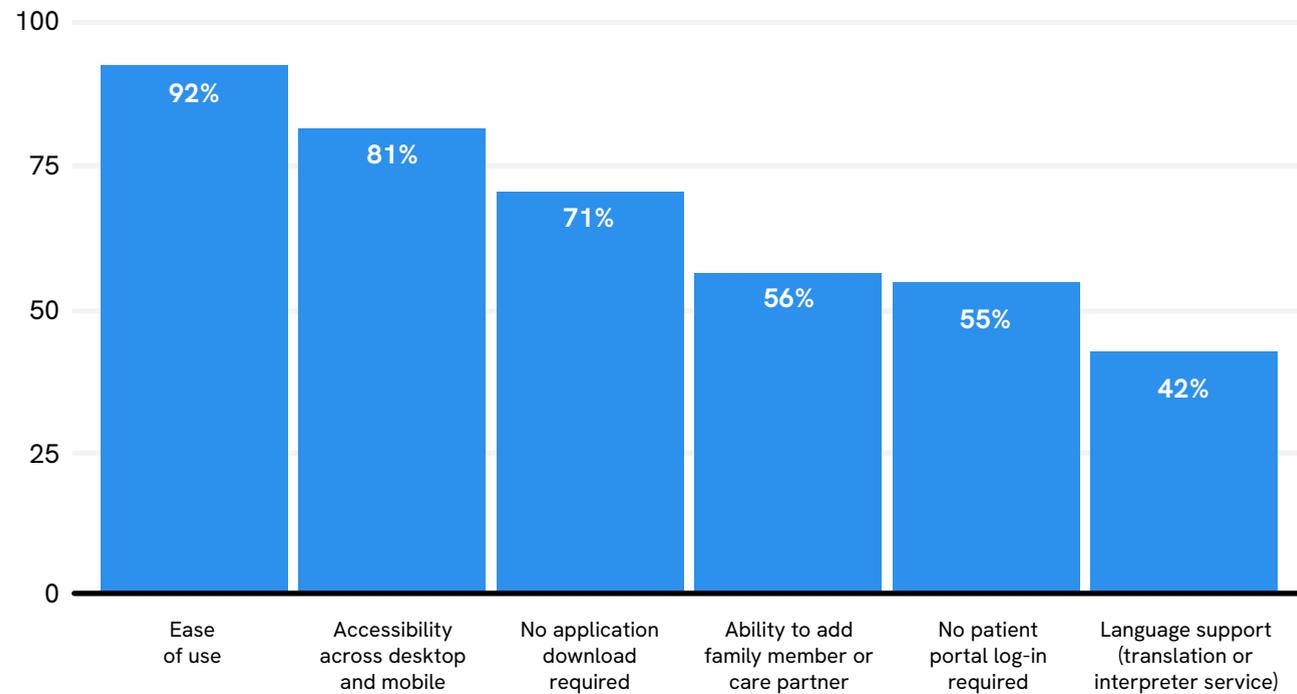


Factors Influencing Patient Access

Ease of Use, Cross-Device Compatibility Key Attributes for Patient Access

Ensuring patient access to telemedicine is a critical aspect of successful implementation. Approximately 92% of physicians surveyed identified ease of use as a key factor in promoting patient access, followed by cross-device compatibility, allowing access from both desktop and mobile devices. Notably, the majority of physicians surveyed identified the ability to avoid application downloads and login-protected patient portals as important to ensuring patient access to telemedicine.

Which of the following features are important to ensuring patient access to telemedicine?

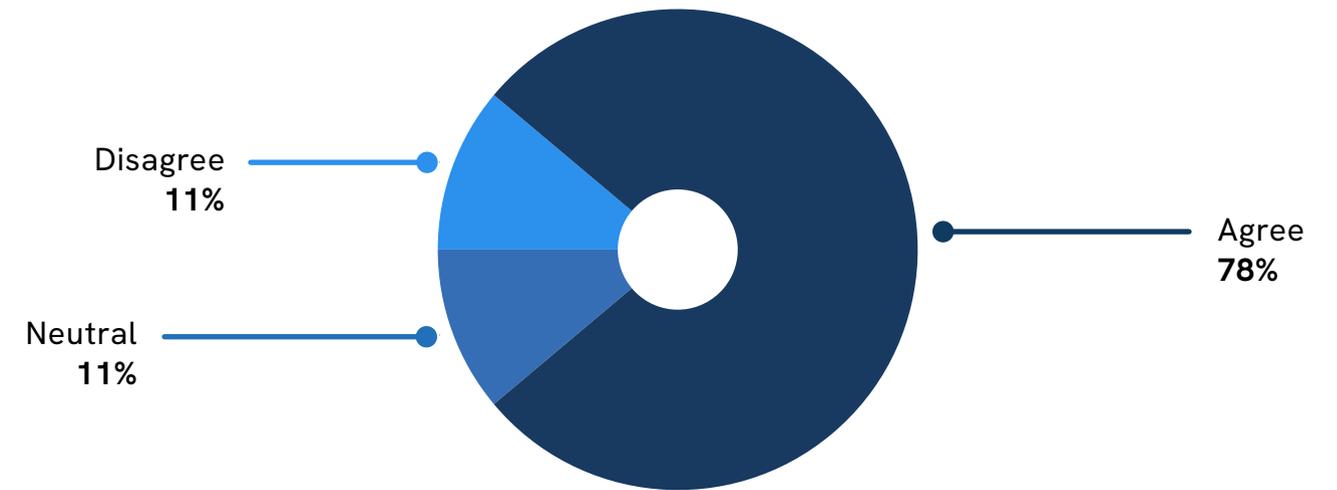


Policies to Preserve Patient Access

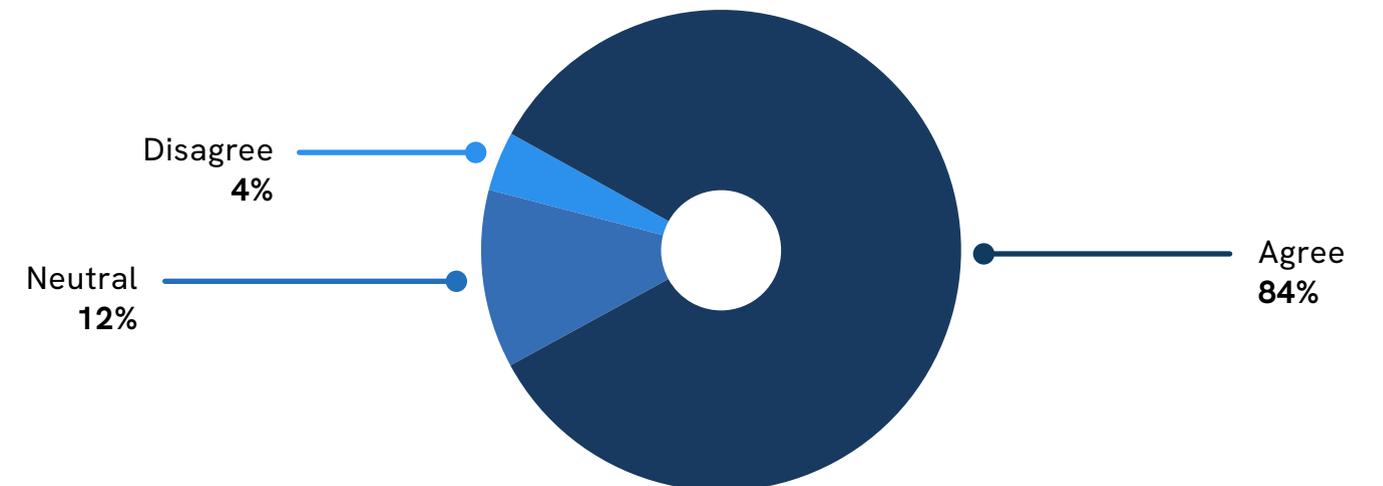
Pay Parity, Licensing Across State Lines Critical to Patient Access

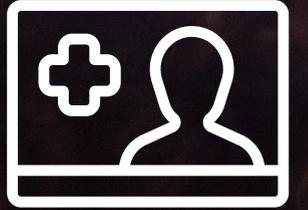
As telemedicine’s role in U.S. health care continues to evolve, pay parity and the ability to offer telemedicine services across state lines will continue to be two issues that can greatly impact patient access. Among all physicians surveyed, over 78% indicated they believe there should be pay parity between telemedicine and in-person visits, and nearly 84% said the ability to practice telemedicine across state lines is critical to improving patient access to specialists and other timely care. With a projected physician shortage of up to 124,000 physicians by 2034,¹ telemedicine is likely to play a significant role in promoting patient access to care, particularly in rural or underserved areas.

Percentage of Physicians Who Agree There Should Be Pay Parity Between Telemedicine and In-Person Visits



Percentage of Physicians Who Agree Ability to Practice Telemedicine Across State Lines is Critical to Improving Patient Access to Specialists, Other Timely Care





Patient Adoption of Telemedicine

Patient Insights

Tracking Patient Perception and Adoption of Telemedicine

As part of this study, Doximity surveyed 2,400 adult patients across the U.S. about their use of telemedicine and preferences for virtual care in the future.

Survey respondents included 1,200 patients who identified as having a chronic illness and 1,200 patients who did not. Among all respondents surveyed, the majority reported participating in a telemedicine visit within the last year (between March 2022 to March 2023).

The following analyses examine these patients' direct experiences with telemedicine, as well as broader trends and preferences among the full patient cohort.

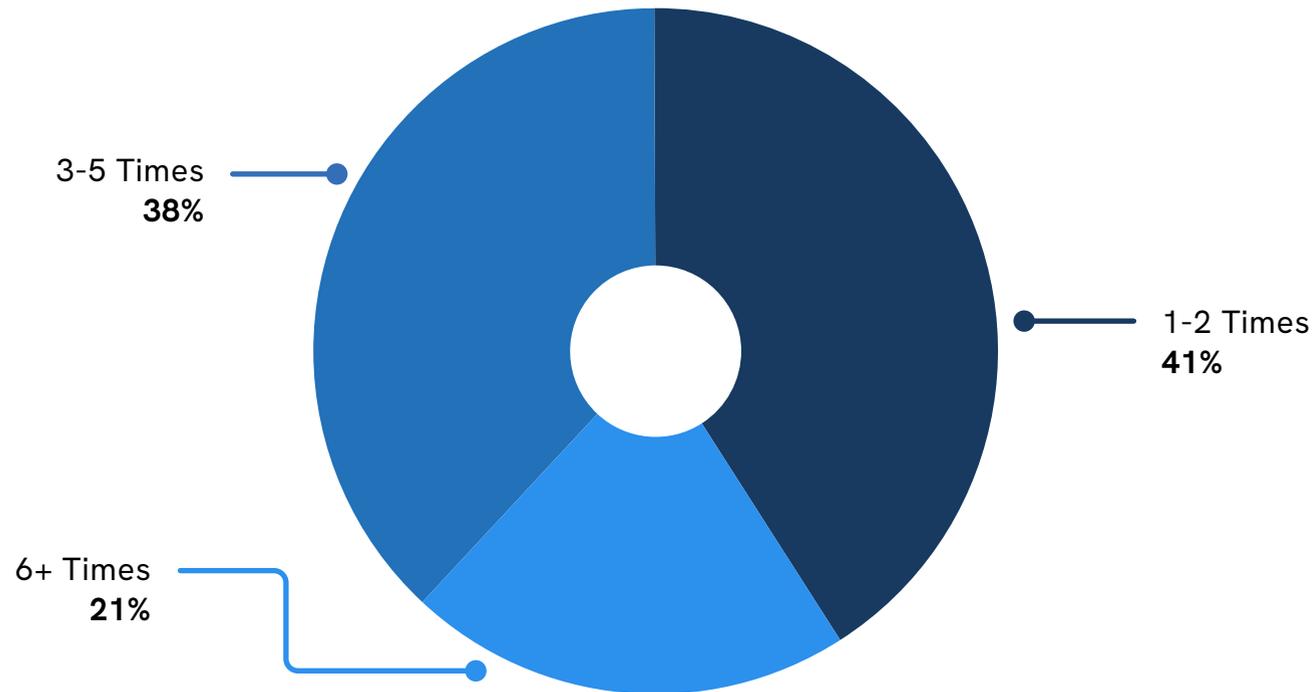


Telemedicine Use Among Patients

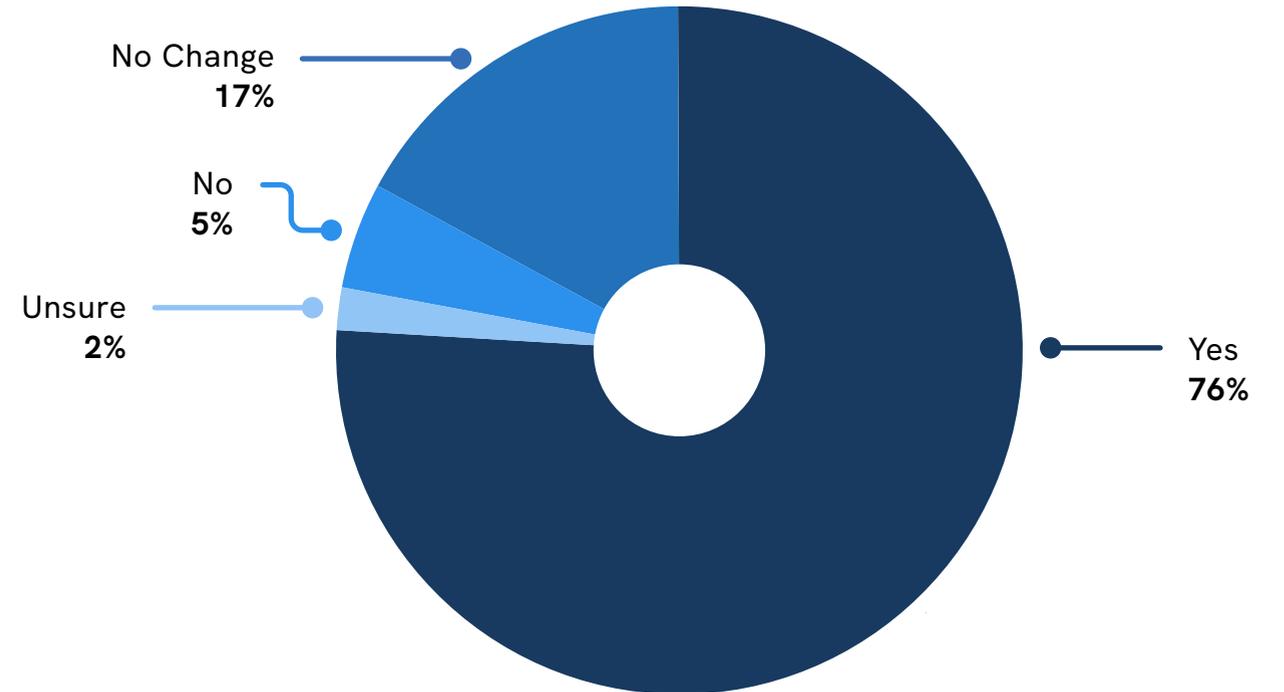
Patients Report Recurring Use of Telemedicine Within One-Year Period

In 2022, telemedicine reached the 80% adoption mark overall, becoming the preferred channel for prescription care and minor illness.⁶ While this is a significant milestone, the frequency of telemedicine use is also noteworthy. Based on survey results, nearly 60% of patients who had a telemedicine visit in the past year participated in a minimum of three virtual visits. Over one in five (21%) participated in six or more visits, and this frequency was similar among patients with and without chronic illnesses. Further, nearly 76% of patients who had a telemedicine visit reported it improved their access to health care services.

In the past year, how many times did you meet with a doctor virtually?*



Has virtual care improved your access to health care services?*



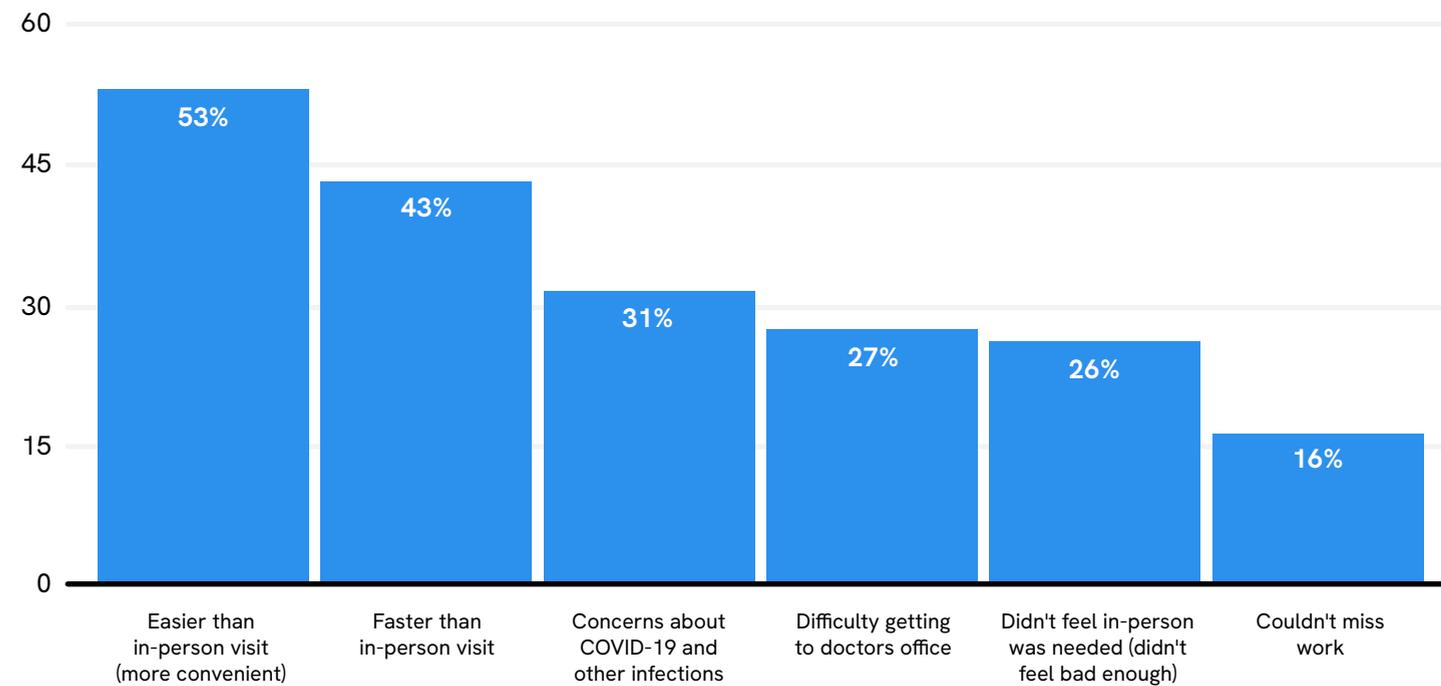
*Percentages confined to respondents who participated in a telemedicine visit in the past year.

Factors Driving Telemedicine Adoption

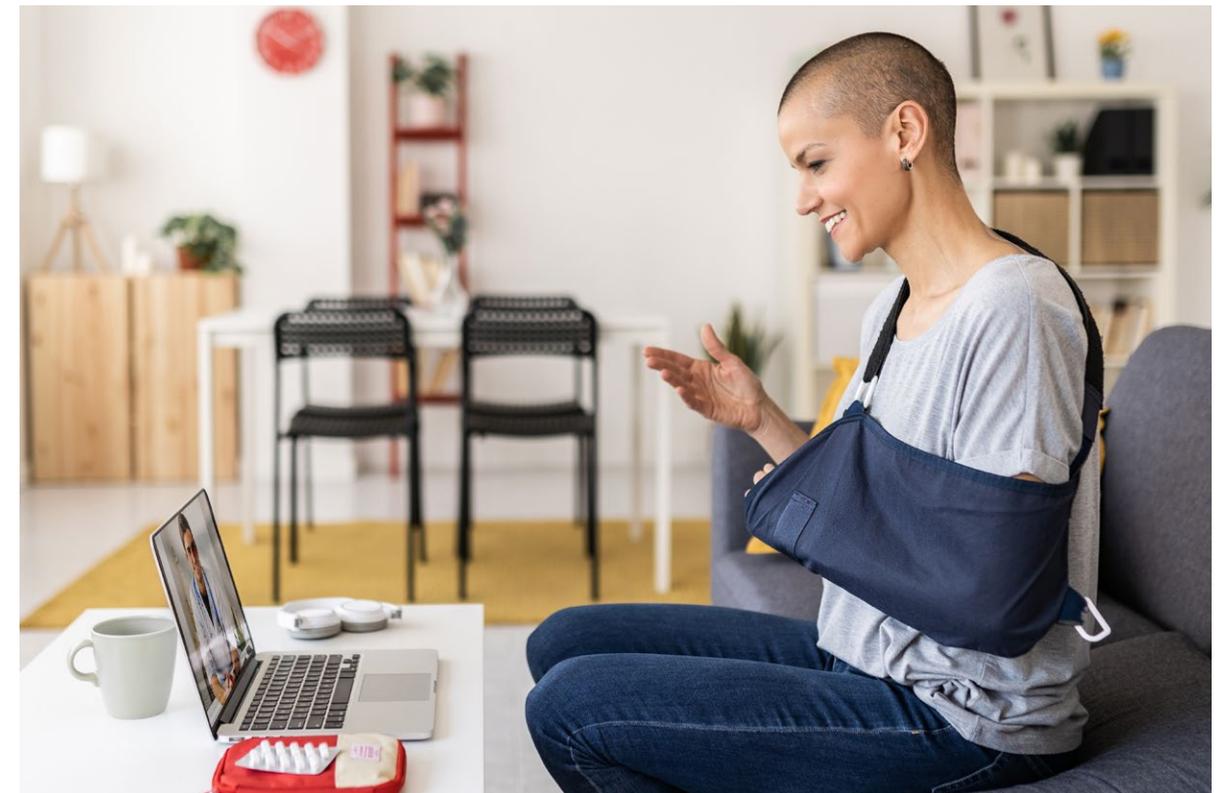
Efficiency, Convenience Leading Drivers of Patient Adoption

Patients who participated in a telemedicine visit in the past year identified a number of reasons for adoption, with efficiency and convenience being primary drivers. Telemedicine enables patients to consult with their doctors from the comfort of their homes, eliminating the need to interrupt their daily routines or commute to a doctor's office. Importantly, more than one in four patients with a telemedicine visit in the past year reported opting for a virtual visit because they did not believe their situation warranted an in-person appointment. This suggests that telemedicine could play a vital role in ensuring patients less inclined to visit a doctor's office still receive timely medical evaluation. In fact, the majority of all patients surveyed (70%) indicated they may be more likely to consult with a doctor in a non-emergency situation if the visit could be conducted virtually.

Why did you see your doctor virtually within the past year?*



*Percentages confined to respondents who participated in a telemedicine visit in the past year.

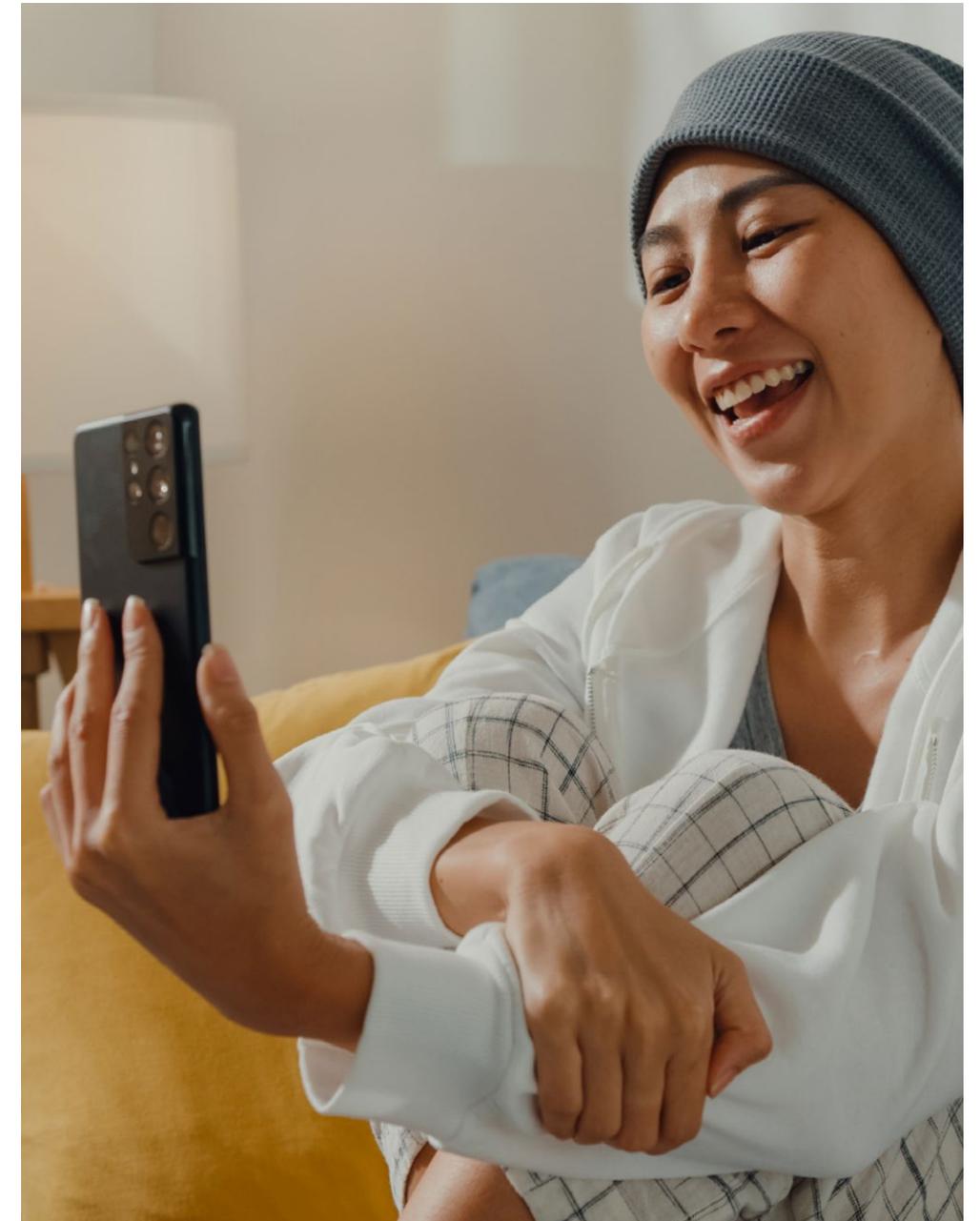
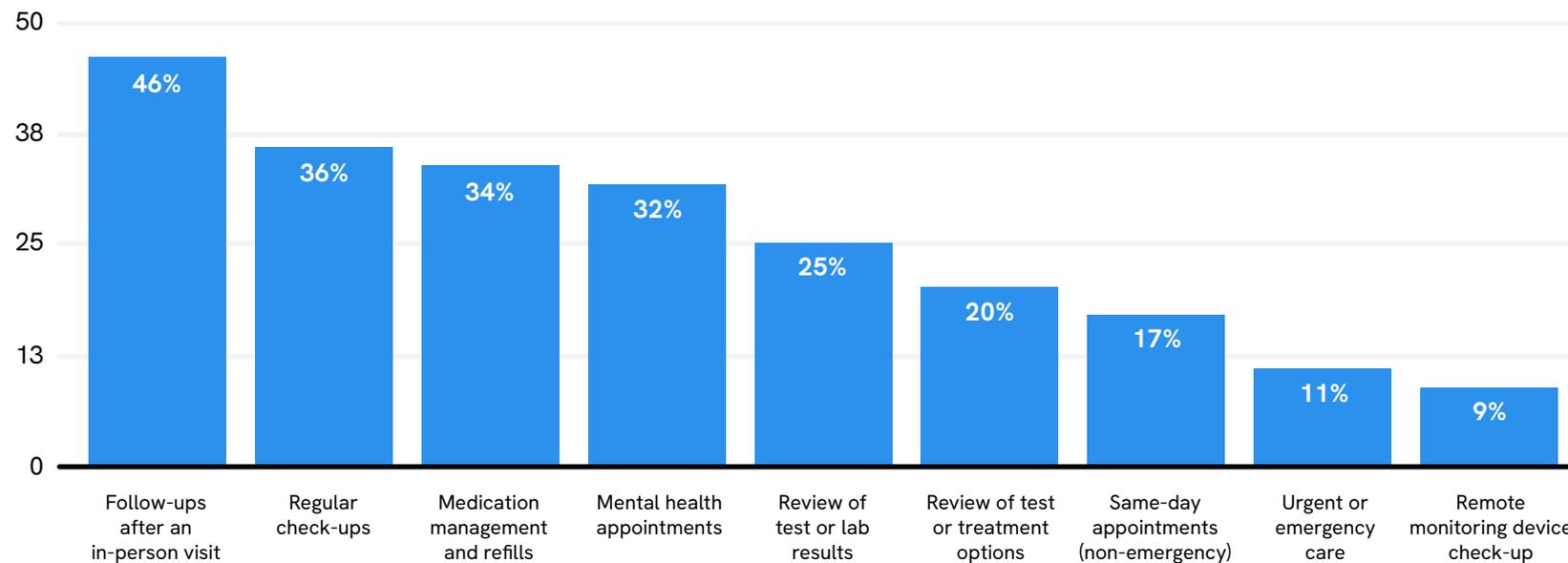


Adoption by Health Care Service

Strong Telemedicine Adoption for Routine Visits, Medication Management

Over the past year, patients participated in telemedicine visits to receive a number of health care services, ranging from routine check-ups to appointments to discuss test results and treatment options. While follow-up appointments appear to be one of the primary applications of telemedicine use, this is likely due to the comprehensive nature of these visits, which can encompass various health care services. Among all patients who had a virtual care visit in the past year, approximately one in three patients (34%) used telemedicine to discuss their medications with their doctor or to refill their prescriptions, while roughly one in five used telemedicine to review test or treatment options. Notably, some of the highest use of telemedicine for these services was among patients with chronic illnesses.

What type(s) of care have you received virtually in the past year?

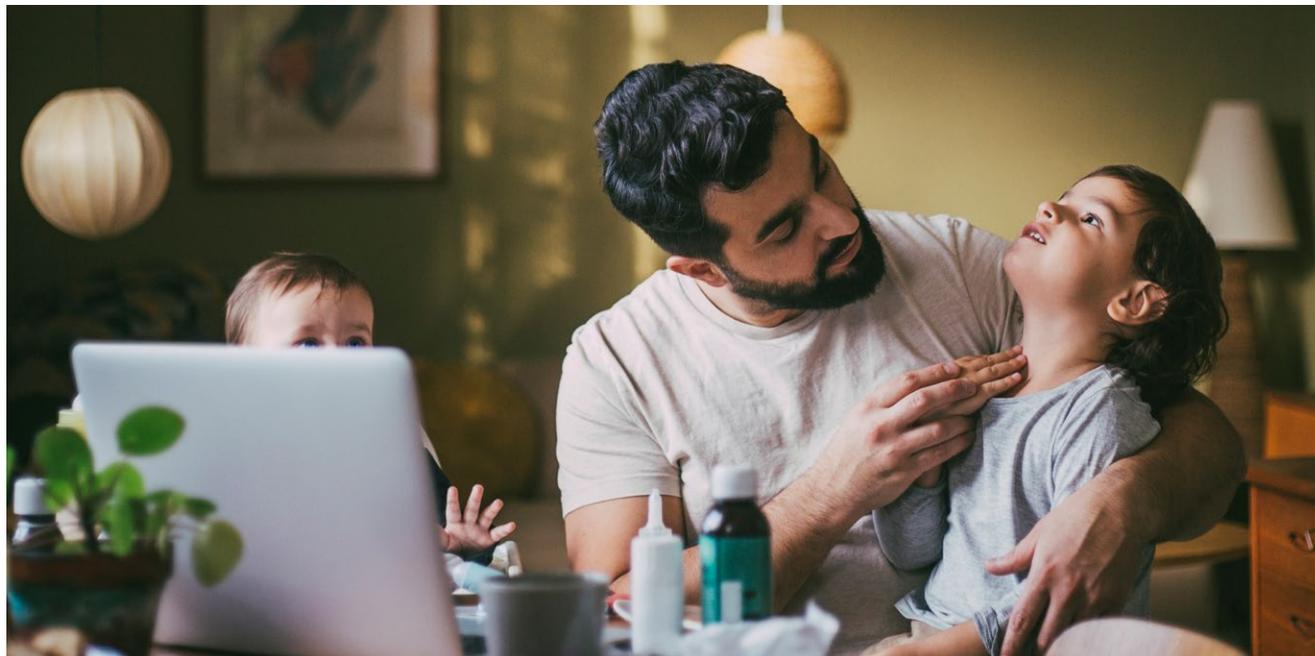


Preferences by Modality

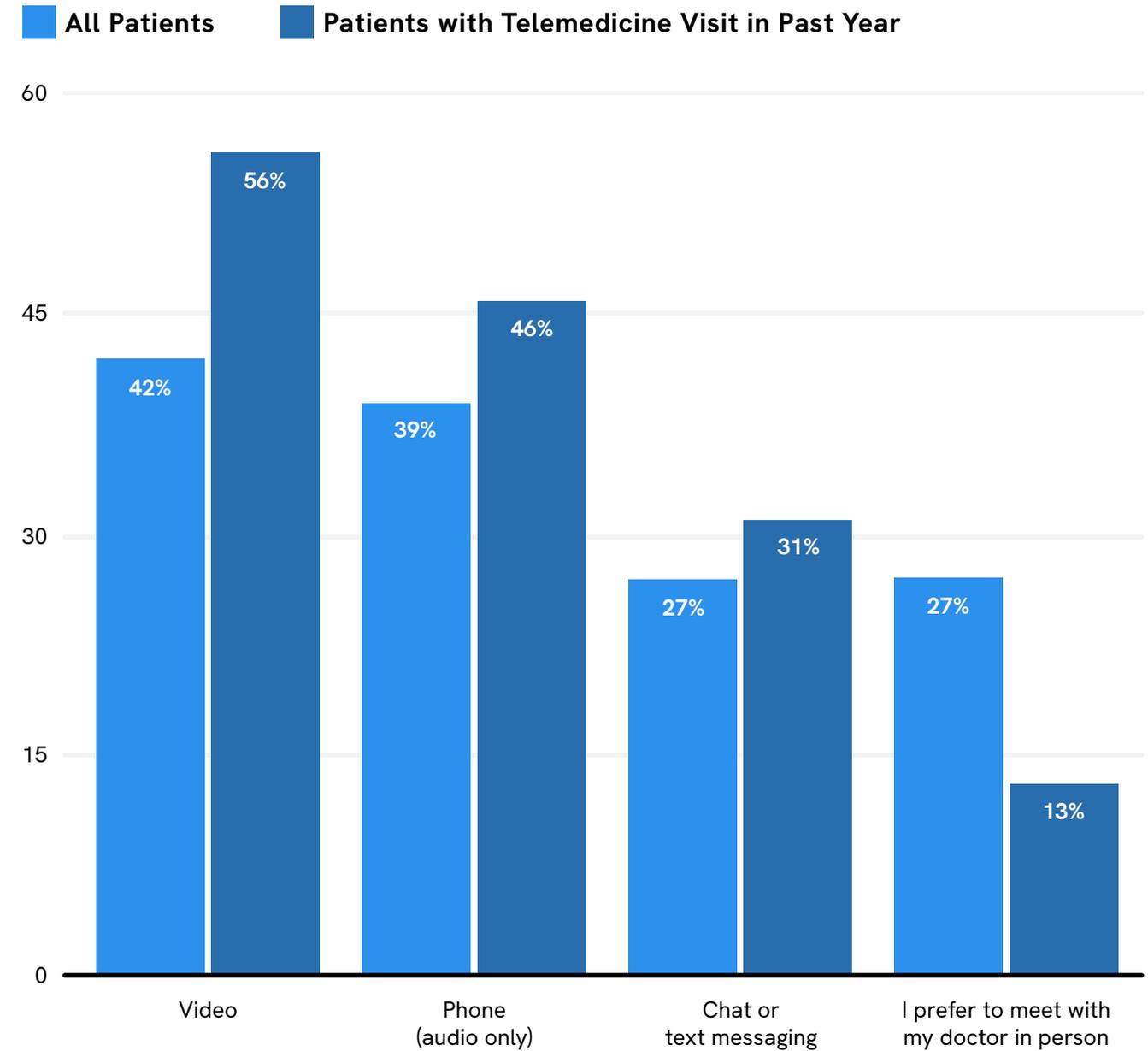
Patients Report Similar Preferences for Video, Audio-Only Visits

Patients are also embracing a variety of telemedicine modalities to cater to their diverse needs and preferences. These modalities include video consultations, audio-only phone calls, and chat or text messaging.

Among all patients surveyed, video emerged as the most preferred modality, with audio-only phone visits closely behind. These relatively strong preferences across modalities underscore the need for adaptable and flexible telemedicine solutions that can promote a positive patient experience for all.



Which types of virtual care formats do you prefer?





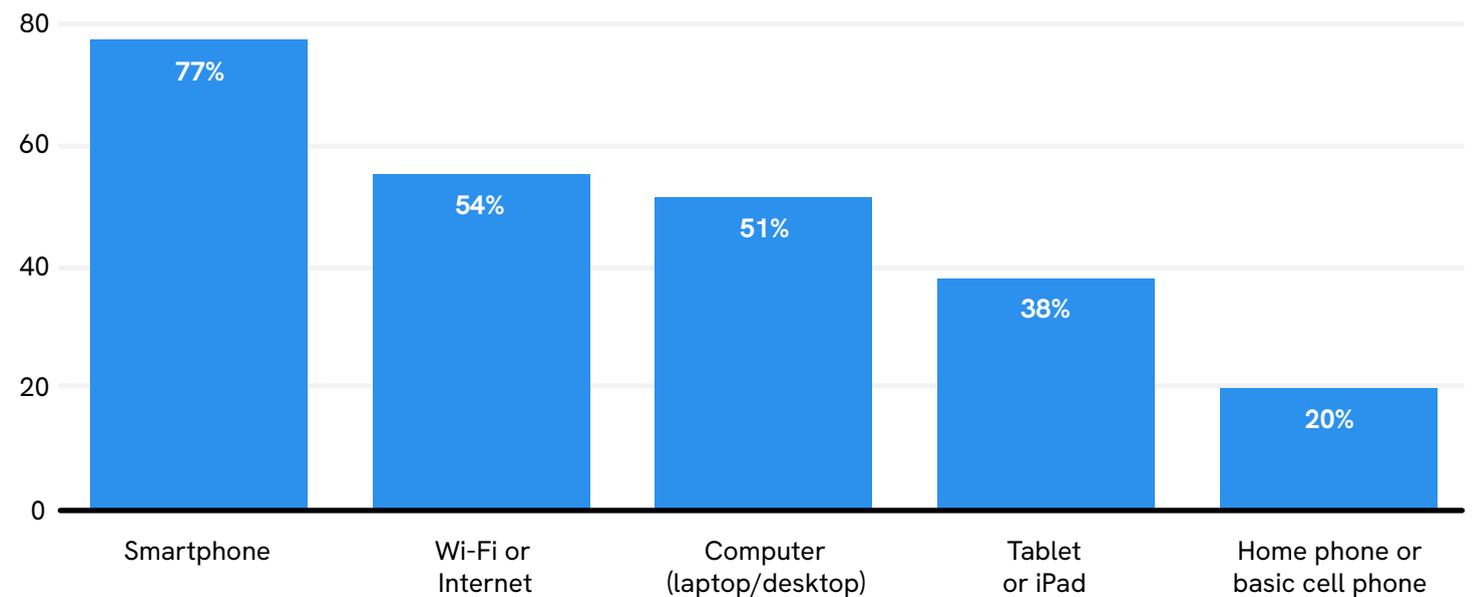
Device Access and Preferences

Patients Continue to Favor, Depend on Smartphones

Among all patients surveyed, the majority (77%) reported having regular access to a smartphone, making it the most commonly available device for virtual health care visits. This was followed by computers at 51% and tablets at 38%. Importantly, only 54% of respondents reported having regular access to Wi-Fi, underscoring the need for flexible telemedicine solutions that can easily adapt to meet individual patients' needs, including adjusting for no or low internet connection.

In terms of patient preferences, 60% of respondents indicated a strong preference for using mobile devices for telemedicine visits, with less than one-fourth (24%) reporting a preference for computers.

Which of the following resources do you have regular access to for virtual health care visits?

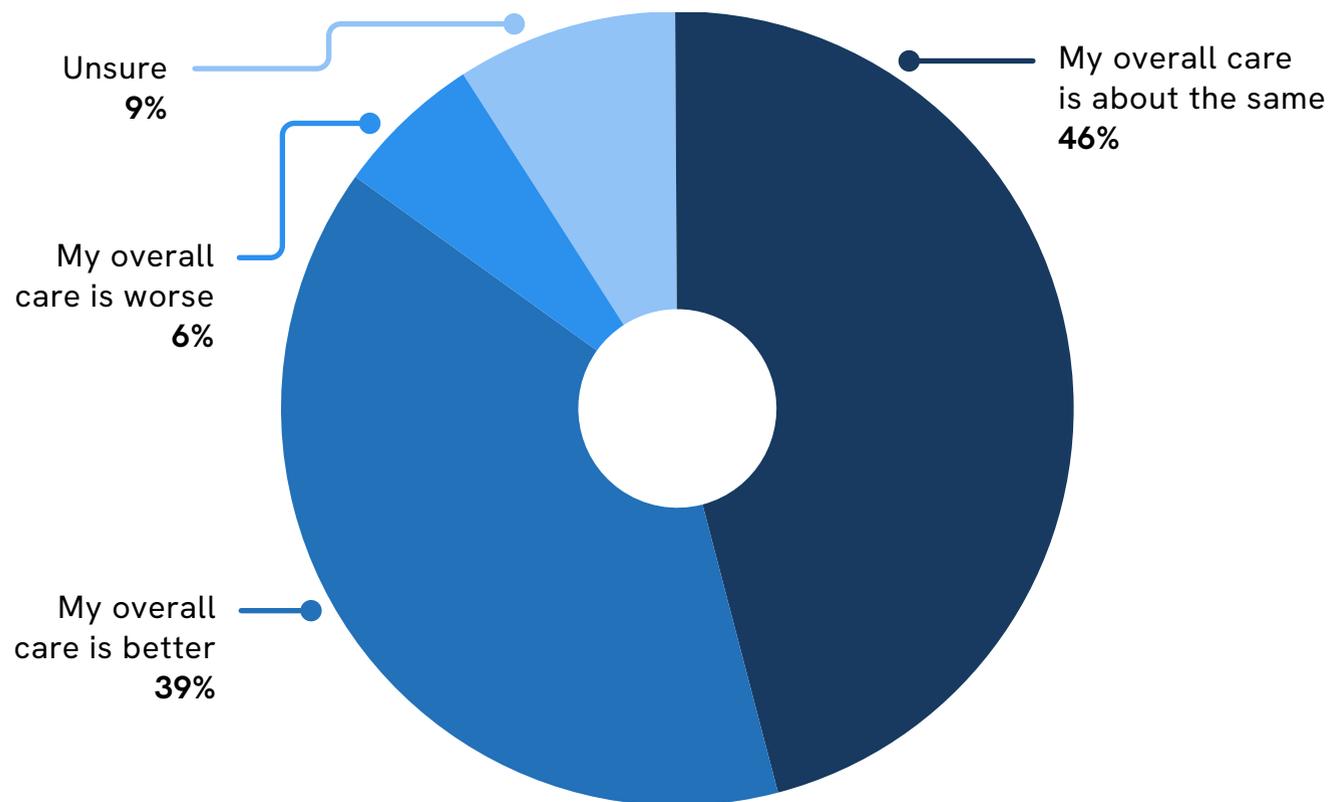


Telemedicine Satisfaction, Quality of Care

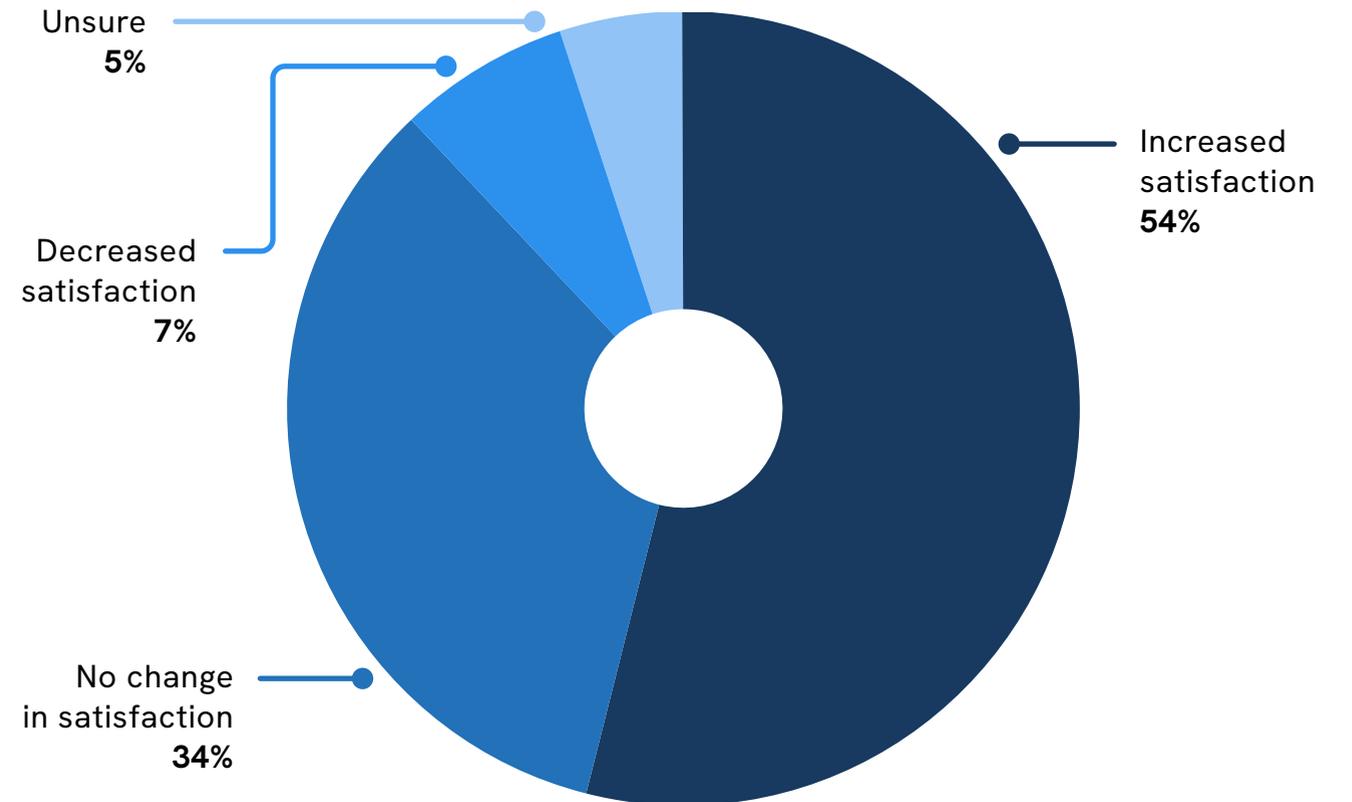
Patients Report Increased Satisfaction, Equivalent or Superior Quality of Care

Consistent with prior year findings, patients continue to report equivalent or superior quality of care as the result of their experience with telemedicine. Among patients who participated in a telemedicine visit within the past year, 85% reported their overall care was better or about the same with virtual care, and over half indicated increased satisfaction. These results underscore telemedicine’s ability to enhance patient experiences and outcomes, making it a valuable tool in modern health care delivery.

Which of the following best represents your experience with virtual care overall?*



How has virtual care affected your satisfaction with your care?*

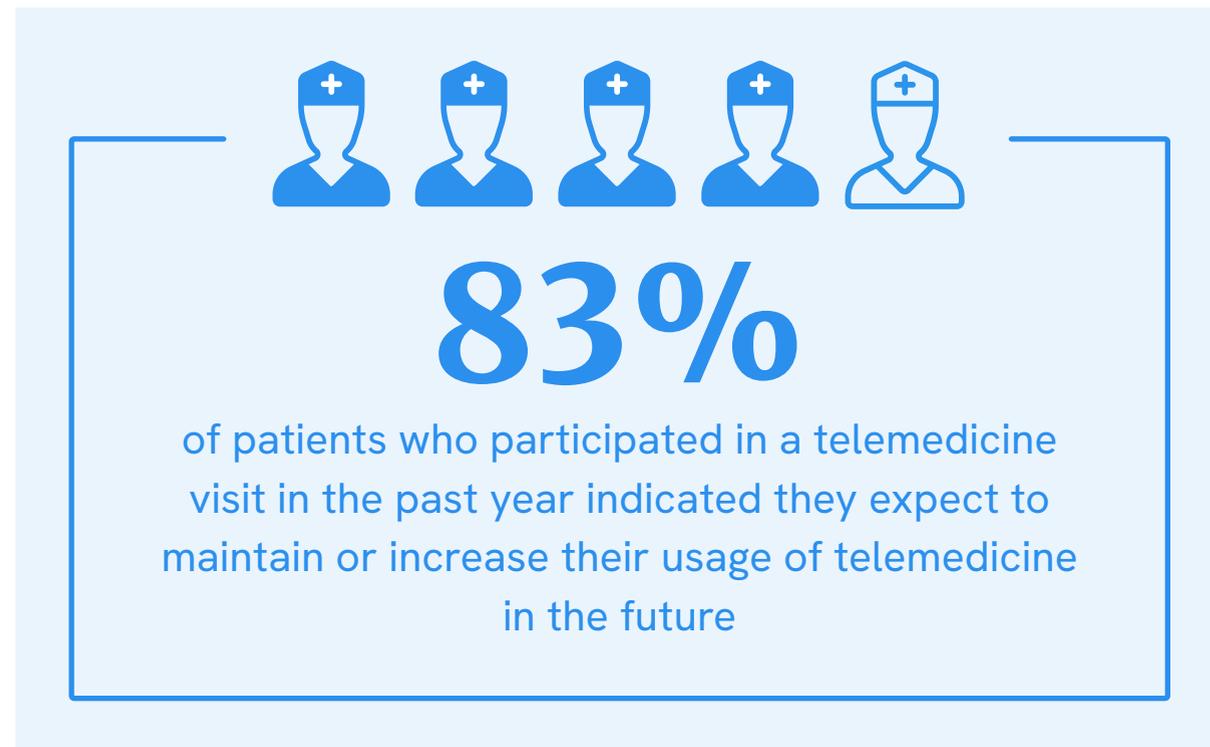


*Percentages confined to respondents who participated in a telemedicine visit in the past year.

Expectations for Future Use

Patients Emphasize Importance of Virtual Care Options

Nearly 67% of patients with a telemedicine visit in the past year emphasized the importance of their doctor providing virtual care options, and this number was even higher among patients who had three or more telemedicine visits (72%). Notably, the large majority of patients who participated in a telemedicine visit in the past year (83%) indicated they expect to maintain or increase their usage of telemedicine in the future.





Conclusion, Methodology, & Sources

Conclusion

With strong adoption among physicians and patients, telemedicine is poised to maintain an important role in health care delivery, particularly as the U.S. continues to grapple with physician burnout and shortage and an aging population.

Moving forward, uniting telemedicine with in-person care will help personalize care models, promote more equitable access to care, and strengthen the overall health care system for all.

By leveraging the advantages of both telemedicine and in-person care, physicians as well as care teams can create flexible and adaptable models that better meet the diverse needs of their patients.

This flexibility could also provide much-needed support for physicians and other medical professionals, as they continue to navigate a complex and evolving health care landscape.



Methodology

Physician Insights

Medicare Telemedicine Insights: Doximity partnered with CareJourney, a health analytics organization, to measure the number of physicians billing a set of Medicare telemedicine codes throughout 2022. The corresponding national provider identifier (NPI) numbers were compared to Doximity user data to assess the rate at which this cohort used Doximity's telemedicine platform.

Adoption by Age and Metro Areas: Responses were drawn from physicians who were users of Doximity's telemedicine platform in 2022. Data was mapped across metropolitan statistical areas.

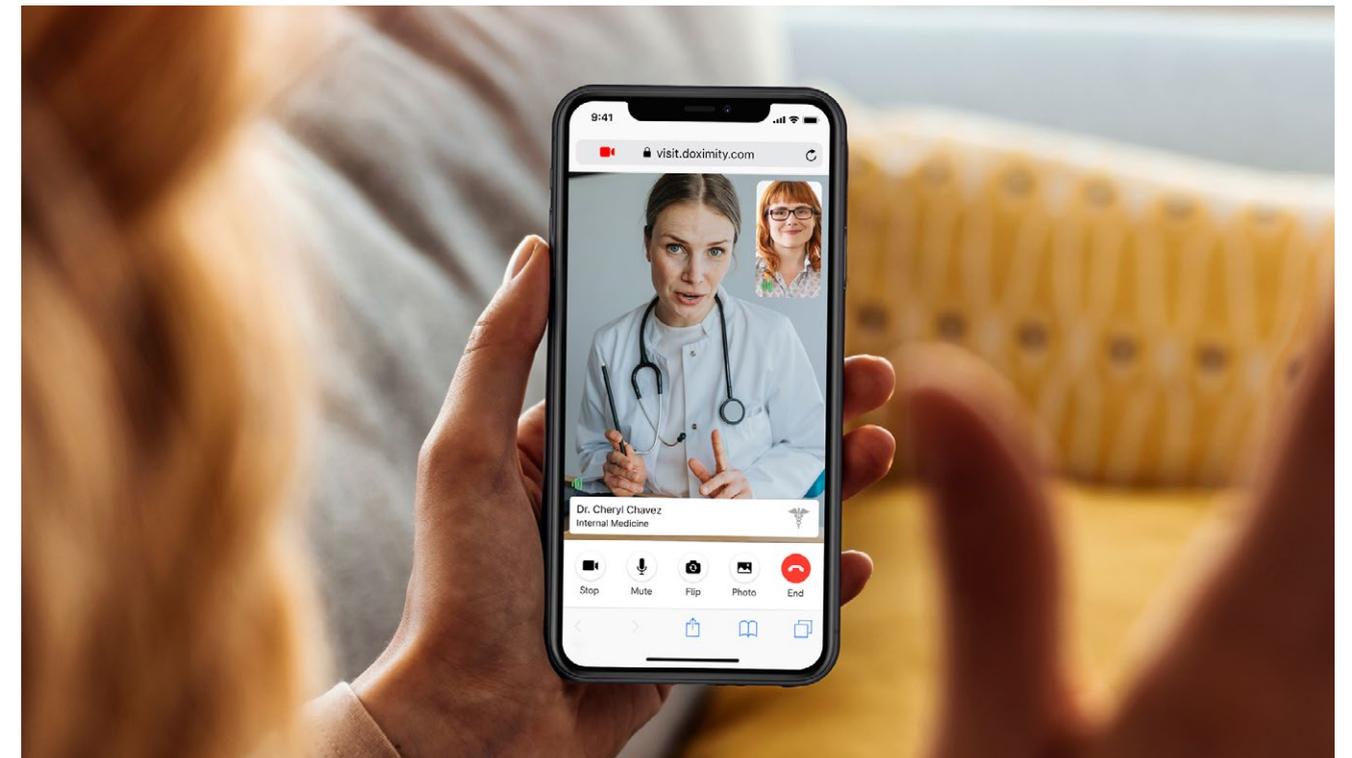
Specialty Rank: The specialty rank list was drawn from physicians who were users of our telemedicine platform in 2022. Pediatric specialties and some adult subspecialties were folded into their adult general specialty. For example, colorectal surgery was included in general surgery.

Physician Survey: Doximity conducted a survey of its physician telemedicine users via SurveyMonkey to supplement its existing physician adoption insights. This survey was completed by over 1,200 U.S. physicians across nine different specialties: cardiology, endocrinology, gastroenterology, nephrology, neurology, oncology, pulmonology, psychiatry, and rheumatology.

Doximity conducted the survey in March 2023. Survey participant demographics are not population-based and findings therefore may not be able to be extrapolated to the broader physician population.

Patient Insights

Doximity powered this section from a patient survey conducted via Pollfish. This survey included 2,400 U.S. adults. The survey was distributed to two respondent groups: 1,200 respondents who identified as having a chronic illness and 1,200 respondents who identified as not having a chronic illness. Doximity conducted the survey in March 2023. Survey participant demographics are not population-based and findings therefore may not be able to be extrapolated to the general population.



Sources

- ¹ The Complexities of Physician Supply and Demand: Projections From 2019 to 2034. Association of American Medical Colleges.
<https://www.aamc.org/media/54681/download>
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<https://rockhealth.com/insights/consumer-adoption-of-digital-health-in-2022-moving-at-the-speed-of-trust/>

About Doximity

Founded in 2010, Doximity is the leading digital platform for U.S. medical professionals. The company's network members include over 80% of U.S. physicians across all specialties and practice areas. Doximity provides its verified clinical membership with digital tools built for medicine, enabling them to collaborate with colleagues, stay up to date with the latest medical news and research, manage their careers and on-call schedules, and conduct virtual patient visits. Doximity's mission is to help doctors be more productive so they can provide better care for their patients.

To learn more, visit www.doximity.com.