

# HEALTHCARE, WITH A DOSE OF ARTIFICIAL INTELLIGENCE

*Using AI-based Digital Humans to Speed up Covid-19 Vaccination Scheduling*

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MAKE SYSTEMS INTELLIGENT

## Conversational AI Powers the Covid-19 vaccination scheduling

The COVID-19 pandemic has put an enormous burden on public health, healthcare agencies, and organizations across the world. Experts from the Department of Health and Human Services (HHS) are leading vaccine development, while experts from the Department of Defense (DoD) have partnered with the Centers for Disease Control and Prevention (CDC) and other parts of HHS to coordinate supply, production, and distribution of vaccines.

However, successful rollout of the national vaccination program requires close collaboration among federal, state, and local healthcare entities for information dissemination and scheduling to the public. Additionally, there are a number of challenges for state and local agencies in communicating with the public on vaccination, rollout strategy, eligibility, and campaign management. These challenges include tracking patient and vaccine data, vaccine supply and demand logistics, and more broadly, data sharing across healthcare entities for the entire vaccine lifecycle. This whitepaper outlines some of these

### COVID VACCINATION BOOKING & SCHEDULING

- Appointment and Procedure rescheduling for Covid vaccination
- Pre-visit outreach and screening
- Health maintenance
- Campaigns, such as flu shots or mammograms
- Provide first-line support to common questions
- Automate patient surveys.

challenges and provides an approach to address these challenges using the Humonics Cloud contact center platform, digital communication, and cognitive intelligence technologies.

Scheduling millions of Covid-19 vaccination appointments is an immediate global imperative but reaching each individual (twice) is a mammoth task even in 'normal' times. This whitepaper articulates the need for artificial intelligence (AI) - specifically conversational AI - to ease the appointment process, helping aid the global fight to vaccinate everyone quickly and efficiently.

## Citizen education, outreach, and Vaccination Scheduling

Conversational AI coordinates and manages vaccination appointments quickly, and at a huge scale, which enables health departments to focus on delivering vaccines and call centers to focus on helping those who really need it.

The need for conversational AI-based Digital Humans.

**1.High volume of interaction:** The vaccine needs to be administered throughout the population and so the numbers involved in this endeavour are in the hundreds of millions.

**2.Numerous channels of contact:** There are a number of channels via which this effort could be coordinated. Voice, text, website. In addition, there is immense inherent complexity in reaching out to people at the right time and being available to them when they respond.

**3.Clarity of the objective** narrows down the types of responses we can expect to receive from individuals, and those can be categorized for more efficient automated resolutions. For instance, these categories may include.

- Scheduling/rescheduling appointments for each dose
- Confirmation of appointments (to track those who have received the dose vs. not)
- Request for information primarily regarding the vaccine, its side effects, and how individuals are prioritized (e.g. by age, profession, vulnerability)

Call center capacities are reduced due to the virus' impact, and we have the potential for inefficiency. Only one-way messages leaves no room for the individual to come back with questions, alterations, etc. This will logically lead citizen to seek out the helpline and call in for the simple task of rescheduling the appointment to a later date. This not only ends up costing additional money but more importantly, prevents those who are in desperate need of an intelligent human interaction.

Reaching 70% of the U.S. adult population requires state, local, and large health care providers to manage vaccine campaigns at a population-level scale.

Any delay caused by inefficiencies in this process means additional time taken to reach the entirety of the population and puts lives at risk. Thus, choosing a technology that not only informs but rather opens channels for effective communication.

- Appointment for first dose a. Potential rescheduling b. Questions about standard information
- Appointment confirmation (so that no spots go unfilled, and people do not have to wait in lines excessively)
- Confirmation of successfully receiving the first dose.
- Post Appointment care: including answering questions about potential side-effects.
- Appointment for second dose a. Same as above
- Confirmation of successfully receiving the second dose Given the elements to this process and the extended period of time over which it goes, that ability to converse and be kept up to date with minimal effort from both ends (the individual as well as the healthcare provider) is a necessary feature.

AI-based Vaccine administration Communication platform can be leveraged to schedule vaccine appointments, capture administrative and billing data, track vaccine lot numbers, manage inventory, document side effects, supply operational metrics, and provide patients with access to their vaccine data. The interoperability of vaccination data between vaccine administration technology and EHRs across independent health settings is largely inconsistent across the industry.

From scheduling check-ups to setting up payment arrangements, healthcare providers and payers looking to automate complex live agent transactions turn to Humonics. Our AI-powered Virtual Agents are trusted to deliver the industry's highest self-service rates and patient experience scores.

Today's Healthcare services providers must deliver hyper personalized Healthcare experience at scale wherever, whenever, and however customers choose to engage. These cognitive machines enable Healthcare to save not only time and improve efficiency, but also help Healthcare to save millions of dollars as a result of cumulative cost savings.

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## **Intelligent virtual assistants can streamline Healthcare operations and drive digital adoption**



Leveraging Healthcare Digital Assistants is “The New Normal” in the post Covid19 scenarios where consumers want a touchless self-service experience remotely from the safety of their homes. According to PwC’s report, the “New Normal” for healthcare services institutions is to meet the demand for being customer-centered, and that means offering seamless omnichannel experiences.

As part of the New Normal, customers will demand 24/7 quick access to information without waiting for hours on a call. At the same time, Healthcare should support an efficient way of healthcare that reinforces personal and Healthcare well-being without much friction. The only solution to all these issues is to adopt a digital strategy that’s scalable, extensible and omnichannel. Virtual assistants that respond quickly and intelligently and can provide a consistent response and user experience and help facilitate this change.

## Healthcare calls which can be automated using Virtual Agents

Vaccination Appointments Scheduling is a good start point to begin and the Healthcare contact center's transformation to AI automation. Offload routine billing calls and conversations from Live agents to AI-powered virtual agents. By seamlessly integrating with CRM or ERP, virtual agents use ASR, natural language processing (NLP) to **greet Patients by name, predict the reason for the call, authenticate, review past History, identify Healthcare information, securely accept Insurance Details, and credit card info**, and much more - all the things live agents do.

AI and privacy go hand in hand with assistants that can be hosted securely on your HIPAA-compliant infrastructure.



### Intelligent Front Door

Greet customers, understand intent, and route accordingly.



### Appointment Management

Assist patients with new appointments, changes, cancellations, and proactive reminders.



### Payments & Collections

Help patients settle their bill and negotiate arrangements through inbound and proactive solutions.



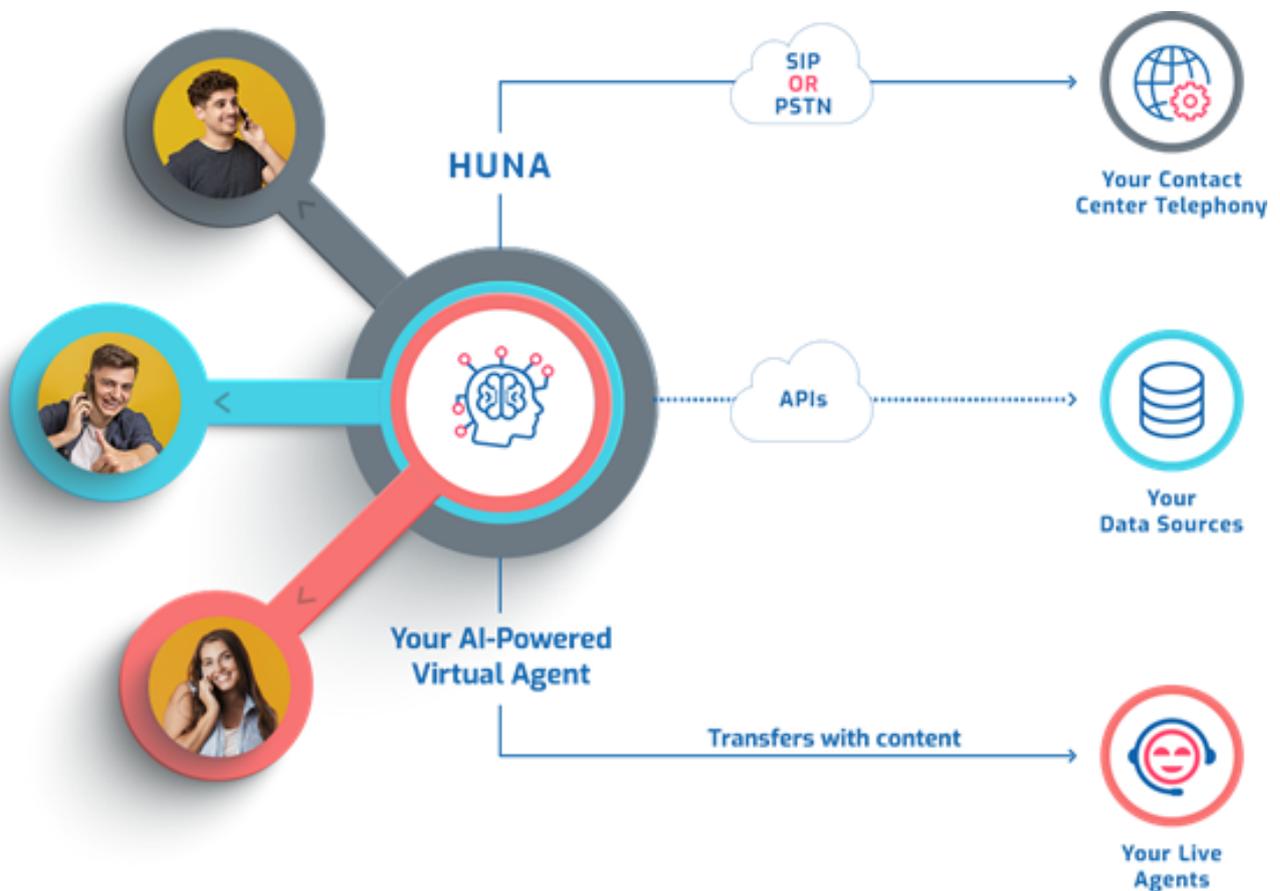
### Account & Order Management

Allow patients to update profile information, order supplies, and more.

Our Digital Assistant can help organizations by analyzing patient behaviour and history to predict no-shows before they happen. Humonics IVA can even be used to automate routine tasks such as providing and confirming referrals, performing patient satisfaction surveys, helping customers book appointments and follow-ups, and paying bills. Digital Assistants can also be used to verify important information such as insurance coverage and current symptoms.

## HUNA : Artificial Intelligence Driven Omnichannel Contact Center

Companies often fail across digital channels because they are insufficiently aware of the real needs and preferences of their customers across omnichannel journeys. To address this, our Design team at HUMONICS has rethought the design priorities and put Artificial Intelligence for Adaptive Human and Machine interactions



Humonics follows stringent guidelines for security and compliance, including industry best practices. From personally identifiable customer information to proprietary business data, we put a premium on protection. We embed security, resiliency, and redundancy not only into our platform, but into the very fabric of our organization. Plus, everything we do is backed by rigorous security standards and practices.

## Successful Deployments across Industry

**HIPAA Compliance Bot for a Leading US Payer:** The Payer had a contact center to provide support to the Providers who contacted them. The initial part of the call involved verification of the patient for HIPAA Compliance.

Humonics' conversational AI Interface on IVR was able to verify the details before passing the call to a Human Assistant reducing the AHT of the assisted call.

