Digital Virtual Assistants for Health System Websites: What Really Works?

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Introduction

Conversational artificial intelligence (AI) has made remarkable strides in the two decades since Microsoft introduced "Clippy" the Paperclip, a virtual assistant integrated with their Office program. Advanced-for-its-time yet relentlessly annoying, Clippy was the first experience millions of people ever had with conversational AI. Facing little love and much ridicule, Clippy was retired in 2007, a testament to the promise and peril of corporate efforts to use software to speak directly to their customers.

Since then, digital virtual assistants have evolved from intrusive distractions to ubiquitous and powerful tools for consumer engagement. They have proliferated across industries because, when designed correctly, they drive top-line revenue growth while reducing operating costs, a tantalizing prospect for any business leader.

In just one example from the travel industry, Emirates Vacations needed to fix lackluster consumer engagement and turned to conversational AI. They deployed chatbots in their display ads, providing a direct line to book travel – and it worked. Engagement rates rose 87% as consumers could much more easily and quickly find the vacation experiences that matched their interests and the travel agency earned one of the highest-rated consumer chatbot experiences in the world.

As health care organizations face increasing competition for patients and providers, they are taking lessons from other industries by integrating conversational AI into their digital front door strategies.

Consumers increasingly demand the seamless experiences they have come to expect in retail, banking, and travel. In a recent survey by Cedar, a patient payment and engagement platform, 41% of all patients – and 61% of those between 18- 24 – said they would leave their current health care provider for a better digital experience.

2019 Health Care Consumer Study

41%

of all patients would choose a digital experience

61%

of patients 18-24 would choose a digital experience

45%

of Gen Z patients lack a primary care provider

And for that younger health care consumer, the traditional referral routes are less reliable. 45% of Gen Z patients lack a primary care provider (PCP), and of those that have a doctor, less than half of patients use their PCP as the first step in finding care. These patients expect websites to point them to the care they need.
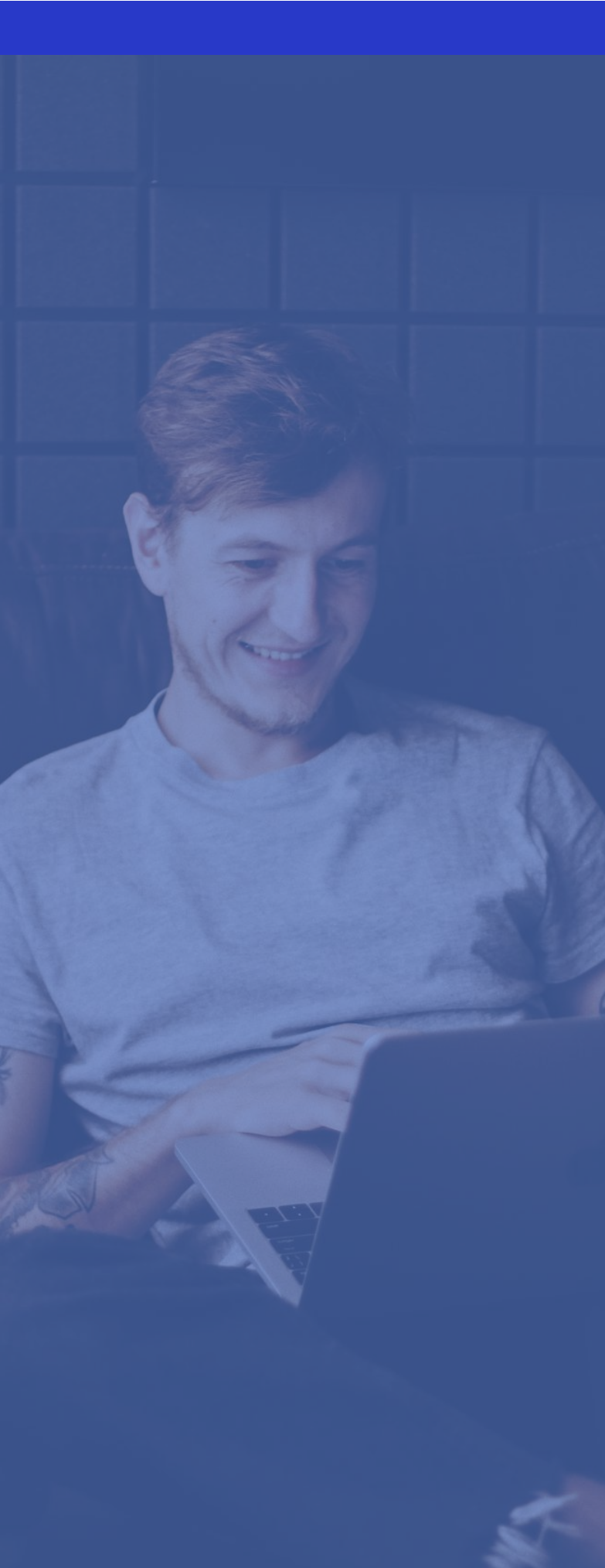
A truly integrated digital experience empowers patients to take a proactive approach to their health needs while helping providers with operational workflow challenges. Effective chatbots help patients access quick answers to general digital front door queries from the simple, like hours of operation, addresses, available services, and provider ratings, to more complex needs like matching a user's symptoms to an appropriate clinician, scheduling a visit, and paying a bill. The more sophisticated conversational AI chatbots are programmed to self-learn, ingesting new words and dialogues for continuous improvement. This type of advanced technology can significantly drive patient engagement while reducing cost: consumers like to avoid lengthy call center wait times and providers enjoy the reduced operational burden on staff.

With this kind of win-win value proposition, it is not surprising that many health systems are deploying AI chatbots to answer patients' questions about various health conditions and to find providers. But health care leaders who install these solutions first need to do no harm because an ineffective chatbot can be worse than no chatbot at all. And the stakes, of course, are much higher in health care than in vacation planning: chatbot consumers who hit "dead-ends" or are served up the wrong information not only get frustrated, but they may also fail to access needed care.

For a long time, the aspiration of conversational AI was for users to forget they weren't actually having a conversation with a human. That was the explicit goal of AI research as early as 1950 when English mathematician Alan Turing proposed his eponymous test that a human being should be unable to distinguish a conversation with a machine from another human being. Since then, however, researchers have learned that some patients are more likely to be open and honest - especially about adherence to self-care plans - if they know they are interacting with a bot and not a real human.

Today, rather than insisting that conversational AI be indistinguishable from human conversation, leaders in the field are focusing on the utility of the interaction over human simulation. "The goal of conversational AI," says Nathan Treloar, President and COO of Orbita," is to achieve the benefits of automation, without sacrificing a feeling of empathy in the interaction.

Not all chatbots are built the same – and the wrong one will infuriate your users.

Back when Microsoft's Clippy was introduced in 1997, the technology was still worlds away from passing a Turing test. What has changed since then is that chatbots have gained the two-way conversational capabilities to "understand" user intent and connect that intent with satisfying responses. Today, advanced AI chatbots are often trained with more than 2 million consumer messages so the technology can understand what health care consumers are asking for and route them to where they need to go.

The challenge for health care leaders today is finding and designing the right conversational AI tools for their organizations. "Artificial Intelligence" and "Machine Learning" are overused in software marketing hype to the point of being almost meaningless. Finding the right solution means sifting through myriad technologies on the market, a task that requires an untenable amount of time and expertise for leaders running large health care organizations. A typical health system can take over a year to source, select, contract and implement a solution. By the time a health care organization completes the process, the technology may have changed substantially.

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Panda's 3 best practices for selecting AI chatbot technologies

1. Ensure AI chatbots really are conversational

2. Help patients meet their goals

3. Seek rich and actionable analytics

To accelerate the technology adoption process and to give those leaders greater confidence in their selections, Panda Health devoted its team of digital health experts to extensively evaluate the conversational AI industry. Panda conducted market research on best use cases and practices to build on the input we received from our buyer health systems to define a clear set of criteria to be met. Panda hosted live demos, performed thorough Information Security evaluations and tested live instances of supplier chatbots.

Panda then sifted through scores of chatbot solutions – both health care-specific and industry-agnostic – to generate a long list of companies meeting the health care organizations' use-case needs and criteria. With a custom-built RFP that actually got rave reviews from suppliers, Panda narrowed that group down to a small number of best-in-class providers that were invited to join the Panda marketplace. Over the course of that evaluation process, Panda identified three key considerations that any health system should keep top-of-mind when adopting AI chatbot technology.

ONE

Ensure AI chatbots really are conversational

Health systems should attempt to peel back sales claims by asking to test other health systems' live chatbot deployments. The truth is many health care chatbots are not as conversational as they claim. There are many choice-driven bots that use selectable menus and buttons - these are not conversational.

The key to being conversational is when a bot is able to understand and handle the context of natural language inputs. For example, a patient might ask "what are the symptoms of diabetes?" and then follow that with "what are the treatments?". A well-designed bot knows that the context of the second question is still "diabetes".

As another example, if a patient says they have cough and fever symptoms, a chatbot may be able to suggest a primary care provider but little else. The giveaway is when a chatbot fails to understand the patient, hits a dead-end, and then keeps asking, "How can I help you?" No technology – not even human intelligence – is perfect, and there is always a risk of hitting a dead-end. But the leading conversational chatbots minimize these shortfalls and at their best they have the ability to ask probing questions to fully engage the patient. Conversational chatbots should have straightforward conversations with intuitive, natural language experiences—all with HIPAA compliant chat platforms.

TWO

Help patients meet their goals.

Advanced AI chatbots should be able to determine intent, allowing patients to search for relevant providers across multiple locations and self-schedule appointments in real-time. With the ability to create and manage complex question-and-answer interactions, advanced chatbots connect patients to actionable solutions like visiting a specialist or scheduling a test.

For improved experiences, robust conversational AI also allows users to select their preferred communication channel, including text-based and voice-based options across multiple languages. By meeting patients where they are, health care organizations can optimize navigation and discoverability.

THREE

Seek rich and actionable analytics.

Health care teams can better understand user searches with rich analytics features to determine at what point patients leave the chatbot experience or where they go when they leave. Robust analytics provide actionable insights to determine how well patients' needs are being met—and to inform future decisions more reliably. By integrating the insights with broader digital marketing metrics, health care organizations can tailor consumer engagement strategies to granular segments of their market.

Access to Best-in-Class Digital Health Partners at Speed

Panda Health can help your organization find best-in-class technology that empowers your patients with conversational AI and creates a robust digital front door. If you are a health care organization looking to elevate and accelerate your digital strategy—or a digital health company with best-in-class technology—reach out to one of our experts.
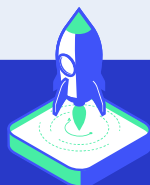
WHAT WE DO

TRUSTED MARKETPLACE

STANDARDIZED PROCUREMENT

TECHNICAL INTEGRATION

CONTACT MANAGEMENT

RESULTS

50%
IMPROVEMENT IN PROCUREMENT SPEED

10-20%
REDUCTION IN CONTRACTED PRICES

30-50%
REDUCTION IN PROCUREMENT COSTS

3-5x
ROI ON PANDA SPEND

IMPACT FOR HEALTH SYSTEMS

More Revenue ▶ Faster Revenue ▶ Less Cost ▶ Buyer Insights

REFERENCES: 1. Digiday, 2. Cedar Survata, 3. Kaiser Foundation, 4. JMR