

WHITE PAPER

# Powering the Healthcare Digital Front Door and Reducing Clinician Burden with Conversational AI



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Clinician burnout is well-established and has been studied for well over a decade. The health IT community has responded with efficiency tools, training, and programs for clinicians, with a lesser focus on using digital tools to offload this burden by automating processes and equipping clinicians to practice at 'top-of-license' as a part of their care team. A recent JAMIA publication found that EHR efficiency tools are not likely to reduce burnout symptoms.<sup>1</sup>

A [2020 Medscape poll](#) of over 15,000 physicians found that nearly half the respondents reported symptoms of burnout, defined as feelings of job dissatisfaction with elements of hopelessness.<sup>2</sup> A shocking one out of five respondents had considered suicide.

Hilliard, et al. found that the number of patient call messages per week was a significant contributor to burnout.<sup>3</sup> Ultimately, burnout among medical providers is about "loss of control."

Adopting a 'Digital Front Door' powered by conversational artificial intelligence (AI) supports automation and self-service to put resources and information in the hands of consumers and patients, reducing administrative tasks and patient messages for the providers while enhancing the patient experience.

**Out of 10,000 U.S. clinicians polled in 2017, 80% believe that virtual assistants will drastically change healthcare for the better.<sup>5</sup>**

Healthcare organizations realize the potential of AI. A [2018 HIMSS Media survey](#) of healthcare organizations (HCOs) found that 77 percent of them either used or planned to use AI or ML (machine learning) in their delivery of care.<sup>4</sup>

Providers are also on board with virtual support. Out of 10,000 U.S. clinicians polled in 2017, 80% believe that virtual assistants will drastically change healthcare for the better.<sup>5</sup>

This white paper will discuss best practices for leveraging the digital front door in healthcare to reduce clinician burden and create meaningful efficiencies.

## Clinician Burnout

There are many factors that lead to clinician burnout. Some of them include:

### Extended Workday

Clinicians often can't meet work responsibilities during the regular workday and have to work at home (aka. 'pajama time'). This threatens work-life balance. According to Jennifer Joe, MD, CEO of Vanguard.Health, "For so many of us work is home, home is work. Home as respite doesn't exist anymore."<sup>6</sup>

### Poorly Designed EHRs

EHR systems have a reputation for being difficult to use with outdated interfaces and excessive mouse clicks to perform simple tasks (Ehrenfeld and Wanderer, 2018; Gardner et al., 2018).<sup>7,8</sup> They are also known for poor interoperability with other systems, making communication with other providers cumbersome. And EHRs have increased data entry requirements, usually quality measures for reimbursement, not clinical outcomes (Shanafelt et al., 2016; Gregory et al., 2017).<sup>9,10</sup>

### Less Patient Interaction

Clinicians must spend a disproportionate amount of time doing bureaucratic tasks versus engaging with patients. Reduced patient interaction worsens the quality of care, as the clinician may become less aware of the patient's needs and the patients become less likely to open up.

### Increased Doctor-Patient Communication

Paradoxically, greater ease of e-communication with patients on EHR systems, patient portals and by email has increased clinician workload (Dexter et al., 2016).<sup>11</sup> [As noted, a recent study published in JAMIA](#) found that the number of patient call messages per week could be linked to burnout.<sup>1</sup> Such messages included patient requests and questions, but also refill requests, patient care forms and other tasks. Increased call volume might also be correlated with burnout because the tasks are usually uncompensated.

## Leveraging a Healthcare Digital Front Door Powered by Conversational AI

Can technology reduce clinician burden by engaging and empowering patients to get (and share) the information they need, when needed, and through their preferred channels of communication? If poorly designed, technology will only exacerbate existing problems, as we have seen with poorly designed electronic health record (EHR) systems. To engage patients at the digital front door, technology must be well-integrated into the patient journey and corresponding clinical workflows, ease sharing of information, and focus on improving the patient and clinician experience.

By pulling data from multiple sources and automating tasks, conversational AI technology is well-suited to guide patients through each step of the digital front door and alleviate clinician burden. Building on automation, virtual assistants such as chatbots incorporate existing information (i.e. provider and location databases, COVID-19 related care and safe hospital practices, symptom checking content, hospital website content, etc.) while also sourcing new information in contextually appropriate ways (“who does knee replacement surgery that accepts my insurance?”). The virtual assistant meets individual needs 24/7, enhancing the patient’s experience by removing friction while reducing messages or calls to clinical staff, so the time providers spend with patients is more meaningful and less administrative.

Alongside a ‘Digital Front Door,’ a conversational AI platform can provide out-of-the-box ‘campaign-based’ outreach that automates specific tasks (i.e. pre-visit COVID-19 screening, health maintenance reminders like flu shots). In this campaign-based approach, HCOs can get started quickly but still have agile conversational flows.

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- **The following use cases demonstrate how conversational AI platforms reduce burden and create efficiencies at the digital front door:**

### Care navigation

A chatbot allows a patient to check their symptoms and get recommendations on next steps for care.

**A patient sprained their ankle. A chat bot asks them questions and helps them understand their care options, whether it be urgent care, a virtual visit, scheduling an appointment with their PCP, or self-care at home.**

### Call center automation/deflection

High volumes of calls from patients to call centers or providers decrease as virtual assistants help offload tasks and provide patients with on-demand resources and information, while escalating to the call center staff when appropriate.

**A patient is experiencing COVID-19 symptoms and needs to understand next steps for testing and care, a website chatbot can screen the patient and provide them with locations near their home for testing.**

## • Patient bill pay and financial support

Virtual assistants can provide transparency around care options and cost. With greater awareness, a patient can make an informed decision. In turn, patients are more apt to pay that bill once it comes their way because they are already aware of the cost and not surprised.

- **A patient is experiencing a new onset headache and needs care, they're presented with costs and may choose to have a virtual visit based on convenience and cost.**
- **Due to COVID-19 and an increase in unemployment, many diabetic patients are becoming non-adherent to their insulin treatments. Through a virtual assistant, a pharmaceutical company sends notification to doctors and patients by text, interactive voice response (IVR), and other channels that it is now offering insulin for \$35 a month.**

## Surveys, screeners, and assessments •

A virtual assistant can send questions to patients to gauge their health status and safety.

- **A not-for-profit hospital system uses a virtual assistant to send out a survey around anxiety and depression to employees as a way to have a greater awareness of their mental health and recommend next steps.**
- **A dialysis center integrates conversational AI into an IVR system to automate a COVID-19 screening tool for patients prior to their appointments.**
- **A telemedicine company leverages a chatbot to gather information from patients in a virtual waiting room to update the history of the presenting illness and other key details that a clinician will need as part of their overall assessment.**

## Find a location and schedule a doctor's appointment

According to Chelsea Biel, RN, Director of Clinical Informatics at Orbita, patients that schedule their own appointments are more likely to keep them. "There's a belief that if a patient selects their visit time, they're more likely to stick to it because they've confirmed it works with their schedule and commitments."<sup>12</sup> They're also more likely to reschedule than be a no-show. No-shows decrease revenue and productivity.

**An organization uses a chatbot virtual assistant to address FAQs and facilitate blood donation recruitment and scheduling.**

## Key Takeaways

It is incredibly important that the virtual assistants in question are available anytime, anywhere, and on any device. Engaging patients through the digital front door not only increases access to care, which is important for health equity, but alleviates clinician burden by often resolving the needs of many more patients.

Such consumerization of the health care industry is undeniable. According to AVIA, a leading healthcare innovation and strategy consultancy, healthcare organizations risk losing 1 to 3 points of commercial share to digitally integrated competitors that prioritize convenience and price.<sup>13</sup>

Virtual assistants must be user-friendly if they are really going to make a measurable impact on clinician burden. Patient adoption is a requisite and is at the core of designing the digital front door. Imperative in the success of a virtual assistant in healthcare is understanding the patient journey and setting out to achieve goals that align with consumer expectations.

### Other tasks that an AI-powered virtual assistant can do today include:

- Appointment and procedure rescheduling
- Pre-visit outreach and screening
- Health maintenance campaigns, such as flu shots or mammograms
- Provide first line support to common questions
- Automate patient surveys

## About Orbita

**Orbita** provides market-proven voice and chat solutions for healthcare and life sciences sectors, and the most powerful conversational AI platform enabling entities to cost-effectively create and manage HIPAA-compliant virtual health assistants for the enterprise. Organizations tap the power of Orbita's voice search-enabled technologies for consumer marketing, customer service, patient engagement, outcomes improvement and cost reduction initiatives. Customers include Amgen, Brigham and Women's Hospital, ERT, Libertana Home Health, Mayo Clinic, Merck and University of Chicago Medicine. Partners included Amazon, Cognizant, Deloitte, Pariveda, and ServiceNow.

### Meet consumers

#### Where they are with a digital front door

Learn how your organization can remove friction and improve access to care with OrbitaENGAGE, a digital front door solution that helps consumers quickly and easily find the information they need to access and receive care. Using powerful conversational experiences like chatbots, voice search, and voice SEO, OrbitaENGAGE supports patients as they search for a doctor, location, service or activities like triaging and appointment scheduling.

**See Orbita's Digital Front Door solutions in action**

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