

## Individuals' use of online medical records and technology for health needs

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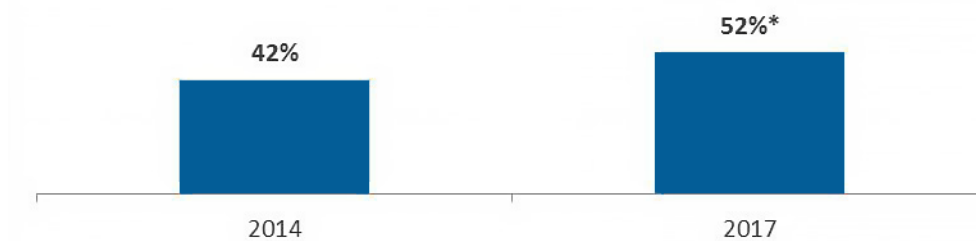
Individuals' electronic access and use of their health information will be critical towards enabling individuals to better monitor their health as well as manage and coordinate their care. Past efforts sought to provide individuals the capabilities to view, download, and transmit their patient health information. Building on these efforts, the 21<sup>st</sup> Century Cures Act (Cures Act) includes provisions to improve patients' access and use of their electronic health information via a single, longitudinal format that is secure and easy to understand.<sup>1</sup> The Cures Act also calls for patients to be able to electronically share their information. Online access to medical records, such as through patient portals, enable patients and caregivers to access their health information. Mobile health apps and devices connected to a providers' electronic health record system using open application programming interfaces (APIs) will also allow individuals to collect, manage, and share their health information. Using the National Cancer Institute's 2017 Health Information Trends Survey, we report on access and use of online medical records and the use of technology such as smartphones, tablets, and electronic monitoring devices (e.g. Fitbits, blood pressure monitors) for health related needs.<sup>2</sup>

### HIGHLIGHTS

- ▶ As of 2017, 52 percent of individuals have been offered online access to their medical record by a health provider or insurer. Over half of those who were offered online access viewed their record within the past year; this represents 28 percent of individuals nationwide.
- ▶ Among those who accessed their online medical record within the past year, 8 in 10 considered their online medical record both easy to understand and useful.
- ▶ One-third of individuals used an electronic device for monitoring their health (e.g. Fitbit, blood pressure monitor) and 4 in 10 tablet or smartphone users have a health or wellness app.

### In 2017, half of individuals nationwide reported they had been offered online access to their medical record by a health care provider or insurer.

**Figure 1:** Percent of individuals ever offered access to their online medical record by a health care provider or insurer, 2014-2017.



SOURCE: HINTS 4 Cycle 4, 2014; HINTS 5, Cycle 1, 2017.

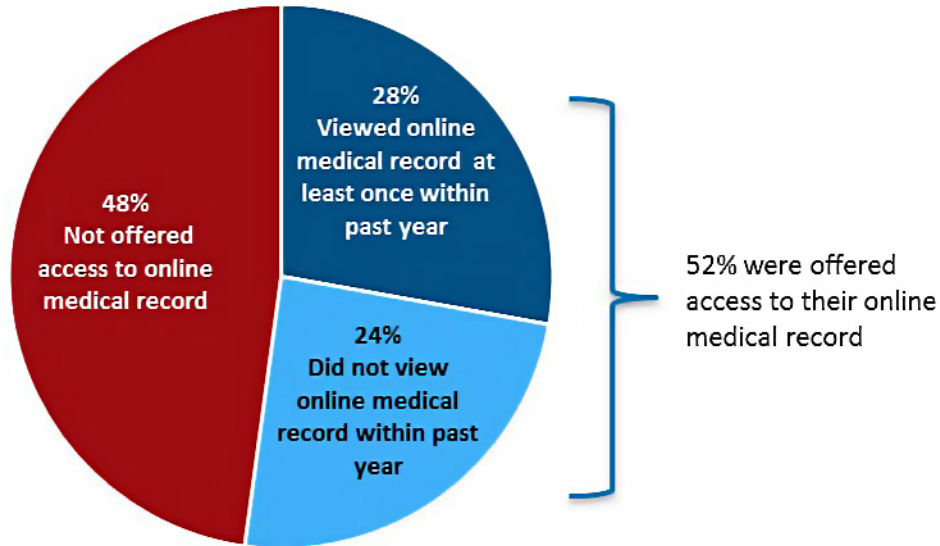
NOTES: \*Significantly different from 2014 (p<0.05). Denominator represents all individuals. Percentage reflects weighted national estimate.

★ Individuals' access to online medical records increased by almost one-quarter (24%) between 2014 and 2017.

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## Almost 3 in 10 individuals were offered access to their online medical record and viewed their record at least once within the past year.

Figure 2: Percent of individuals who were offered access to their online medical record and viewed their record at least once within last year, 2017.



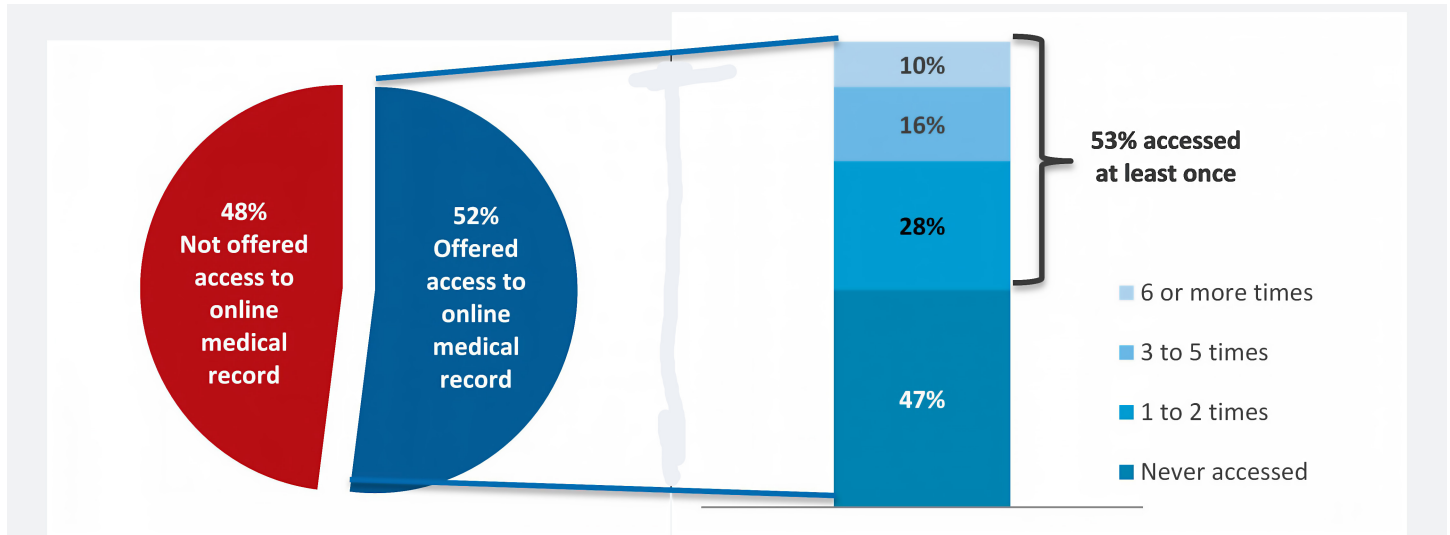
SOURCE: HINTS 5, Cycle 1, 2017

NOTES: Denominator represents all individuals. Percentage reflects weighted national estimate.

- ★ About one-quarter of individuals were offered access to an online medical record but did not view their record within the past year.
- ★ Almost half of individuals were not offered access to an online medical record.

### Among individuals who were offered an online medical record, more than half accessed their record at least once within the past year.

**Figure 3:** Frequency of viewing an online medical record within the past year among those who had been offered an online medical record by a health care provider or insurer, 2017.



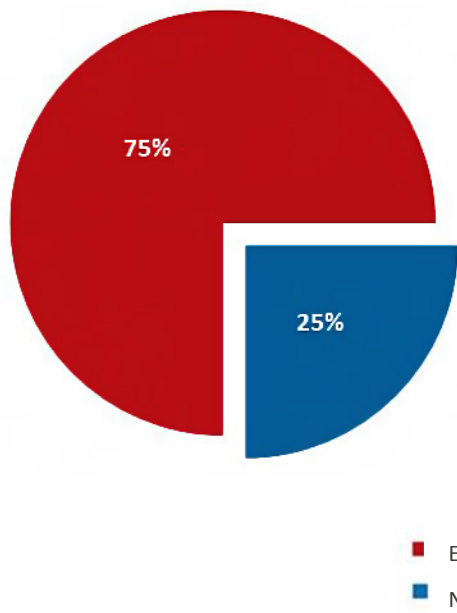
SOURCE: HINTS 5, Cycle 1, 2017

NOTE: Numbers do not add up to 53% due to rounding. Denominator represents individuals who were offered access to their online medical record (52% of individuals nationwide).

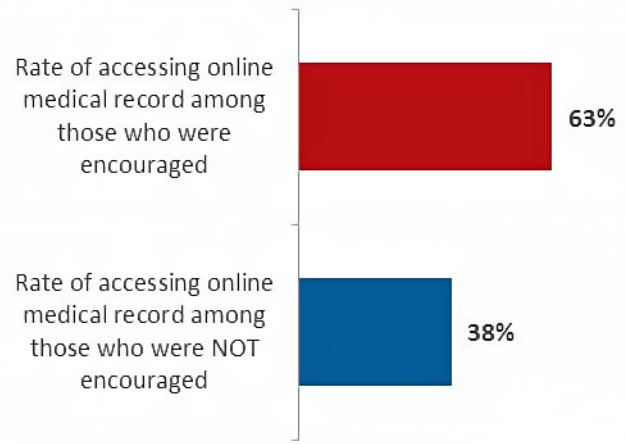
- ★ Among individuals who did access their online medical record at least once within the past year, most accessed their data once or twice.
- ★ About one-quarter of individuals offered access to their online medical record accessed their data three or more times within the past year.

**Individuals encouraged by their health care provider to use their online medical record were nearly two times more likely to access their online medical record compared to those who were not encouraged.**

**Figure 4:** Percentage of individuals encouraged by their health care provider to use their online medical record, 2017



**Figure 5:** Rates of individuals accessing their online medical record by whether their health care provider encouraged them to use their online medical record, 2017



SOURCE: HINTS 5, Cycle 1, 2017.

NOTE: Analyses were limited to individuals who were offered access to an online medical record by a health care provider.

- ★ Among individuals who were offered online access to their medical record, three-quarters were encouraged by the provider to use it.
- ★ Sixty-three percent of individuals encouraged to use their online medical record by their health care provider accessed their online medical record within the past year.
- ★ Only 38 percent of individuals who were offered online access to their medical record by their health care provider but not encouraged to use it accessed their online medical record within the past year.

## The top 2 reasons cited by individuals for not accessing their online medical record within the past year were their “preference to speak to a provider directly” and “perceived lack of need.”

**Table 1:** Reasons for not accessing online medical record as reported by individuals who did not access their online medical record within the past year, 2017.

Reason for not using online record	% Among those who did not access online medical record offered to them
Prefer to speak to health care provider directly	76%
Did not have a need to use your online medical record	59%
Concerned about the privacy/security of online medical record	25%
Do not have a way to access the website	20%
No longer have an online medical record	19%

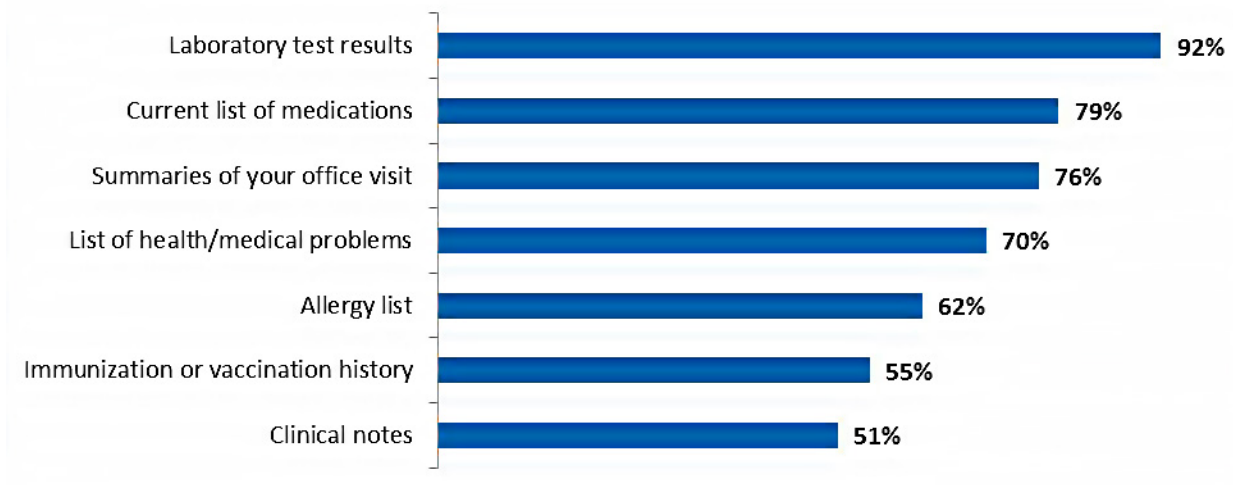
SOURCE: HINTS 5, Cycle 1, 2017.

NOTE: Denominator represents individuals who were offered an online medical record but did not access their record within the past year.

- ★ Three-quarters of individuals cited their preference to speak with their health care provider directly as a reason for not using their online medical record within the past year.
- ★ One-quarter of individuals cited concerns related to privacy and security of online medical records as a reason for not accessing their online medical record.
- ★ About one-fifth of individuals did not access their online medical record because they did not have a way to access the online medical record’s website.

**At least three-quarters of individuals who accessed their online medical record within the past year reported that it included laboratory test results, current list of medications, and summaries of their office visits.**

**Figure 6:** Types of information reported in individuals’ medical record amongst those who were offered and accessed their record, 2017.



SOURCE: HINTS 5, Cycle 1, 2017.

NOTE: Denominator represents individuals who were offered access to the online medical record and viewed their online medical records at least once within the last year.

- ★ Almost all individuals who accessed their online medical record reported having access to laboratory test results.
- ★ A majority of individuals who had accessed their online medical record reported that their online medical record included their list of health/medical problems and allergies.
- ★ About half of individuals who accessed their online medical record reported that immunizations were included in their online medical record.
- ★ The least frequently reported type of information included in an online medical record was clinical notes.

## Individuals who accessed their online medical record used it to view test results, perform health-related tasks and communicate with health care providers.

**Table 2:** Reported online medical record functionalities used by individuals amongst those who were offered and accessed their record, 2017.

How online medical record was used <sup>1</sup>	% Individuals who accessed online medical record at least once
View test results	<b>85%</b>
Performed one or more health-related tasks: Request refill prescriptions, complete paperwork, or make appointments	<b>62%</b>
Communicate with health care provider via secure messaging	<b>48%</b>
Monitor health or use for informing treatment decisions	<b>39%</b>
Update or correct medical record	<b>23%</b>
Download online medical record	<b>17%</b>
Transmit data to outside party (health care provider, caregiver or service or app)	<b>14%</b>
Transmit to another health care provider	<b>10%</b>
Transmit to caregiver	<b>4%</b>
Transmit to service or app	<b>3%</b>

SOURCE: HINTS 5, Cycle 1, 2017

NOTE: Denominator represents individuals who were offered access to their online medical record and accessed their online medical records at least once within the last year. <sup>1</sup>Please see Appendix Table 1 with full results available at the end of this data brief.

- ★ Among individuals who accessed their online medical record, about 8 in 10 viewed test results, less than one in five downloaded their online medical record and only about one in 10 electronically transmitted their health care data from their online medical record.
- ★ About 6 in 10 individuals who accessed their online medical record used it for performing health-related tasks online such as making appointments, requesting prescription refills or filling out paperwork.
- ★ Half of individuals used their online medical record to communicate with their health care providers via secure messaging.
- ★ Approximately one-quarter of individuals requested corrections or contributed information to their online medical record.
- ★ Less than 5 percent of individuals transmitted their health record data to a service or app.

**Eight in 10 individuals who accessed their online medical record reported that it was both easy to understand and useful.**

**Table 3:** Perceived ease of understanding the information in an online medical record by whether individuals find their online record useful for monitoring their health, 2017.

		Health information in my online medical record is...	
		Easy to Understand	Difficult to Understand
My online medical record is...	Useful for Monitoring Your Health	<b>82%</b>	<b>3%</b>
	Not Useful for Monitoring Your Health	<b>10%</b>	<b>5%</b>

SOURCE: HINTS 5, Cycle 1, 2017.

Note: Denominator represents individuals who were offered access to the online medical record and accessed their online medical records at least once within the last year.

- ★ Overall, about 9 in 10 individuals (92%) reported that the health information in their online medical record is easy to understand.
- ★ Overall, 85 percent of individuals reported that their online medical record was useful for monitoring their health.
- ★ Five percent of individuals who accessed their online medical record found the health information in their online medical record neither easy to understand nor useful for monitoring their health.



## Nearly one-in-five individuals care for or make health care decisions for someone with a medical or behavioral condition or disability.

**Table 4:** Percent of individuals who provide care or make health care decisions for someone with a health or behavioral condition or disability, 2017.

Type of Care Recipient	% Across all Individuals
Serve as a Caregiver (at least one care recipient)	<b>18%</b>
Child/Children	<b>7%</b>
Parent/Parents	<b>5%</b>
Spouse/Partner	<b>2%</b>
Close Family Member	<b>1%</b>
Friend or Other Non-Relative	<b>&lt;1%</b>
More than One Type of Care Recipient	<b>3%</b>
Do Not Serve as a Caregiver	<b>82%</b>

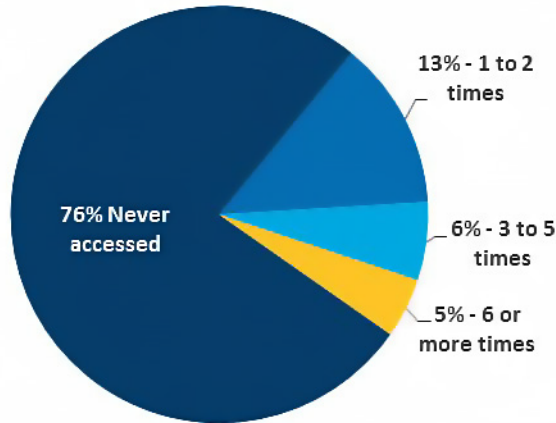
SOURCE: HINTS 5, Cycle 1, 2017.

NOTE: Denominator represents all individuals. Percentage reflects weighted national estimate.

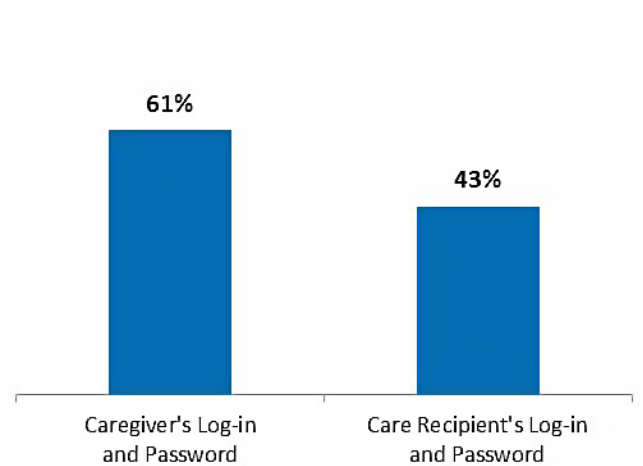
- ★ Almost one in 10 individuals provided care or made health-related decisions for a child with a health or behavioral condition or disability in 2017.
- ★ About 5% of individuals provided care or made health-related decisions for a parent with a health or behavioral condition or disability in 2017.
- ★ About 3% of individuals provided care or made health-related decisions for more than one individual with a health or behavioral condition or disability in 2017.

**Nearly one-quarter of caregivers accessed their care recipient’s online medical record at least once within the last 12 months.**

**Figure 7:** Frequency of caregivers accessing their care recipient’s online medical record in the last 12 months, 2017



**Figure 8:** Method of logging in to a care recipients’ online medical record by a caregiver, 2017



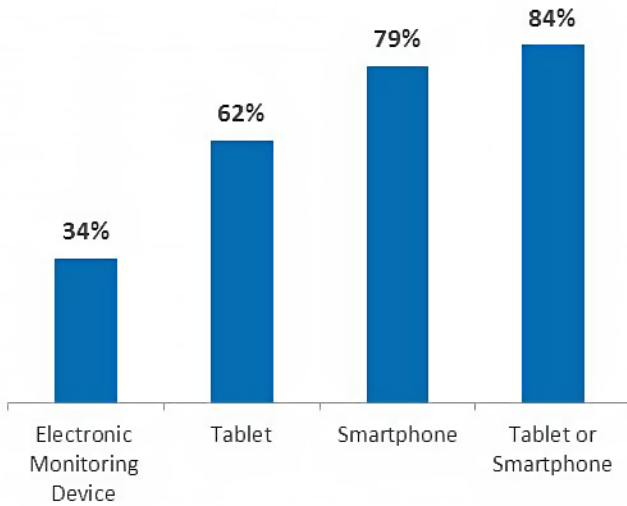
SOURCE: HINTS 5, Cycle 1, 2017.

NOTE: Figure 8 denominator is the 24% of individuals who accessed their care recipients’ online medical record. Survey respondent can select more than one option and therefore the total doesn’t add up to 100%.

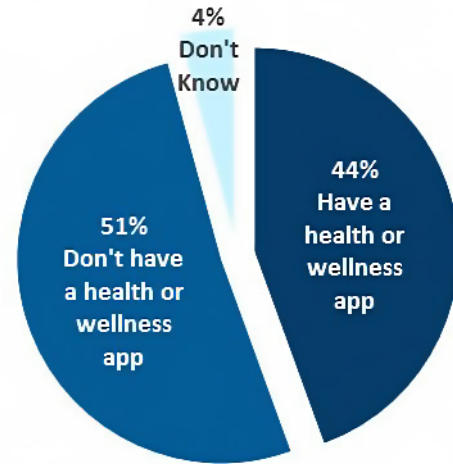
- ★ Just over one in 10 caregivers accessed their care recipient’s online medical record 3 or more times in the last 12 months.
- ★ Among the caregivers accessing their care recipient’s online medical record, six in 10 logged in the online medical record using their own log-in credentials, while four in 10 used their care recipient’s log-in credentials.

**More than four in 10 smartphone or tablet owners possessed a health or wellness app.**

**Figure 9:** Percent of individuals who have an electronic monitoring device, smartphone, or tablet, 2017.



**Figure 10:** Percent of individuals who have a health & wellness app on their smartphone or tablet, 2017.



SOURCE: HINTS 5, Cycle 1, 2017.

NOTE: Examples of an electronic monitoring device include Fitbit, blood glucose meter, and/or blood pressure monitor. For Figure 10, total does not add up to 100% due to rounding. Denominator for Figure 10 refers to the 84% of individuals who own a tablet or smartphone.

- ★ Over eight in 10 individuals own tablet or smartphone.
- ★ One-third of individuals own an electronic monitoring device such as a Fitbit, blood glucose meter, or blood pressure monitor.

## More than four in 10 smartphone or tablet owners used their devices to track progress on a health-related goal.

**Table 5:** Percent of individuals who reported using their smartphone or tablet to help discuss, track, and/or make decisions regarding their health, 2017.

Used a tablet or smartphone to help you...	% Among those with a Tablet or Smartphone <sup>1</sup>
Track progress on a health-related goal	<b>42%</b>
Make a decision about how to treat an illness or condition	<b>37%</b>
Discuss your health with your health care provider	<b>33%</b>
Used a tablet, smartphone, or electronic monitoring device to...	% Among those with a Tablet, Smartphone or Electronic Monitoring Device <sup>2</sup>
Collect and share information with a health professional	<b>18%</b>

SOURCE: HINTS 5, Cycle 1, 2017.

NOTE: Examples of an electronic monitoring device include Fitbit, blood glucose meter, and/or blood pressure monitor. <sup>1</sup>Denominator represents 84% of individuals that report having a tablet or smartphone; <sup>2</sup>Denominator represents 88% of individuals that report having a tablet, smartphone, or electronic monitoring device.

- ★ Almost four in 10 smartphone or tablet owners used their devices to make a decision about how to treat an illness or condition.
- ★ One-third of smartphone or tablet owners used their devices to discuss their health with their health care provider.
- ★ Nearly one in five smartphone, tablet or electronic monitoring device owners shared health information collected by their devices with a health professional.

## Summary

Online access to medical records serve as a key tool to help individuals and caregivers understand their health and manage their health care needs. Online access to medical records has grown by 24% since 2014. In 2017, half of individuals had been offered access to an online medical record by either a health care provider or insurer, of which, more than half viewed their information. This represents about 3 in 10 individuals nationwide. Almost one in five individuals cared for or made health care decisions for someone with a medical or behavioral condition or disability in 2017. About one-quarter of these caregivers accessed their care recipients' online medical record within the past year, a majority of whom reported having their own log-in credentials.

Consistent with past survey findings, nearly half of individuals did not access their online medical record.<sup>3</sup> Individuals' preference to speak with health care providers directly was a common reason cited for not using an online medical record. This suggests that some may perceive online medical records as a replacement for rather than as an additional means of communicating with health care providers. Similar to past findings, a perceived lack of need was also frequently cited as a reason for not using an online medical record.<sup>4</sup> Prior [ONC research](#) found that individuals may not realize the value of accessing their online medical record until they have a medical need.<sup>5</sup> Given that the patient record request process can take time, it is of great benefit to access one's data prior to an urgent health need. Additionally, healthy individuals may also benefit from correcting errors in their medical record before a health issue occurs. Among individuals that accessed their medical record online, almost one in 10 requested a correction to information in their record. Explaining these benefits to healthy individuals may increase usage of online medical records. Addressing disparities in Internet access and use of technology may also be an issue given that one-fifth of individuals reported lacking a way to access their online medical record.

Health care providers play an important role in enabling consumers' access and subsequent use of online medical records. The three-quarters of individuals who were offered and encouraged to use an online medical record by their health care provider were nearly two times more likely to access their medical record compared to those who were not encouraged to do so (63% vs. 38%). Providing health care providers with suggestions on how to encourage their patients to use their online medical records may also increase consumers' usage of online medical records.

Among the 53% of individuals who viewed their online medical record at least once in the past year, over 8 in 10 considered it both easy to understand and useful. The most frequent uses of online medical records related to those tasks that could be completed with greater convenience (e.g., outside office hours). These tasks include requesting prescription refills, making appointments and filling out paperwork; and communicating with health care providers via secure messaging. A significant number of those who accessed their online medical record also used it to monitor their health and to inform treatment decisions. The widespread inclusion of clinical data such as laboratory test results, medications, and health problems can make online medical records useful for informing patients' decisions.

Although many individuals viewed test results, few individuals downloaded or electronically transmitted their health information from their online medical record. Individuals may not be aware of the benefits of these more advanced functions, nor of their right, per HIPAA, to request to sending their medical record to a designated third party. These functionalities may also not work well in online medical records and many providers or apps may not possess the capabilities to receive and incorporate such information. However, recent market developments suggest that increased adoption of FHIR (Fast Healthcare Interoperability Resources), a standard for electronically exchanging medical record data and health IT developers publishing APIs, will enable more individuals to use apps to store, manage, and transmit their health records across a variety of devices.<sup>6,7</sup>

Individuals' use of devices and apps to address health needs is becoming more common. Among the 8 in 10 tablet and smartphone owners, 44% reported having a health or wellness app. About one-third of individuals own an electronic monitoring device such as a Fitbit, blood glucose meter, or blood pressure monitor. These patient-generated data may



allow individuals to monitor their health and give their health care providers a more complete portrait of an individual's overall health. One-fifth of tablet, smartphone, and monitoring device owners shared and discussed data from these devices with health care providers. Over four in 10 tablet and smartphone owners used their devices to monitor their health and to inform treatment decisions. Thus, as the use of open APIs becomes widespread, third-party developers can design apps for consumers to more easily transmit patient generated data from these devices to the destinations of their choice.

The U.S. Department of Health and Human Services (HHS) has taken steps towards realizing the goals of the 21<sup>st</sup> Century Cures Act so that individuals and caregivers possess the tools necessary to access, manage, and share their health information. Recognizing the key role providers play in consumers' access and use of online medical records, ONC developed [a patient engagement playbook](#), a practical guide for providers to facilitate access and use of online medical records by their patients and caregivers.<sup>8</sup> In an effort to educate providers on the right of access, the HHS Office for Civil Rights also provides free continuing medical education for health care professionals on this topic.<sup>9</sup> ONC also has taken efforts to reach out to consumers. [ONC's Guide to Getting and Using your Health Records](#) seeks to educate individuals and caregivers about the value of online medical records as well as how to access and use their information.<sup>10</sup> ONC also has developed videos and fact sheets to educate consumers about their rights to access their health information under HIPAA.<sup>11</sup> Furthermore, through the [Trusted Exchange Framework and Common Agreement](#), individuals will be able to request access to their health information across multiple providers in a more seamless manner.<sup>12,13</sup> Providers' adoption and use of the 2015 Edition of certified EHR technology, which includes APIs, will make it easier to electronically exchange health record data and patient generated data to and from apps and devices.<sup>14</sup> These measures, along with market forces, will help empower individuals so that they have the information they need to make choices that will drive our health care system towards improved outcomes and higher value.

## Definitions

Definitions for variables derived by ONC during this analysis are described below:

Offered access to an online medical record: Individuals were considered to be offered access to an online medical record if they responded “yes” to either health care provider or insurer for the question, “Have you ever been offered online access to your medical records by: a) health care provider? b) health insurer?”

Ease of Understanding the Health Information in Your Online Medical Record: Health information was considered “Easy to Understand” if an individual responded “Very easy” or “Somewhat easy” to the question, “How easy was it to understand the health information in your online medical record?” Health information was considered “Difficult to Understand” if an individual responded “Very difficult” or “Somewhat difficult” to the same question.

Usefulness of Your Online Medical Record for Monitoring your Health: Online medical records were considered “Useful for Monitoring Your Health” if an individual responded “Very useful” or “Somewhat useful” to the question, “In general, how useful is your online medical record for monitoring your health?” Online medical records were considered “Not Useful for Monitoring Your Health” if an individual responded “Not very useful” or “Not at all useful” to the same question. Individuals who responded, “I do not use my online medical record to monitor my health” were not included in this analysis.

## Data Source and Methods

Data are from the National Cancer Institute’s (NCI) Health Information National Trends Survey (HINTS). Since 2003, NCI has sponsored HINTS to assess the impacts of health communication, specifically measuring: how people access and use health information, how people use information technology to manage their health and health information, and the degree to which people are engaged in health behaviors.

ONC staff, working with the National Partnership of Women and Families and NCI, developed the survey content related to health IT use for HINTS 5. HINTS 5, Cycle 1 (2017) data were collected from January through May, 2017. The sample design for HINTS 5, Cycle 1 (2017) consisted of a single-mode mail survey, using the Next Birthday Method for respondent selection.

The sample design for the HINTS 5, Cycle 1 (2017) survey consisted of two-stages. In the first stage, a stratified sample of addresses was selected from a file of residential addresses. In the second-stage, one adult was selected within each sampled household. The sampling frame consisted of a database of addresses used by Marketing Systems Group (MSG) to provide random samples addresses. Complete data were collected from 3,191 respondents. The response rate was in 32%, and results were weighted to account for non-response and generate national estimates.

The analyses conducted in this data brief primarily focused on questions from sections B, D, and E. The questions asked in the HINTS 5, Cycle 1 (2017) survey can be found at [https://hints.cancer.gov/docs/Instruments/HINTS5\\_Cycle1\\_Annotated\\_Instrument\\_English.pdf](https://hints.cancer.gov/docs/Instruments/HINTS5_Cycle1_Annotated_Instrument_English.pdf).

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## Appendix

**Appendix Table A1:** Reported online medical record functionalities used by individuals who have accessed their record at least once, 2017.

How online medical record was used	% Among those who accessed their online medical record at least once
<b>Perform Health-Related Tasks</b>	<b>62%</b>
Make appointments with a health care provider	<b>39%</b>
Request refill of medications	<b>38%</b>
Fill out forms or paperwork related to your health care	<b>38%</b>
<b>Update Medical Record</b>	<b>23%</b>
Request correction of inaccurate information	<b>8%</b>
Add health information	<b>19%</b>
<b>Communicate with Health Care Provider</b>	<b>48%</b>
Securely message health care provider and staff (e.g., e-mail)	<b>48%</b>
<b>View, Download or Transmit</b>	<b>89%</b>
View test results	<b>85%</b>
Download online medical record	<b>17%</b>
Transmitted data to outside party (composite of below)	<b>14%</b>
Transmit to another health care provider	<b>10%</b>
Transmit to caregiver	<b>4%</b>
Transmit to service or app	<b>3%</b>
<b>Self-Management and Decision Making</b>	<b>39%</b>
Monitor your health	<b>33%</b>
Help you make a decision about how to treat an illness or condition	<b>19%</b>

SOURCE: HINTS 5, Cycle 1, 2017

NOTE: Denominator represents individuals who were offered access to their online medical record and viewed their online medical records at least once within the last year.