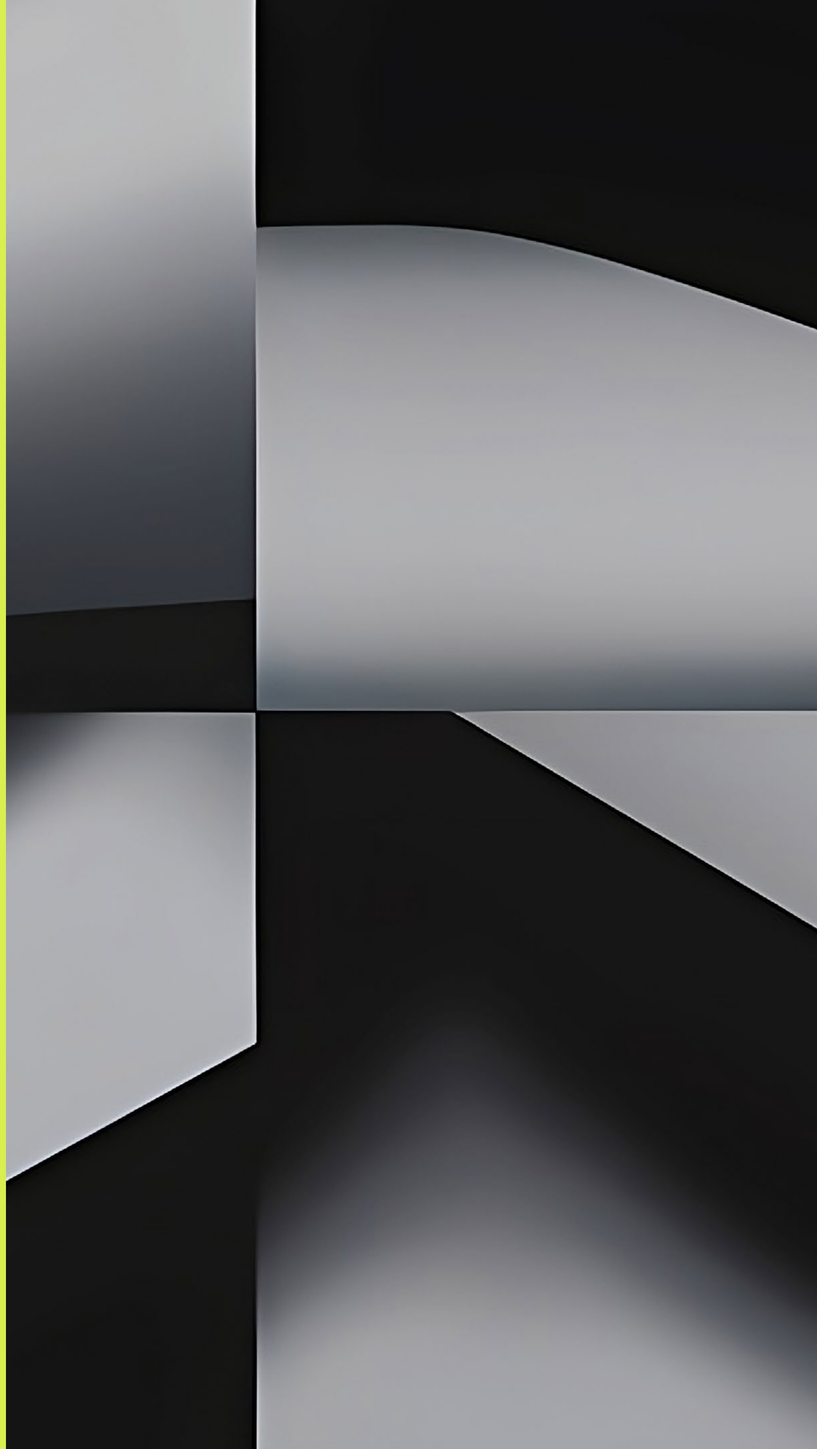
PolyAI

GUIDE

Modernizing the healthcare experience with voice AI.



INTRODUCTION

Today’s patient is today’s modern consumer.

They expect healthcare experiences to reflect the technology advances that they enjoy across the spectrum of their lives.

Healthcare organizations are increasingly responding - and competing - on the personalized, high-touch, high-tech experiences they deliver. Adopting voice AI is part of that modern experience.

But many healthcare organizations struggle with knowing when and where to implement voice AI in a way that will have maximum impact on both patient experience and internal resources. In addition, healthcare decision-makers must ensure that voice AI solutions like AI agents meet regulatory HIPAA, GDPR, and other compliance requirements. It’s a complex environment undergoing rapid transformation and increasing pressure to meet patient (and employee) expectations.

So, where do you begin with voice AI?

In this ebook, we explore:

- An overview of voice AI for healthcare
- Optimal use cases to introduce voice AI into your healthcare organization
- How to successfully implement voice AI.

What is Voice AI for healthcare?

Voice AI is transforming patient interactions by providing empathetic, personalized support throughout the care journey. By using natural language processing (NLP), machine learning (ML), and large language models (LLMs), voice AI can recognize spoken language in context and respond with human-like speech.

For patients navigating healthcare - whether scheduling an appointment, refilling a prescription, or seeking urgent assistance - empathetic conversations create a more supportive experience. Today's voice AI can detect a caller's tone, sentiment, and context, allowing patients to speak naturally without rigid prompts to make interactions feel more human, build trust and reduce frustration.

Empathetic, contextual voice AI agents help drive self-service adoption. The best voice AI for healthcare can detect complex patient and provider names and medical terminology and discern the context when patients use non-medical language to describe their conditions. It also understands when it is medically imperative to transfer a caller to a human agent.

Contextual conversations create a more human-like experience, allowing AI agents to respond with empathy - critical for patients as they navigate healthcare systems during some of the most difficult or joyous experiences of their lives.

86%

of patients cite a good patient experience as their number one factor in choosing a healthcare provider.

The need for transformation in patient services.

Healthcare, like many industries, sits at the intersection of a rapidly changing tech world driven by AI and automation and legacy IT systems, cumbersome infrastructures, and heavy regulations that make it difficult to change. Consequently, patient experience is impacted by the discord between pockets of modernization and lagging, disconnected experiences.

81%

of patients have used AI chatbots or AI agents for healthcare support in the past year

13%

of U.S. consumers have used voice technology to schedule doctor's appointments

The gaps in patient experience.

	Virtual assistants vs. IVR	Scheduling bottlenecks	No-show follow-ups	Agent workload on routine tasks	Manual prescription services
Experience	Patients use Siri/Alexa to call their healthcare providers only to engage with traditional IVR that struggle with names and complex routing.	Human agents handle scheduling, leading to long queues, delayed callbacks and limits capacity to scale.	No show appointments are not automatically followed up on.	Agents handle FAQs and extension routing manually.	Prescription requests and updates require human handling.
Impact	Frustrating and inefficient experiences, leading to abandoned calls or misrouted requests.	Patients face long wait times, discouraging them from making appointments.	Revenue loss for providers, and patients go without care.	Reduced efficiency and less time for critical patient interactions.	Patients lack real-time tracking and self-service options, increasing frustration.

Patients expect healthcare experiences to be seamless, personalized, and efficient. In fact, 86% of patients cite a good patient experience as their number one factor in choosing a healthcare provider. Aside from patient care, these expectations particularly apply to scheduling, phone triage, prescriptions, non-emergency transportation, and call routing.

Voice AI has the ability to vastly improve patient experiences in these functions.

Voice AI impact on healthcare costs.

In addition to improving patient experiences, deploying voice AI decreases operational costs and can improve revenue. By automating processes and being able to scale, healthcare organizations lower costs while handling higher volumes of interactions.

In healthcare patient services, AI can drive:

25%

drop in call volumes due to self-service

30%

improvement in first-call resolution (FCR)

AI is expected to save the healthcare industry billions of dollars within the next decade through improved efficiency, scalability, and reduced overhead and operational costs.

Benefits of voice AI in healthcare.

There are numerous benefits to using voice AI in healthcare patient services:

Scalability

With voice AI, you can answer thousands of calls simultaneously, scale quickly, answer calls efficiently, and effectively manage peaks in call volume without the costly and time-consuming process of hiring and onboarding agents.

Treating patients with empathy

Providing empathetic support is crucial when handling sensitive healthcare or billing issues. Voice AI can deliver empathetic responses to make self-service more caring and encourages its use.

Consistent service 24/7

Voice AI delivers a consistent and efficient patient experience for every call, every time, round the clock.

Operational and cost improvements

Voice AI reduces costs and improves call center performance. You'll see marked improvements in call abandonment, average handle times, call deflection, and wait times.

Frees agents to focus on handling high-value resolutions

When you offload basic, transactional calls to voice AI, your human agents can focus on handling calls that require deeper empathy, judgment, and complex problem-solving.

So, where is the best place to start?

Top voice AI use cases for healthcare patient services.

The following are some of the best use cases to begin your organization's voice AI journey. These deliver maximum impact and can help demonstrate the ROI of voice AI, enabling you to expand your use cases as you advance AI adoption.

Smart scheduling

Automate your scheduling with voice AI self-service options to enable patients to schedule, cancel, or reschedule appointments at their convenience — no human agent needed. Remind patients with automated appointment reminders to help reduce no shows.

Intelligent call routing

Replace IVRs to provide patients with the freedom to ask clarifying questions, and ask their queries in detail, so they can be directed to the department, provider, or facility of their choice efficiently. Voice AI accurately identities and discerns complex names, improving patient satisfaction by understanding the patient's words the first time.

Manage billing and payments.

Enable patients to pay bills, update insurance and discuss Medicaid, Medicare, pricing and payment plans.

Self-service FAQs

Patients often call with common questions that take up an agent's time. Provide answers to FAQs and scale call volumes with voice AI to ensure that every patient has their questions answered on the first call.

Record requests

Voice AI can handle records requests, freeing agents to focus on more in-depth patient services issues.

Automated triage.

Voice AI can assist with triage by identifying symptoms, providing accurate information and guidance to patients, and routing calls to the appropriate provider as needed.

Non-emergency medical transport scheduling.

Patients can schedule their transport pickups via voice AI assistance for convenient self-service at scale.

Prescriptions support

Voice AI can handle patients' prescription refill requests, status updates, automated pickup or prescription renewal reminders, taking the load off of pharmacy staff to focus on prescription fulfillment and consultation.

Patient feedback.

Offer qualitative patient surveys in natural language, so patients can speak in their own words. Trigger qualitative feedback questions at different points of the phone experience to collect timely and relevant feedback along different dimensions.

Deliver personalized support, at scale.

Remember every patient and offer repeat services, send outbound reminders and offer priority service to those who need it most.

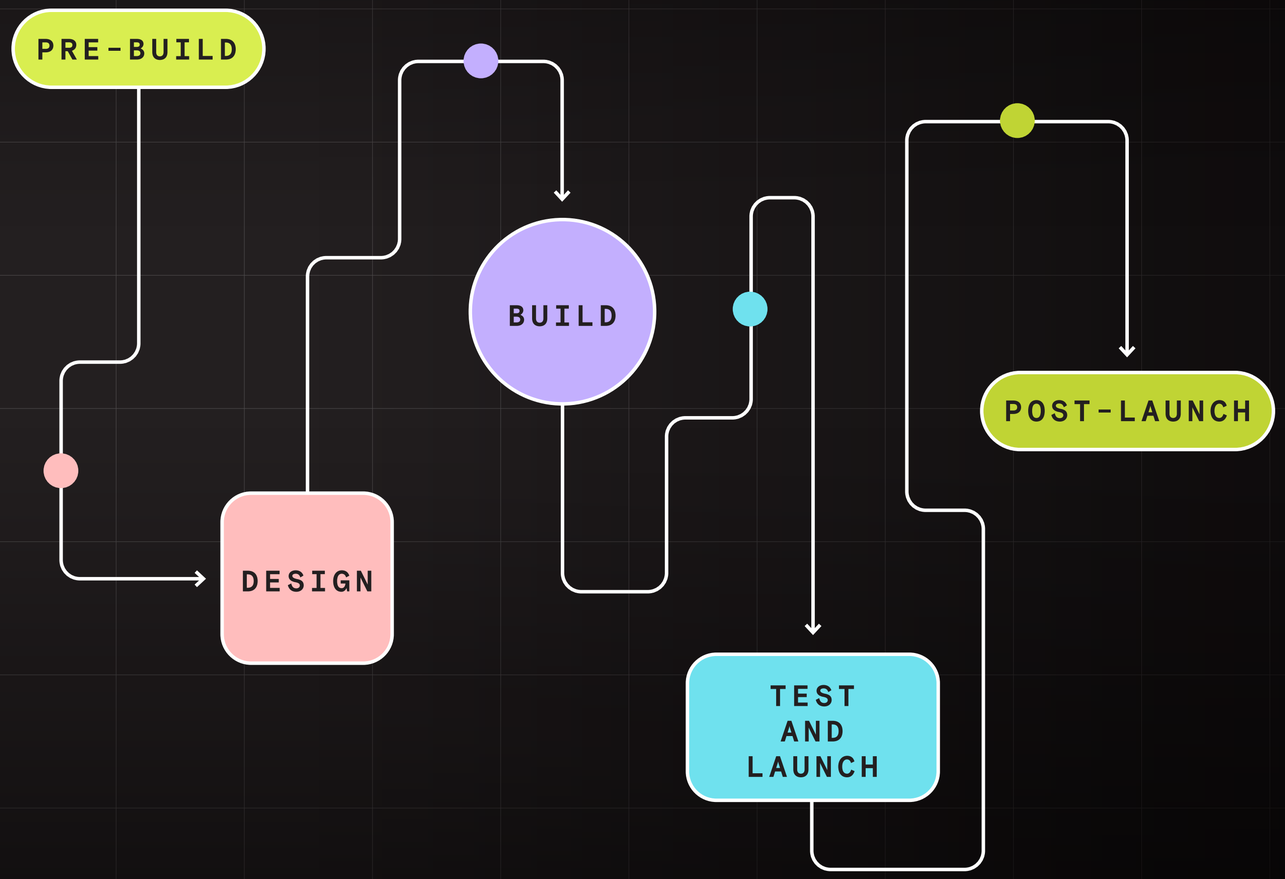
Deploying voice AI in healthcare patient services.

Knowing where to begin with AI transformation can be challenging, especially if you have cumbersome infrastructure and legacy systems.

While you can employ internal staff to develop voice AI, it is often more efficient and cost-effective to work with conversational AI experts who can guide you through every step of the process.

In our experience, very few healthcare companies have the machine learning engineers, dialogue designers, data analysts, and other AI experts needed to develop and maintain voice AI agents. PolyAI works closely with every healthcare client to ensure they have the support, guidance, and expertise needed to identify the best use cases, develop, deploy, and maintain voice AI that truly fits their needs.

Here are the steps we'll walk through together:



PRE-BUILD

Here, you assemble your implementation team and map out your current IVR system to pinpoint where your voice AI will have the most impact. Next, we define change management strategies to secure stakeholder buy-in, gather baseline data on key metrics, and set clear objectives. Finally, we'll conduct a technology audit to understand your technical architecture and determine the best way to integrate voice AI.

DESIGN

In this phase, you'll select an AI voice that matches your brand. Then, we'll design for automation which means creating engaging and user-friendly conversations that make a positive first impression, adapt to the customer's tone, and simplify complex information. Finally, we'll create a handoff protocol that smoothly transitions to a human agent when necessary, considering urgency, sensitivity, and revenue impact.

BUILD

Now, we'll build your AI agent. We focus on ensuring it can listen, reason, and speak effectively. This involves using automatic speech recognition, spoken language understanding, large language models, dialogue management, and safety guardrails. The goal is to create an AI agent that understands callers, responds appropriately, and speaks naturally. A simple SIP or PSTN connection is all that's required to route calls between your voice assistant and your team.

TEST AND LAUNCH

Before going live, we'll want to run several tests, including quality assurance, load tests, and team demos. Once satisfied, it's time to launch! You can either do a rolling launch or dive in fully. PolyAI will be on hand to monitor early calls, make sure things are running well, and make any adjustments needed.

POST-LAUNCH

After launch, you'll regularly monitor key metrics like AHT, call volume, and containment. Continuously update and refine the ASR, machine learning, and dialogue design to improve performance. Voice AI, like any AI product, needs ongoing attention to deliver great customer experiences. PolyAI experts are here to support your journey.

Getting started with voice AI for healthcare is a solid step forward in modernization and in improving the patient and employee experience.

Experience PolyAI voice AI for healthcare.

At PolyAI, we intentionally designed our voice AI for healthcare to deliver the personal empathy, ease, security, and care that you want your patients to experience. Every time they interact with you.

As a trusted partner for voice AI in healthcare, we deliver:

Security

24/7 support with compliance certification to meet your needs including HIPAA, ISO 27001, SOC 2, PCI DSS, GDPR and more.

Learn more

Integrations

No need to change your tech stack. Out-of-the-box and custom integrations make implementation safe and easy.

Learn more

Data and Insights

Real-time insights. No data gaps, manual compiling, or business decisions based on guesswork.

Learn more

Powerful results

75%+ calls resolved

15 point increase in CSAT abandonment

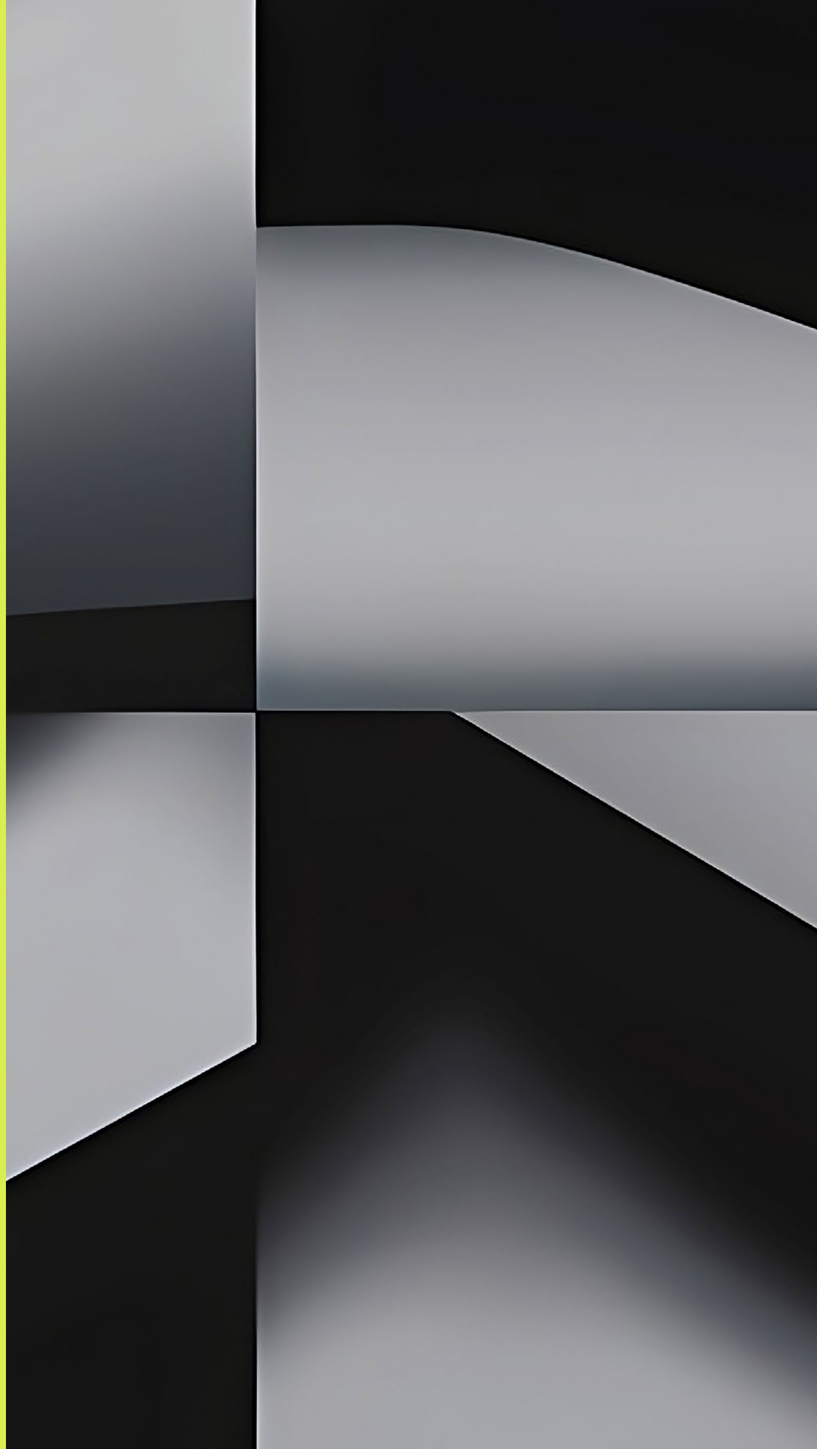
93% reduction in cost per contact

Hear PolyAI for yourself.

Check out our recorded voice **AI demos.** Or sign up for our **monthly live demo** to find out more about how PolyAI can help you answer every call immediately, improve loyalty, resolve over 50% of calls, and deliver effortless CX at scale.

You'll learn more about:

- The ROI of voice AI
- The best way to design voice experiences for patient engagement
- How other healthcare companies have successfully deployed voice AI
- How to begin your voice AI journey

Ready to get started now?

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