Building the Future of Patient Education

How Hospitals Can Deliver Better Health Outcomes Through Digital Education Solutions and a Unified Patient Education Strategy

A 2021 NGPX REPORT

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Executive Summary

Effective patient education is an essential component to producing successful patient outcomes. But one of the biggest challenges in the healthcare industry is that physicians, nurses, and other healthcare professionals lack the time to effectively educate their patients.

"Critical to any educational process is time. The development of patient health literacy is crucial to our proven health prevention measures of exercise and diet. Patients must have a deep understanding of the impact healthy interventions can have on their present and long-term health."[1]

- 2017 report by Nachiket Patel, et al. published in *Proceedings* (Baylor University Medical Center)

In the past, printed materials in the form of pamphlets, brochures, and booklets often served as a way for healthcare professionals to educate patients about their care. Now, many patients are technology-literate and expect to see the same types of digital tools they use in their everyday lives in the healthcare setting, especially when it comes to interacting with healthcare professionals, asking questions, and learning about their conditions and treatments.

In this report, we explore how hospitals and other healthcare organizations are successfully delivering patient education using digital solutions. We also examine what challenges both clinicians and patients face when engaging in patient education, and what can change in the next three years to create a unified, standardized, and more effective patient education experience.

[1] https://www.researchgate.net/publication/313314445_Improving_Health_Outcomes_Through_Patient_Education_and_Partnerships_with_Patients

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Key Findings
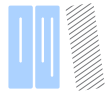
62% of hospitals use three or more sources for their patient education materials. Most respondents (61%) consider working with multiple sources for patient education a struggle.

52% of those who consider working with multiple sources for patient education a struggle say clinicians' confusion as to **which educational materials they should select and difficulty standardizing clinical content across their healthcare system are common problems they face as a result.**

Only **46% of the respondents say their organizations use digital tools** for patient education.
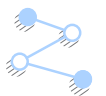
57% of the respondents say a **"disjointed approach across the organization"** is the most common issue they encounter with their patient education materials.

67% of hospitals deliver patient education through a patient portal while **64% use print resources and 54% use email.**

53% of the respondents believe most patients are completely satisfied with their existing tools for patient education, but 47% believe their clinicians are only somewhat satisfied and 22% believe their clinicians are unsatisfied.

49% of the respondents say their clinicians don't have enough time to spend with patients on their education and 44% say clinicians lack the resources to prepare patients for upcoming procedures.

69% of the respondents believe diversifying and optimizing media for patient education can help empower patients to take an active role in their care, while 56% say making education an essential part of the patient journey can do so.

In each case, nearly half of the respondents believe unifying patient education across the health system through a "single source" platform (48%) and achieving insights into how well patients interact with educational materials (48%) are the best strategies for improving patient education in 2021.
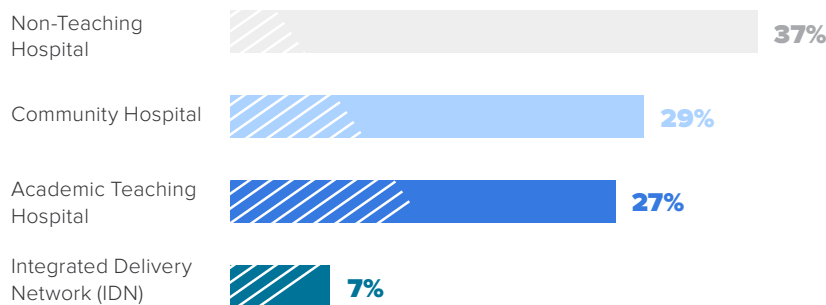
About the Respondents

The WBR Insights research team surveyed 100 healthcare leaders to generate the data featured in this report.

At 37%, a plurality of the respondents comes from a non-teaching hospital. Meanwhile, 29% of the respondents are from a community hospital, 27% are from an academic teaching hospital, and 7% represent an integrated delivery network (IDN), an organization that manages a series of localized health facilities through a single governing board.

Almost one-third of the respondents occupy a role in nursing (33%), while 29% occupy a role in informatics or information. The remaining respondents occupy a medical role (17%), a role in quality (10%), or a role in patient experience (10%). Only 1% of the respondents occupy a role specifically in patient education.

What type of organization do you work for?

Non-Teaching Hospital	37%
Community Hospital	29%
Academic Teaching Hospital	27%
Integrated Delivery Network (IDN)	7%

What is your role?

Nursing	33%
Informatics / Information	29%
Medical	17%
Quality	10%
Patient Experience	10%
Patient Education	1%
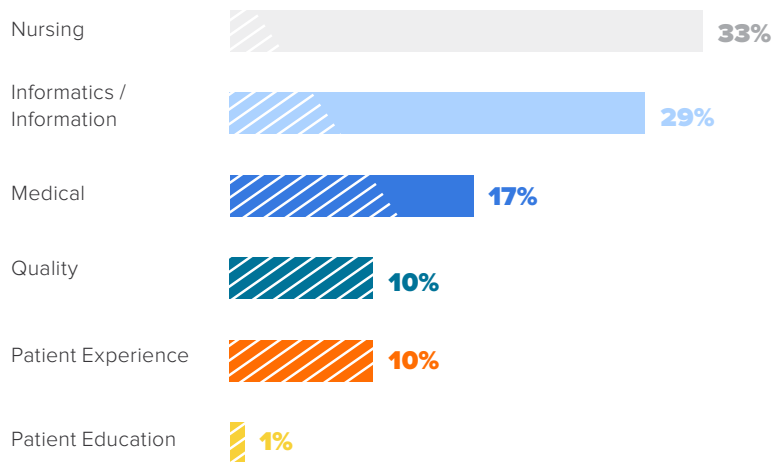
The majority of the respondents in this study, 74%, are C-suite executives. The remaining respondents are directors (19%), managers (5%), and vice presidents (2%).

At 82%, most of the respondents are from an organization that uses Epic as an electronic health records (EHR) system. The remaining respondents are from organizations that use Cerner (23%), Allscripts (12%), AthenaHealth (2%), Meditech (1%), and eD-H (1%). Some of the organizations surveyed use more than one EHR system.

What is your seniority?

C-Suite	74%
Director	19%
Manager	5%
Vice President	2%
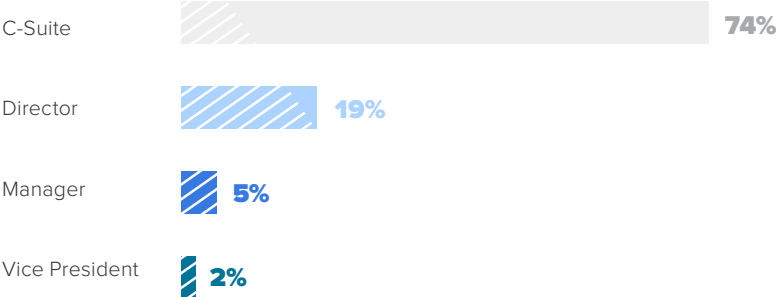
Which electronic health records (EHR) system(s) does your organization use?

Epic	82%
Cerner	23%
Allscripts	12%
AthenaHealth	2%
Meditech	1%
eD-H	1%
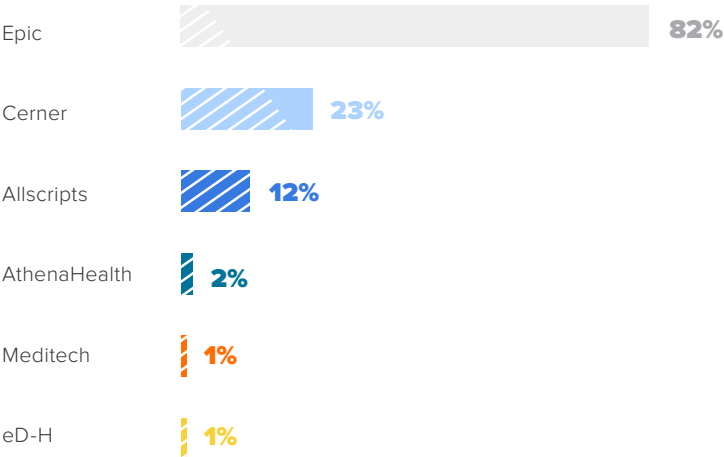
Patients Are Satisfied with Educational Tools, But Clinicians Need Time and Diversified Media

Where once patient education amounted to handing the patient a stack of pamphlets at the office, healthcare professionals now recognize that a patient's understanding of their health and the care they receive is an essential factor in producing positive patient outcomes. As a result, teaching patients self-management and self-care has become a formal discipline in healthcare, and there is more emphasis than ever on making information accessible to patients from various backgrounds.

Today's patient is also different from those of history. They have more information at their fingertips than ever before. After a visit to a doctor's office or hospital, a patient can simply use a search engine to research as much as they'd like about their diagnosis.

But patients still need guidance from physicians and other healthcare personnel. They need explanations about drugs, treatments, procedures, and health conditions in a language they can understand. Perhaps most importantly, they need help avoiding misconceptions about their health and their care, especially when there is so much misinformation online surrounding illnesses, treatments, and medical science.

To gain an understanding of how patient education is fairing in 2021, researchers asked the respondents to describe how patient education has shifted due to one of the most challenging crises in today's healthcare environment: the COVID-19 pandemic.

Several respondents say their organizations pursued virtual patient education programs as a result of the pandemic.

"Since patient safety became a bigger priority, distancing and virtual patient education post-consultation became a new norm,"

- C-suite medical executive at a community hospital.

A C-level information executive from a community hospital says, "It was a clinical safety inclusion to make patient education a virtual solution. COVID introduced contact restrictions and we had to be the first ones to follow the system."

Multiple respondents say they welcome the shift to digital patient education. According to a C-level quality executive at a non-teaching hospital, "Our patient education process is a lot easier now because patients can receive preliminary care through video consultation and receive prescriptions through a valid messaging service."

Other respondents note that their digital, paperless, and video conferencing solutions make it much easier for them to avoid patient mistakes in administering self-care. "The current paperless patient education system makes it easy for us to allow patients to make fewer mistakes in medicating themselves post-consultation," says a director of the patient experience at a non-teaching hospital.

How do your patients currently receive their patient education?

Patient portal	67%
Print	64%
Email	54%
SMS	40%
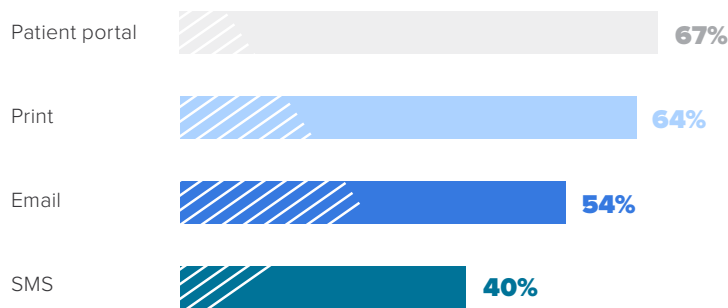
Data from the survey also back up these responses. Most of the respondents say their patients currently receive their patient education through an online patient portal (67%) as well as by email (54%). Still, 64% of respondents say their patients receive printed educational material.

Printed materials have been an important tool in patient education in the past, but they cause significant challenges for both clinicians and patients, especially when compared to the benefits of digital education solutions. Printed materials must be updated manually, can be lost or misplaced, and are not interactive. Digital solutions can be updated automatically, are accessible from anywhere, and can be modified to meet patients' accessibility needs and learning styles.

As we will see, clinicians strongly believe that diversifying and optimizing media for patient education can empower patients to take a more active role in their care and make the education process easier and more streamlined for staff.
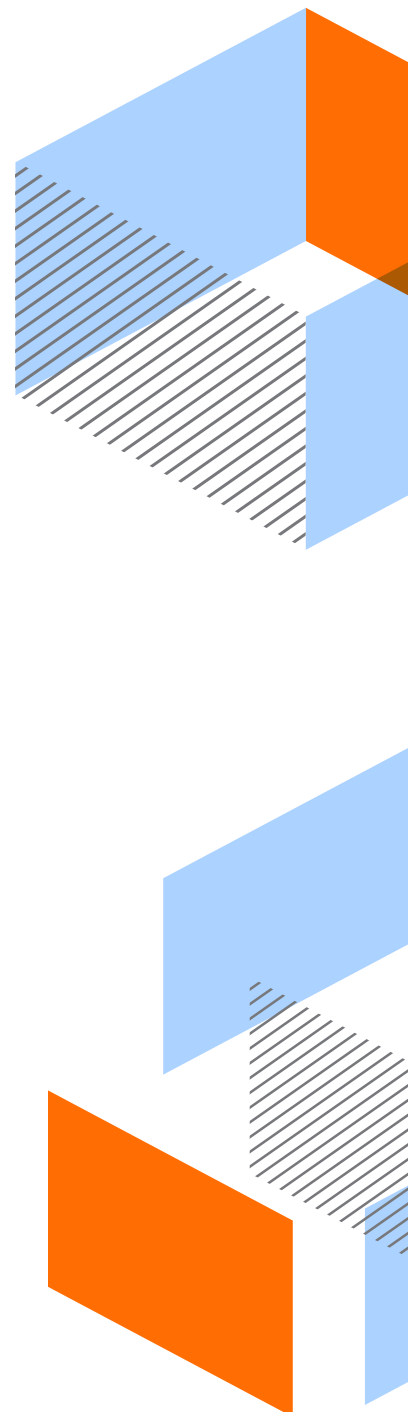
Most respondents believe their patients are either "completely satisfied" (53%) with their existing tools for patient education or "somewhat satisfied" (34%). This could indicate that digital literacy has progressed among patient populations to the point that virtual patient education tools are widely accepted.

However, only 31% of the respondents say clinicians at their hospitals are "completely satisfied" with their patient education tools. At 47%, almost half of the respondents say clinicians are only "somewhat satisfied." While patient satisfaction with these tools is certainly a positive outcome, it's clear that clinicians need faster or more versatile tools at their disposal in delivering educational material to patients.

In your best estimate, how satisfied are your patients and your clinicians with your existing tools for patient education?

■ Completely Satisfied   ■ Somewhat Satisfied   ■ Somewhat Unsatisfied

Patients
- 53%
- 34%
- 13%
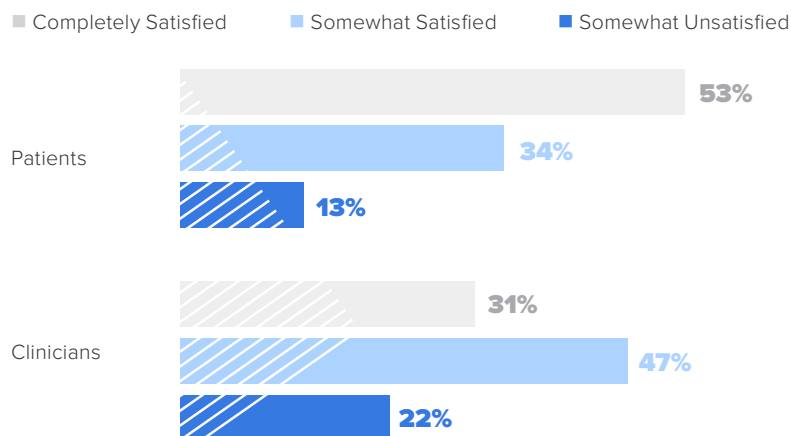
Clinicians
- 31%
- 47%
- 22%

Indeed, clinicians face several challenges in delivering patient education. Three of the most prominent are a lack of time to spend with patients on their education (49%), a lack of resources to prepare patients for upcoming procedures and engagements (44%), and difficulty in managing manual processes associated with patient education materials (43%).

Lack of time to spend with patients is a challenge felt across the healthcare sector. However, digital education tools can assist clinicians with these challenges by providing them with more resources to prepare patients for specific procedures and by automating some manual processes.

What are some of the common challenges clinicians at your organization face today in terms of patient education?

Clinicians not having enough time to spend with patients on their education
49%

Lack of resources to prepare patients for upcoming procedures and engagements
44%

Managing manual processes associated with patient education materials
43%

Inefficient workflow with regard to patient education access and timing
37%

Inability to share patient education the ways patients want to receive it
32%

Increased burdens on IT teams when managing patient education technologies
29%

Growing rates of conditions that require more advanced education requirements
28%

Patient education limited to written materials only
27%

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To help patients, the respondents suggest organizations should diversify and optimize the types of media used in patient educ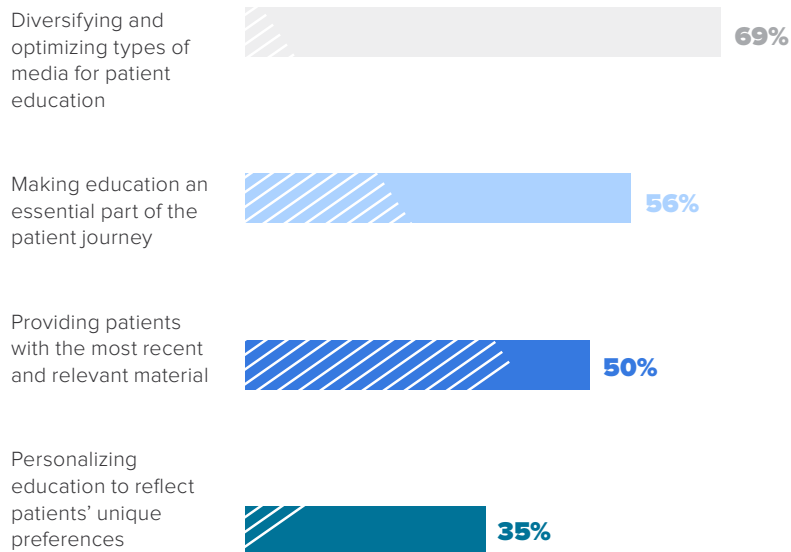ation (69%), make education an essential part of the patient journey (56%), and provide patients with the most recent and relevant material (50%).

Diversifying the media used to deliver patient education could help clinicians better educate patients who learn best through visual materials rather than the written word, for example. Printed educational materials could also help patients who are not technologically literate.

Furthermore, hospitals need to incorporate patient education into the overall patient journey. That means allocating time for clinicians to educate their patients, which is currently one of their most significant challenges.

What are some of the ways your organization can help empower patients to take an active role in their own care?

|	
Diversifying and optimizing types of media for patient education	69%
Making education an essential part of the patient journey	56%
Providing patients with the most recent and relevant material	50%
Personalizing education to reflect patients' unique preferences	35%

Clinicians Struggle with Multiple Sources for Patient Education Materials

Hospitals must choose patient education materials based on the needs and preferences of their patients, but also based on the needs of clinical staff and the hospital's mission. In many instances, hospitals must go to multiple providers to obtain the educational materials and tools they need.

At a total of 62%, most of the respondents use three or more vendors for patient education materials. Only 13% rely on a single provider for patient education materials.

While it can be advantageous for hospitals to provide patients with a variety of educational media, it can complicate things for clinicians. Most of the respondents (61%) say working with multiple sources for patient education is a struggle at their organization.

How many vendors do you currently use for your patient education materials?

2%	11%	49%	24%	13%	1%
More than 4	4	3	2	1	0 — We create our own patient education materials.
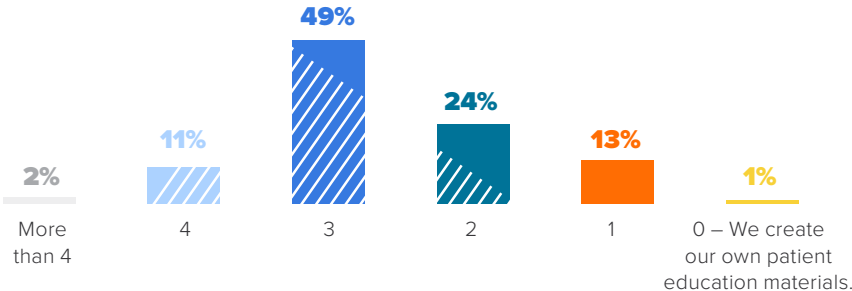
Is working with multiple sources for patient education a struggle at your organization?

61% Yes   **39%** No

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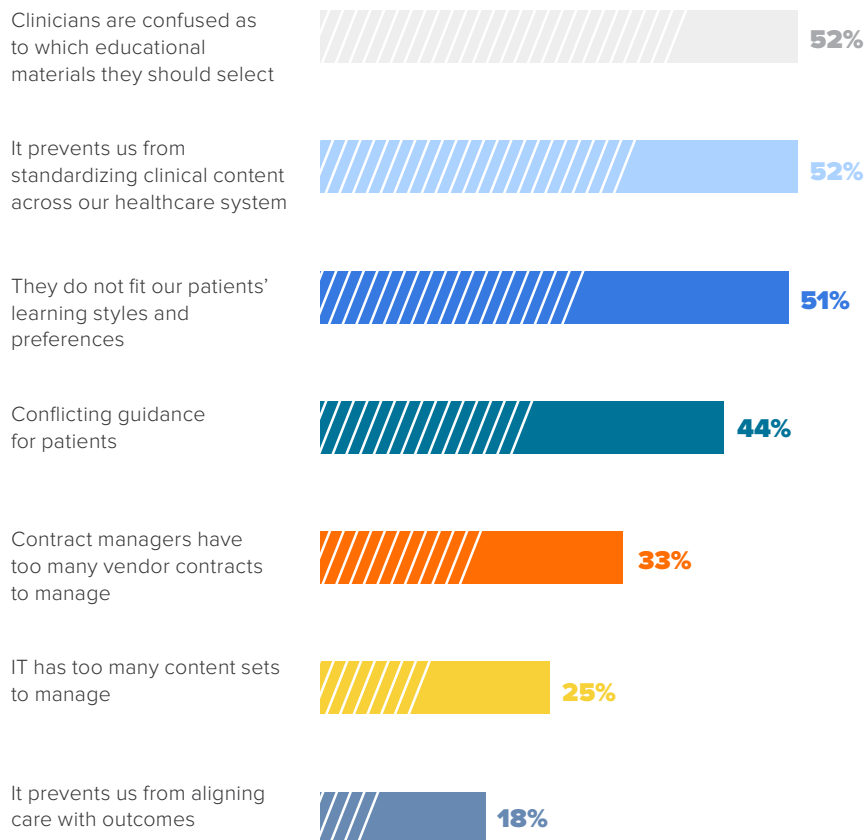Worldwide Business Research

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The respondents who say working with multiple vendors for patient education materials cite four key problems in doing so.

Fifty-two percent of these respondents say clinicians are confused as to which patient education materials they should select. Similarly, 52% of the respondents say working with multiple providers prevents their organization from standardizing clinical content across the healthcare system.

Based on these responses, hospitals may struggle to provide accurate and consistent information to each patient if they rely on multiple providers for educational materials. This could be the case if there are multiple options to choose from when selecting materials for a specific condition, treatment, or procedure.

Meanwhile, 51% say working with multiple vendors means their materials do not fit their patients' learning styles and preferences, and 44% say it leads to conflicting guidance for their patients. To solve these problems, hospitals could rely on a single provider for educational materials, or they could set standards for which vendor's materials to use in specific types of patient interactions.

Since you said yes, which of the following are common problems you face when working with multiple patient education sources?

Problem	Percentage
Clinicians are confused as to which educational materials they should select	52%
It prevents us from standardizing clinical content across our healthcare system	52%
They do not fit our patients' learning styles and preferences	51%
Conflicting guidance for patients	44%
Contract managers have too many vendor contracts to manage	33%
IT has too many content sets to manage	25%
It prevents us from aligning care with outcomes	18%

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As the respondents revealed in previous written responses, many of them currently use digital tools like patient portals for patient education. But, surprisingly, less than half (46%) say they use digital tools when asked directly. Many hospitals switched to digital tools like video conferencing solutions to educate patients safely during the COVID-19 pandemic, but digital tools may not be a formalized part of the hospitals' patient education programs.

To gain a better understanding of how hospitals are using digital education tools, researchers asked the respondents who say they do use digital tools to describe the tools they use currently for patient education.

Do you use digital tools for patient education?

46% Yes   **54%** No

Several respondents say they are using telehealth tools, digital communication tools, and cloud-based applications. Many of the tools they use operate well on mobile devices like smartphones and tablets.

For example, one C-level information executive at an academic teaching hospital says they use "a mobile application that works well based on the capabilities of the technology on the mobile phone."

Similarly, a C-level executive at an IDN says they use "an application on which patients and caregivers have all the information and instructions listed."

Still, some of the respondents say they are using more advanced solutions than smartphone apps.

"We have digital analytics for better patient data and robotics for quick responses," says a nursing manager at a community hospital.

One nursing director at another community hospital says they are successfully educating patients after "creating a single connected system which makes it seamless for patients when they visit the facility for additional consultation."

Creating a single, integrated digital source for patient education across the healthcare system might be a viable solution for many of the challenges listed above. Instead of burdening clinicians with manual processes, a single system could automate many of the time-consuming tasks involved in patient education. It would also help the hospital standardize its patient education materials, helping avoid confusion among both patients and clinicians.

Healthcare Organizations Want to Unify Patient Education Through a "Single Source" Platform

In addition to dealing with challenges associated with multiple vendors of patient education materials, hospitals and healthcare leaders must also enact a strategy for effectively distributing, updating, and using patient education materials across the organization.

Aligning patient education with a unified, digital platform and presenting patients with a diverse range of educational media can make the administering of patient education more seamless and effective, even for patients who aren't comfortable using an app or an online portal. It could also help hospitals create a unified and universal patient education program—something many respondents struggle to achieve with multiple solutions and vendors.
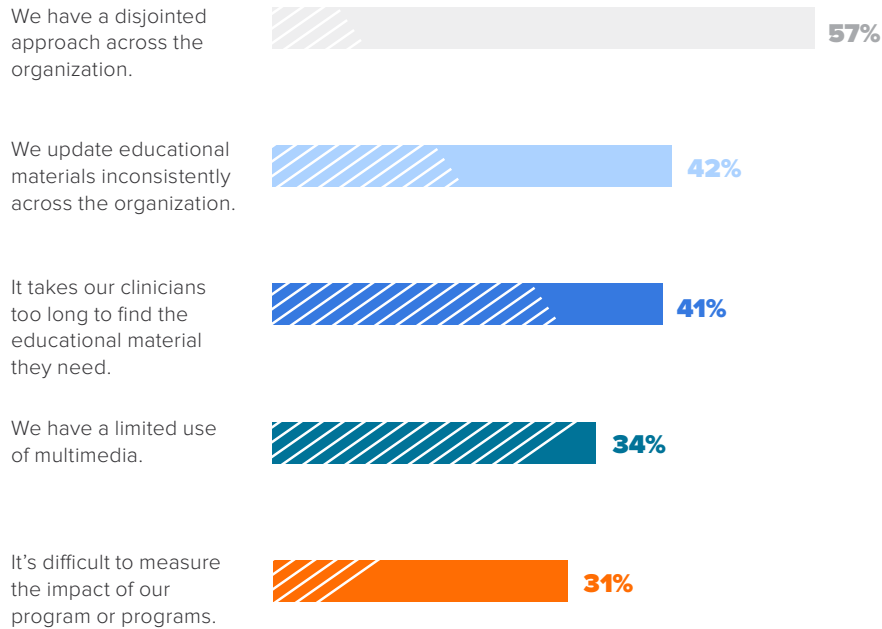
Currently, 57% of respondents say they have a disjointed approach to patient education across the organization. This is an issue they regularly encounter in delivering patient education. There is some internal work to be done in this regard, but using a single vendor or source for material is a way healthcare organizations can unify their strategy, whether it is virtual or not.

Significant portions of respondents say that their organizations update educational materials inconsistently (42%) and that it takes clinicians too long to find the educational material they need (41%). Using automatically updated, cloud-based tools to disseminate materials is one way to resolve this issue. Instead of manually updating physical materials, digital materials can be delivered instantly once they become available.

This solution can still benefit patients who need printed educational materials. With a systematic approach, physical materials can be updated regularly across the organization based on changes to the digital application platform.
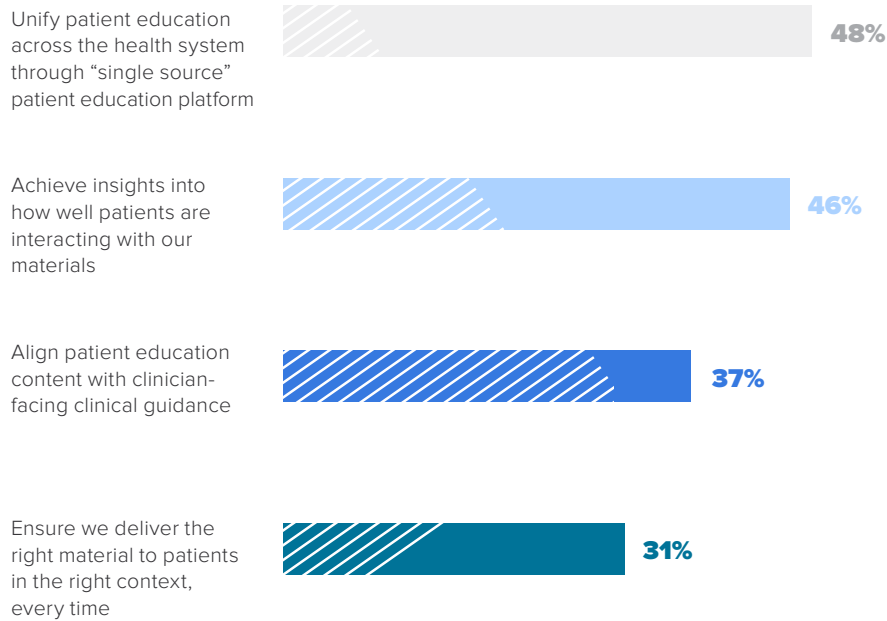
Which of the following issues do you regularly encounter with your patient education materials?

We have a disjointed approach across the organization. — **57%**

We update educational materials inconsistently across the organization. — **42%**

It takes our clinicians too long to find the educational material they need. — **41%**

We have a limited use of multimedia. — **34%**

It's difficult to measure the impact of our program or programs. — **31%**

As suggested, 48% of respondents say one of the best strategies for improving patient education has been unifying the discipline across the health system through a "single source" patient education platform. Organizations that successfully accomplish this can eliminate many of the manual tasks involved in patient education, as well as the confusion that comes from a non-standardized approach to material selection.

Additionally, 46% of respondents say achieving insights into how well patients are interacting with materials is a viable strategy for improving patient education. By using analytics and patient surveys, hospitals and healthcare organizations can gain a better understanding of which types of materials and solutions patients favor over others. This would allow them to tailor the patient experience so that education is more effective both online and in-person.

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What strategies for improving patient education have you adopted or are you planning to adopt in 2021?

Unify patient education across the health system through "single source" patient education platform — **48%**

Achieve insights into how well patients are interacting with our materials — **46%**

Align patient education content with clinician-facing clinical guidance — **37%**

Ensure we deliver the right material to patients in the right context, every time — **31%**

Thankfully, hospitals and other healthcare organizations are making significant strides in their adoption of new patient education technologies and strategies. At 53%, most of the respondents have adopted easy or automated access to each patient's preferred materials for learning, and almost half of the respondents (47%) have adopted and are successfully using cloud-based patient education platforms.
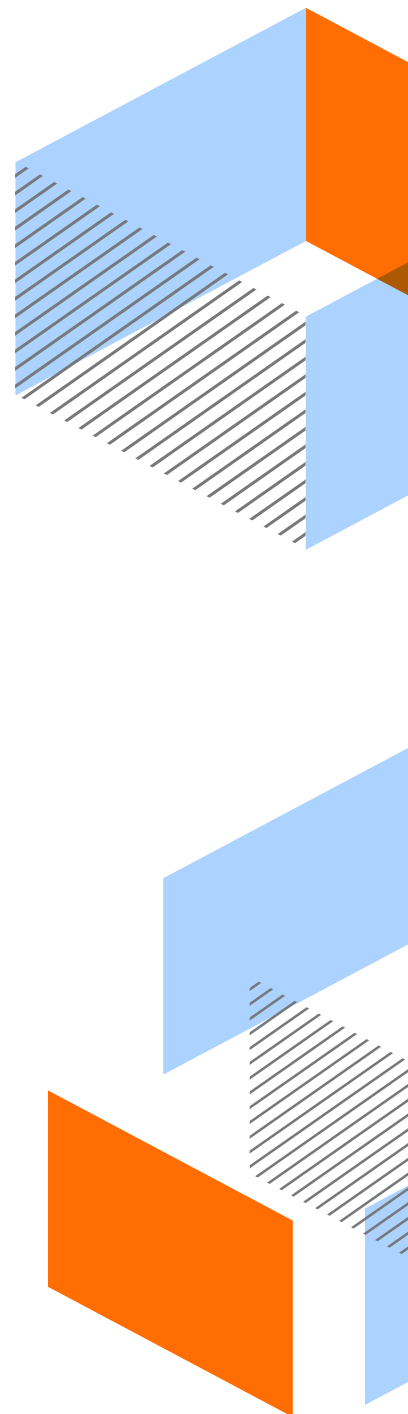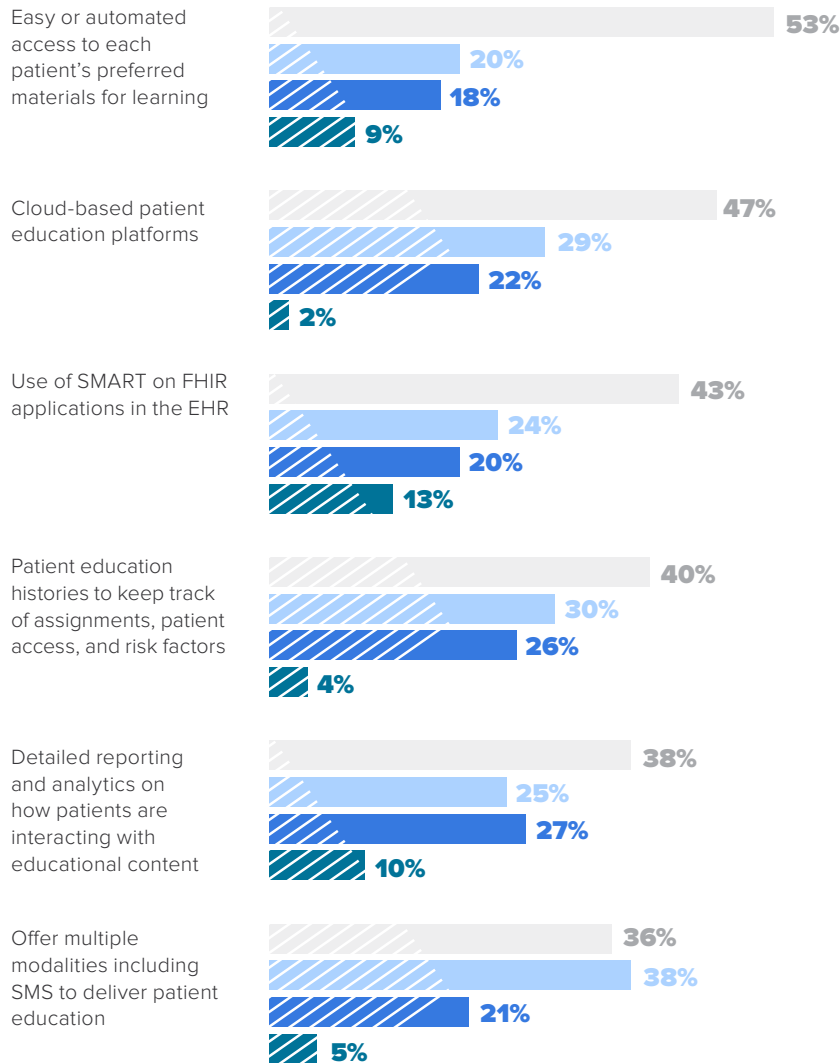
Still, some solutions haven't seen as much adoption. Only 43% are successfully using Substitutable Medical Applications, Reusable Technologies (SMART) on Fast Healthcare Interoperability Resources (FHIR). This is an open, standards-based technology platform that allows users to create apps that run on EHRs and other health data systems.

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Meanwhile, only 40% of respondents have adopted patient education histories to keep track of patient assignments, access history, and patient risk factors. Only 38% of respondents use detailed reporting and analytics to track patient interactions with educational content, and only 36% offer multiple modalities to deliver patient education.

But respondents indicate that they are interested in all these solutions. Most of the remaining respondents either intend to adopt these tools or are considering them. There is a need for these types of tools to improve the patient education experience, and in the next few years, many of these hospitals' programs will evolve to incorporate these technologies.

To what extent have you adopted the following in your organization regarding patient education?

- We have adopted this and continue to use it successfully.
- We have not adopted this, but intend to do so.
- We have not adopted this, but we are considering it.
- We have not adopted this, and we are not considering it.

Easy or automated access to each patient's preferred materials for learning
- 53%
- 20%
- 18%
- 9%

Cloud-based patient education platforms
- 47%
- 29%
- 22%
- 2%

Use of SMART on FHIR applications in the EHR
- 43%
- 24%
- 20%
- 13%

Patient education histories to keep track of assignments, patient access, and risk factors
- 40%
- 30%
- 26%
- 4%

Detailed reporting and analytics on how patients are interacting with educational content
- 38%
- 25%
- 27%
- 10%

Offer multiple modalities including SMS to deliver patient education
- 36%
- 38%
- 21%
- 5%

These and other capabilities have the potential to dramatically enhance patient education programs and improve clinical outcomes. As we've learned, the respondents believe that patients generally have a positive opinion of the digital patient education materials currently being used in healthcare settings. In written responses, many respondents say their patients appreciate the accessibility and ease of use provided by digital patient education solutions.

"Patients are always comfortable when patient education is systematic," says a C-suite executive at a non-teaching hospital. "With the content clearer now, they prefer this system for the future."

Other respondents say that virtual education "eases stress," "connects and communicates well," and makes patients "more equipped to make better decisions for their recovery," as one C-level information officer at a community hospital puts it.

"Patients find it easy and like that we are breaking tradition and going digital with our process of educating them."

- C-suite executive at an IDN.

Conclusion: Patient Education Three Years from Today

In their final line of questioning, researchers ask the respondents to describe the specific improvements they'd like to see to their patient education program over the next three years.

Several respondents say that artificial intelligence (AI) is one technology that springs to mind immediately upon reading the question. "AI can provide continual development into the coming years and beyond," says a C-suite executive at an academic teaching hospital.

Other respondents believe that AI can make patient education both easier and more accurate. "I strongly believe in the capabilities of AI to help track patients better and provide better notifications and information all around us," says another C-level respondent.

Still, advanced capabilities like AI will be better suited to a patient education program that is unified by a single source of truth. Multiple respondents believe that achieving this is their most pressing concern and will be the most significant source of positive patient education outcomes in the next three years.

"Any solution that brings all the services on one platform, so that patients have better end-to-end experiences, would be ideal," says a nursing professional at a community hospital.

Similarly, a nursing director at another community hospital says, "I would expect a larger tech player to come up with something more connected and easier that provides end-to-end coverage for patients."

By unifying their technology solutions, strategies, and material sources, hospitals will be able to deliver patient education more effectively and at less cost in the next three years. They'll also be able to deploy more advanced capabilities like AI to further enhance the patient experience and realize better patient outcomes.

Although some patients may still be better served by traditional forms of patient education, there is a demand for a combined, end-to-end educational platform that can be accessed by patients at their leisure and updated automatically with the latest materials. In the future, many hospitals will likely be rolling out new software solutions so they can meet patient expectations for a simple, app-based educational experience complete with multiple learning modalities and AI-enhanced analytics.

Key Suggestions

Most patients that have used digital educational materials have a positive outlook on them. They particularly enjoy the ability to access patient education via a smartphone app or an online portal, as this allows them to stay connected with healthcare providers and conduct research on their own time. Although traditional forms of patient education may be more suitable for some patients, creating a unified digital experience for the educational process should be a goal for every hospital and healthcare organization.

Clinicians struggle with a lack of time to educate their patients due to manual processes. They also lack the resources they need to prepare patients for upcoming procedures. Use automated patient education solutions to relieve clinicians of some of the burdens of preparing patient materials. Deploy an accessible solution that patients can use on their own, so they can self-educate when possible.

Many hospitals and healthcare organizations are relying on multiple sources for patient education materials. This is causing clinicians to be confused about what materials to select for patients, and it leads to a lack of standardization across the organization. Consider consolidating your patient education strategy to a single source or standardize which sources to use in specific scenarios.

Make deploying a single platform for patient education a key objective. This would help prevent a disjointed approach to patient education across the organization and help teams receive updated materials consistently.

Several healthcare professionals say AI is the future of patient education. Before deploying this capability, ensure you have a unified strategy and end-to-end technology solutions to support it across the organization.

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