

## Use of Telemedicine by Rhode Island Physicians

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### BACKGROUND

Prior to the COVID-19 pandemic, physicians were as likely to make a video call to their patients as they were to make a house call. A 2016 American Medical Association survey found that just 15% of physicians worked in practices using telemedicine. A 2017 review of telemedicine policy trends noted Medicare's restrictive telemedicine reimbursement policies and cited a contemporaneous prediction by the National Business Group on Health that "virtually all large employers will cover telehealth services for their employees by 2020." Their prediction was only wrong by about three months. Insurers and regulators swiftly made changes to reimbursement policies in response to the COVID-19 pandemic. The Centers for Medicare & Medicaid Services (CMS) approved temporary changes to the rules for telemedicine visits on March 17, 2020, and Rhode Island issued an executive order to expand telemedicine services and to ensure parity in reimbursement the following day. Additional executive orders renewed this expansion, and legislation mandating permanent support for telemedicine reimbursement in Rhode Island was signed into law on September 24, 2021.

What has been the impact of these pandemic-related reimbursement changes? Over the past 12 years, the Rhode Island Department of Health (RIDOH) has surveyed physicians and other clinicians about their use of health information technology (HIT), including telemedicine. Prior surveys have focused on the uptake and use of electronic health records (EHRs) and electronic prescribing, as well as the influence of technological advancements and legislation on HIT adoption and clinician workflow. The 2021 survey provided an opportunity to explore the effect of the COVID-19 pandemic on the adoption of telemedicine and physicians' experience using it.

### METHODS

RIDOH's public reporting program, the Healthcare Quality Reporting Program, administers the Rhode Island HIT Survey to all licensed physicians, physician assistants, and nurse practitioners. This program is legislatively mandated to publish reports intended to help consumers compare healthcare practitioners in Rhode Island. The survey, first piloted in 2008, was administered annually from 2009-2015 and biennially starting in 2017. HIT Survey data are used to

report process measures relating to HIT adoption and use.

The 2021 Physician HIT Survey was administered to 4,466 physicians licensed in Rhode Island, in active practice, and located in Rhode Island, Connecticut, or Massachusetts. New questions were added to the 2021 survey to address the expanded use of telemedicine services in Rhode Island as a result of the COVID-19 pandemic. Telemedicine was defined for survey purposes as "remote, real-time communication between a patient and clinician, in lieu of a face-to-face visit." The questions focused on physicians' experience with telemedicine in the year prior to survey administration (June 2020–May 2021), including which telemedicine platform or technology they used, the amount of time spent on various telemedicine-related tasks, and barriers to offering telemedicine. Physicians were also asked whether they had used telemedicine prior to the COVID-19 pandemic. We piloted all new questions in the 2021 survey, including this set of questions, with a subset of physicians using cognitive debriefing to test question comprehension and the response process, as well as the face validity of the included constructs.

### RESULTS

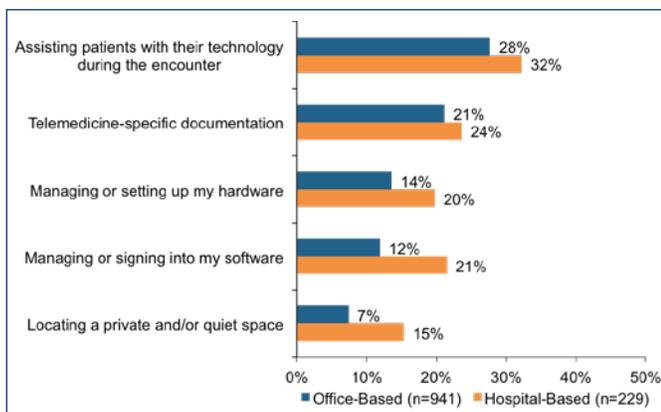
The survey received a total of 1,772 responses, for a response rate of 40%. Among the respondents, 1,556 reported providing direct patient care and completed the full survey. Overall, 80% of physician respondents reported using telemedicine to care for patients in the prior year (June 2020–May 2021). Higher proportions of office-based physicians reported using telemedicine (91%), compared to hospital-based physicians (55%). Among all respondents, only 11% had used telemedicine before the pandemic (12% of office-based physicians and 10% of hospital-based physicians).

Among physicians who had used telemedicine in the prior year, 39% used mostly audio-only technology (e.g., a telephone call). Almost a quarter (23%) used mostly audio/video platforms (e.g., Zoom), and 38% used a combination of audio-only and audio/visual technology. The most common platforms and technologies used by physicians to provide telemedicine were regular phone calls (65% of office-based physicians and 53% of hospital-based), followed by Doximity (32%) and Doxy.me (28%) among office-based physicians, and by Zoom (35%) among hospital-based physicians.

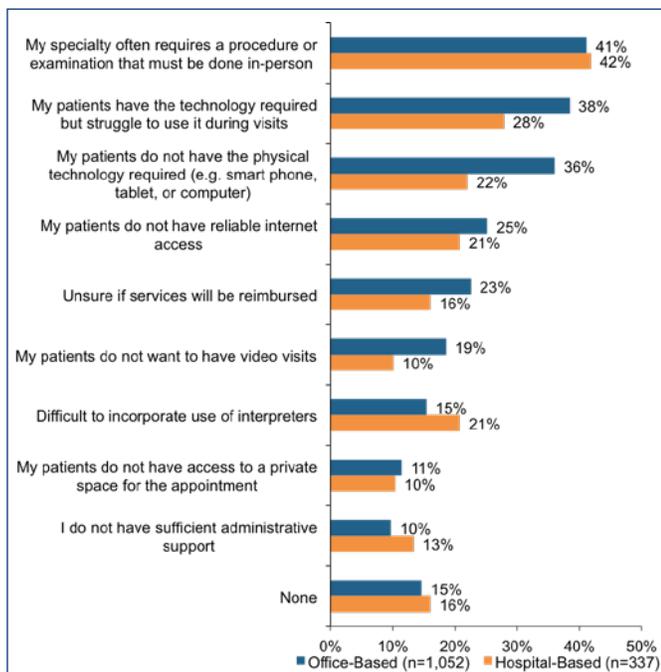
When asked about time spent on common tasks related to telemedicine, almost a third of office- and hospital-based physicians reported spending a “moderately high” or “excessive” amount of time assisting patients with technology during an encounter (Figure 1). More than one in five spent a “moderately high” or “excessive” amount of time on telemedicine-specific documentation. Across all tasks, higher proportions of hospital-based physicians, compared to office-based physicians, reported spending a “moderately high” or “excessive” amount of time on every task type (Figure 1).

All respondents were asked about barriers to providing telemedicine. The highest proportion (41%) reported that

**Figure 1.** Among physician respondents who use telemedicine, the percent who spend a “moderately high” or “excessive” amount of time on the following tasks (N=1,170)



**Figure 2.** Percent of physician respondents who reported the following barriers to offering telemedicine, stratified by setting (N=1,389)



their specialty often requires a procedure or examination that must be done in-person (Figure 2). The next most commonly cited barrier was that patients struggled to use technology during encounters (36%), followed by patients not having needed technology (33%). Among the subset of physicians who had *not* used telemedicine during the past year, the most frequently cited barrier to caring for patients using telemedicine was that their specialty often requires a procedure or examination that must be done in-person (60%).

In free-text responses, physicians provided more details about technology issues, reimbursement, and the need or preference for in-person visits. Additional barriers included challenges in specific populations (e.g., older adults, children, behavioral health patients), patients’ expectations for the timing or level of care during telemedicine visits, and patients multi-tasking (e.g., multiple respondents described patients driving or shopping during visits).

## DISCUSSION

The COVID-19 pandemic dramatically accelerated the uptake of telemedicine in Rhode Island, initiating a demonstration project of its feasibility and merits on a scale not previously seen. Prior to the pandemic, only 12% of outpatient physicians in the state had used telemedicine; within a year, that number increased to 91%. The 2021 HIT Survey examined Rhode Island physicians’ early experiences using telemedicine, and the results align with a recent national study, which documents a surge in use of telemedicine for outpatient care in the first few months of the pandemic. In that analysis, the authors found that telemedicine claims were 78 times higher in April 2020 than in February 2020. As in Rhode Island, broader insurance coverage for telemedicine across the US likely contributed to the increase in use. Almost half of states amended laws or policies to require more robust reimbursement during the pandemic.

Alongside the staggering increase in telemedicine adoption, we identified challenges related to physicians’ and patients’ access to and use of technology. These barriers have been noted by others, prior to the pandemic, but may have been exacerbated, in part, by the rushed nature of the implementation. They should be addressed as Rhode Island moves forward with incorporating telemedicine into routine practice. On the physician side, we recommend prioritizing efficient clinical workflows, access to integrated technology, and staff support of telemedicine visits. On the patient side, we advocate for increased access to and proficiency with technology, as well as consistent broadband internet availability.

There are various limitations to this data. First, all clinician data are self-reported. Second, recent survey years have had a lower response rate than previous survey years. Survey response rates between 2013 and 2015 were above 60%, whereas the 2017, 2019, and 2021 rates were all between

40–43%. We suspect this dip in response rate is tied to the transition to biennial survey administration in 2015. Third, the fact that RIDOH distributes the survey may influence how clinicians respond to more personal questions about challenges implementing care. Finally, distributing the survey electronically may bias the sample by not including clinicians without computer access.

Based on our findings, we recommend that future surveys extend the inquiry into use of telemedicine in several ways. Surveys could be designed to 1) employ mixed methods to more fully investigate the physician perspective, 2) capture the patient and family experience using telemedicine, and 3) explore the quality of care delivered using telemedicine technologies. These additions would broaden our understanding of the impact of telemedicine implementation over the past few years. While our study primarily examined *barriers* to using telemedicine, future surveys should include questions asking for physicians' perspectives on the *benefits* of telemedicine, as well. Additionally, physicians' use of telemedicine overall has evolved since the first year of the pandemic. It is likely that some of the challenges identified in this study have been resolved. Certain telemedicine tasks may now take less time, as practices have deployed EHR templates and patients have become more accustomed to these types of visits. The next administration cycle of the Rhode Island HIT Survey in 2023 will be able to assess how use of telemedicine is changing, building on the baseline set of data from the 2021 survey.

The uptake and use of telemedicine during the COVID-19 pandemic demonstrates that given the right conditions – high need and reimbursement parity – large-scale implementation of telemedicine is feasible and acceptable to physicians and patients. Future research should focus on whether physicians and patients are willing to use telemedicine when not in the midst of a pandemic, the quality of care provided via telemedicine, the cost-effectiveness compared to in-person visits, and how to improve the experience for all.

*The results shared above represent a fraction of the findings from the 2021 HIT survey. The full report can be accessed at <https://health.ri.gov/publications/annualreports/HealthInformationTechnologyPhysicianSurveySummary.pdf>*

*The HIT Survey data are also publicly available as a de-identified research data file. Please contact Emily Cooper, MPH, ([ecooper@healthcentricadvisors.org](mailto:ecooper@healthcentricadvisors.org)) for more information.*

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## Disclosures

None

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