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eBook

Generative AI agent use cases for healthcare provider contact centers

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Healthcare provider contact centers sit at the front line of patient access and experience. They influence care coordination, revenue capture, patient satisfaction, and ultimately health outcomes. That work is inherently complex, with a range of challenges—highly personal and sensitive interactions, strict privacy regulations, and patients who are often anxious, confused, or dealing with serious health concerns. At the same time, hospitals and health systems face relentless pressure to reduce administrative costs, improve access to care, and support overburdened clinical and administrative staff.

Traditional automation and basic AI chatbots have offered incremental efficiencies. But many of the highest-volume interactions require more flexibility and intelligence than legacy tools can provide. Rigid bots struggle with the nuance of patient conversations, fragmented clinical and financial systems, complex scheduling rules, and the need for empathy alongside accuracy.

Healthcare organizations deploying automation for routine tasks saw a

17% reduction

in average call wait time and up to a

22% decrease

in abandoned calls[1].

Generative AI agents are quickly emerging to fill the service gaps that exist between basic bots that can't handle complexity and human agents whose queues are often backed up. Unlike rigid bots, AI agents can interpret context, personalize responses, and securely act to help patients navigate care systems while maintaining HIPAA compliance and patient confidentiality.

1. Healthcare IT News, "Healthcare Contact Center Automation Survey Results," 2024.

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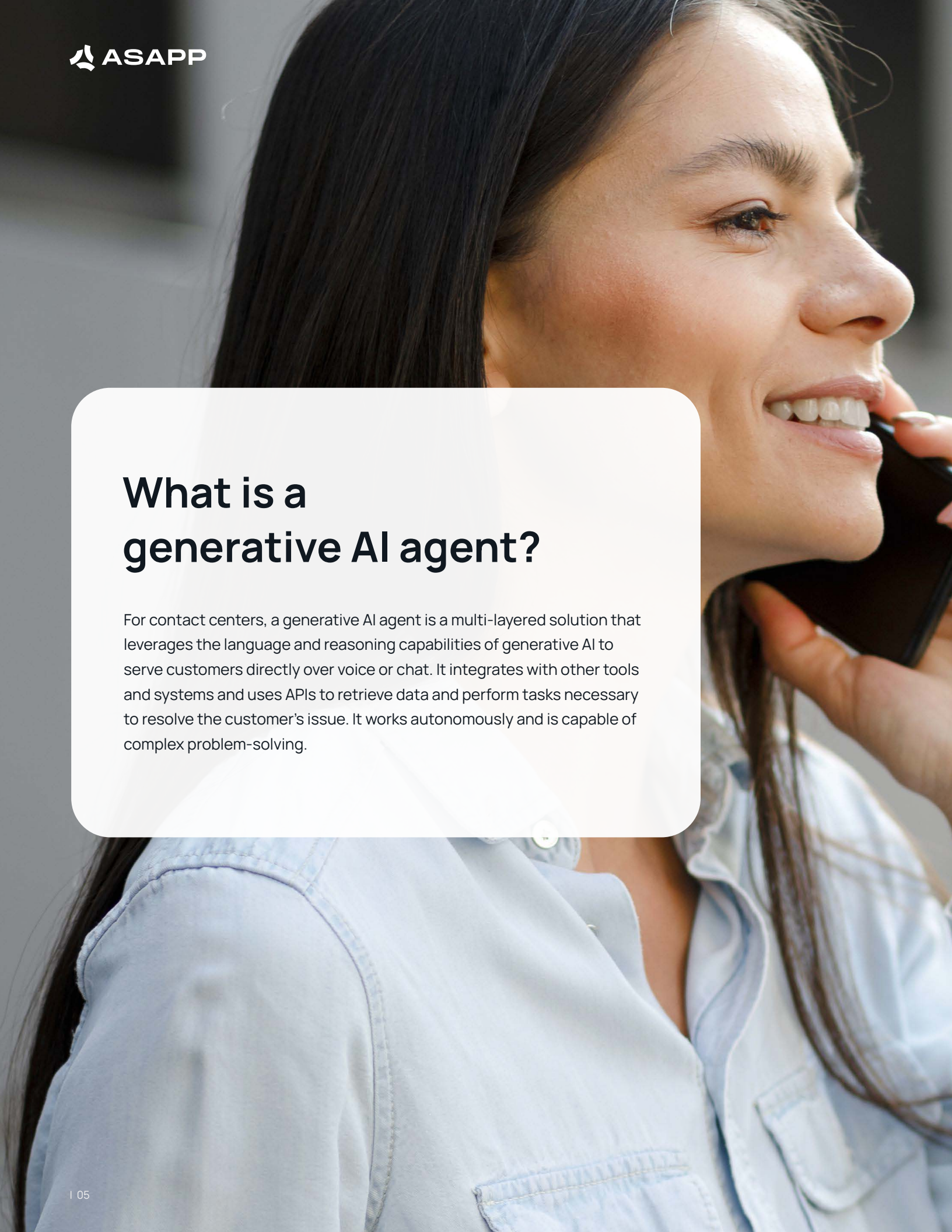
Generative AI agents create new opportunities for healthcare providers to:

- ✓ Resolve patient inquiries faster without sacrificing privacy or security
- ✓ Provide empathetic, consistent support tailored to each unique care scenario
- ✓ Reduce operational costs without eroding trust or quality of service

In short, generative AI agents unlock the ability to scale patient support with the accuracy, safety, and empathy that healthcare requires.

This guide introduces some of the most impactful use cases for AI agents for patient support. It's intended to help you choose use cases that will deliver measurable improvements in patient access, operational efficiency, and outcomes for both patients and your healthcare organization.



What is a generative AI agent?

For contact centers, a generative AI agent is a multi-layered solution that leverages the language and reasoning capabilities of generative AI to serve customers directly over voice or chat. It integrates with other tools and systems and uses APIs to retrieve data and perform tasks necessary to resolve the customer's issue. It works autonomously and is capable of complex problem-solving.

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GenerativeAgent® and the ASAPP CXP

ASAPP's GenerativeAgent is a generative AI agent built from the ground up for enterprise contact centers. Designed to manage complex, multi-turn interactions over voice and chat and autonomously resolve customer issues, GenerativeAgent eliminates the need to manually script conversation flows.

It dynamically adapts to conversational context, knows when to involve human agents, and supports concurrent interactions with human/AI collaboration. Through its industry-first HILA™ (Human-in-the-Loop Agent) workflow, GenerativeAgent can consult with a human agent in real time for guidance, task completion, or approvals—without transferring the customer.

But GenerativeAgent is more than just a customer-facing AI agent. It's also the core of the ASAPP CXP (Customer Experience Platform). The CXP brings every interaction, workflow, and customer signal into one intelligent system that resolves issues, enforces policies, and acts across enterprise systems. Unlike CCaaS or conversational AI tools that stop at simple deflection or routing, the CXP handles complex, multi-step workflows with accuracy, safety, and control while tailoring every step to the individual customer's context.

Leading enterprises use the ASAPP CXP to cut operating costs, accelerate resolution, modernize their CX stack, and build the foundation for an agentic enterprise where each member or patient has their own personalized AI agent.

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The shifting legal and regulatory landscape

As you consider generative AI agents, you'll need to be mindful of a range of legal and regulatory compliance requirements. Data security and patient privacy requirements mandated by HIPAA and PIPEDA are just the beginning. Beyond that, various federal and state laws mandate clear disclosures when AI is used in patient interactions, including explicit consent in some cases. Several states also impose restrictions on how and where patient data can be stored and transferred.

The regulatory landscape is changing rapidly, with an eye toward transparency, bias prevention, and provider oversight. With that in mind, any AI agent solution you choose must enable you to adapt and maintain compliance as regulations evolve.

Our methodology

With each use case, we've included an estimated deployment time, value drivers, and relevant metrics.

Deployment time

The deployment times here are estimates based on our experience deploying the GenerativeAgent platform and other AI solutions in enterprise contact centers. They represent typical durations from scoping to live production, derived from ASAPP benchmarks and industry studies. You'll want to keep in mind that your specific deployment time could vary depending on your CX technology infrastructure, the availability of your IT and development resources, the AI agent vendor you choose, whether you work with a system integrator or other strategic partner, and other factors.

With that in mind, the deployment time estimates should be viewed only as a guide to the relative ease and speed of implementing each use case.

- 2–4 weeks (Quick win)
- 1–2 months (Structured)
- 2+ months (Complex)

Value drivers

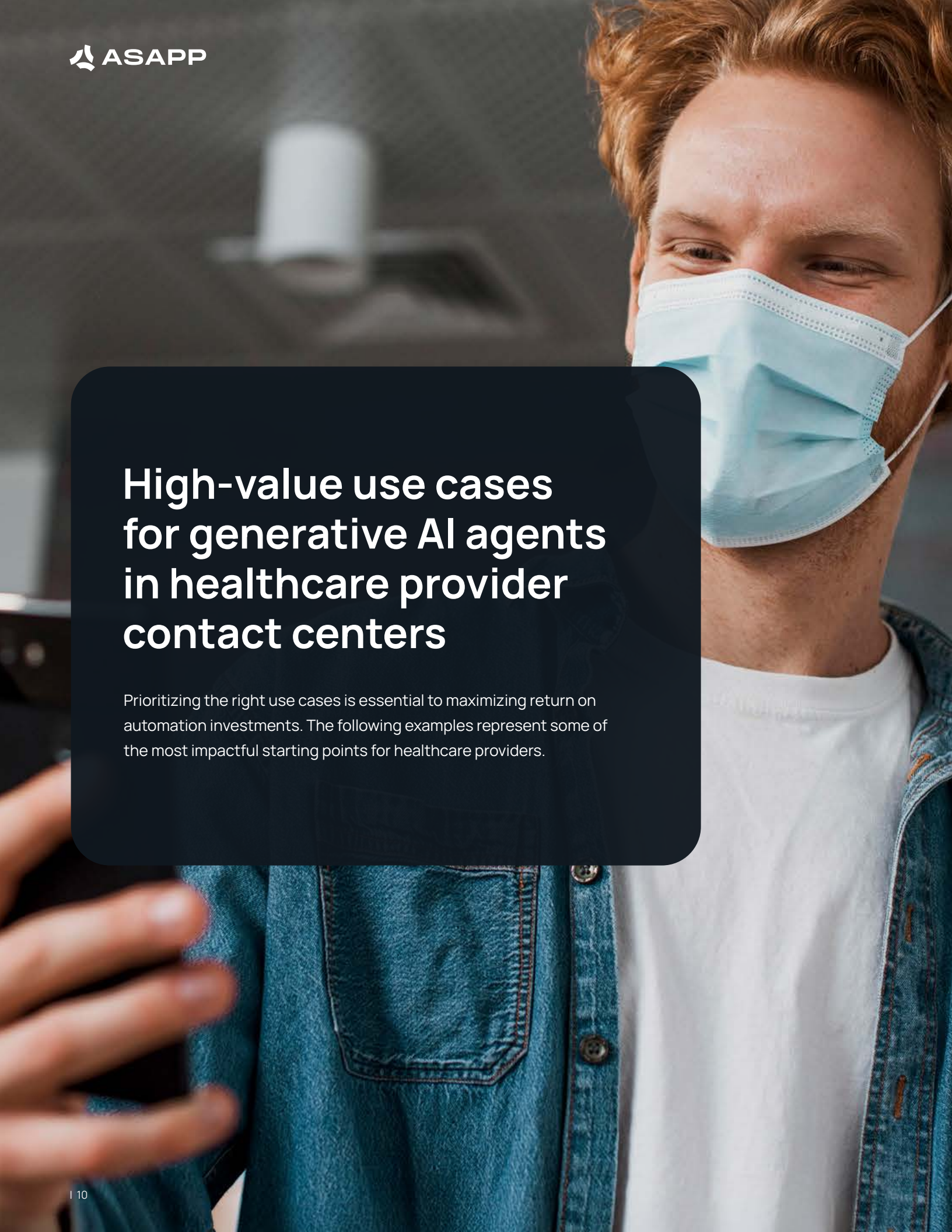
A successful AI agent deployment can drive value in a number of ways, affecting costs, operational efficiency, and patient/member satisfaction. The mix of value drivers will vary from one use case to the next.

For each use case included here, we've listed the value drivers that will impact your customer service operations:

- **Efficiency Gain:** Reduces average handle time (AHT), manual work, or after-call effort.
- **Patient satisfaction improvement: I**ncreases patient satisfaction through faster, clearer, and more consistent, personalized interactions.
- **Patient access improvement:** Expands timely access to care by reducing scheduling friction, improving referral conversion, and overcoming language barriers.
- **Cost reduction:** Lowers administrative and operational expenses by automating high-volume workflows, enabling staff to focus on complex and clinically meaningful interactions.
- **Quality assurance:** Improves compliance and consistency at scale, and reduces risk.
- **Revenue retention:** Reduces patient leakage and preserves continuity of care by capturing inbound demand, improving referral conversion, and increasing completed appointments.

Relevant metrics

Real success with a generative AI agent depends on outcomes that have a positive and measurable impact on your business. So, your goals for any use case deployment should go far beyond the mere containment you might expect with legacy automation. The relevant metrics listed for each use case provide a starting point for measuring genuine business value.



High-value use cases for generative AI agents in healthcare provider contact centers

Prioritizing the right use cases is essential to maximizing return on automation investments. The following examples represent some of the most impactful starting points for healthcare providers.

Appointment scheduling and rescheduling

Patients frequently call to schedule, cancel, or reschedule appointments. A generative AI agent can interpret patient intent, check provider availability, enforce scheduling rules, and book appointments across departments or locations. It can also proactively offer earlier openings when cancellations occur.

- **Deployment time:** 4–6 weeks
- **Value drivers:** Patient access improvement, efficiency gain
- **Relevant metrics:** Reduced time to schedule, lower call abandonment, increased appointment fill rates

Billing and patient financial inquiries

Patients often have questions about bills, insurance processing, balances, or payment options. A generative AI agent can explain charges, verify insurance status, clarify what has been paid, and help patients set up payment plans or make payments securely.

- **Deployment time:** 4–6 weeks
- **Value drivers:** Efficiency gain, revenue retention
- **Relevant metrics:** Higher self-service resolution, shorter billing calls, improved on-time payments

Care access and navigation

Patients frequently need help determining where to go for care, whether a referral is required, or which provider best fits their needs. A generative AI agent can interpret requests, recommend appropriate care settings, confirm network or referral requirements, and assist with next steps.

- **Deployment time:** 4–6 weeks
- **Value drivers:** Patient access improvement, patient satisfaction improvement
- **Relevant metrics:** Faster resolution for access inquiries, reduced misdirected appointments, improved patient satisfaction

Pre- and post-procedure reminders

Patients preparing for procedures often need clear instructions about fasting, medication adjustments, arrival times, transportation, and paperwork. After discharge, they may have questions about recovery steps, symptoms, medications, or follow-up appointments. A generative AI agent can deliver personalized, conversational reminders before procedures, confirm readiness, answer common questions, and escalate clinical concerns when necessary. Post-procedure, it can reinforce discharge instructions, conduct structured symptom check-ins, and help schedule follow-up care.

- **Deployment time:** 4–8 weeks
- **Value drivers:** Patient access improvement, efficiency gain, quality assurance
- **Relevant metrics:** Improved procedure preparedness, fewer preventable readmissions, decreased manual reminder calls, and reduced volume for more expensive clinical staff

Multilingual patient support

A generative AI agent that supports multiple languages allows providers to serve diverse patient populations without staffing full teams for each language. Patients can receive consistent service in their preferred language, with human staff available for escalations.

- **Deployment time:** 1–2 months
- **Value drivers:** Patient access improvement, cost reduction
- **Relevant metrics:** Resolution rates for non-English interactions, parity in satisfaction scores across languages

Preauthorization status inquiries

Patients often call to check the status of prior authorizations for procedures, imaging, or medications. A generative AI agent can retrieve real-time status, explain next steps, and clarify documentation requirements, reducing uncertainty and repeat calls.

- **Deployment time:** 4–6 weeks
- **Value drivers:** Efficiency gain, patient access improvement
- **Relevant metrics:** Faster resolution times, fewer follow-up calls, reduced staff workload

Automated preauthorization intake

Generative AI agents can assist with preauthorization intake by collecting required patient and clinical information, validating completeness, and routing exceptions to specialists. This reduces manual effort and shortens time to approval.

- **Deployment time:** 2–4 months
- **Value drivers:** Efficiency gain, cost reduction
- **Relevant metrics:** Reduced processing time, lower administrative cost per authorization

Medical history and test result inquiries

Patients frequently contact provider call centers with questions about their medical history, prior visits, or diagnostic results, such as what was included in their last blood test, whether results are available, or what specific findings mean. A generative AI agent can securely authenticate patients, retrieve structured information from the EHR, explain results in clear, patient-friendly language, and direct patients to portal access when appropriate. For complex or clinically sensitive questions, the agent can escalate to nursing or clinical staff with full context.

- **Deployment time:** 4–8 weeks
- **Value drivers:** Efficiency gain, patient satisfaction improvement, quality assurance
- **Relevant metrics:** Higher self-service resolution rate, fewer repeat calls, improved patient understanding scores

Telehealth access and support

Patients often have questions about virtual care availability, technology requirements, or appointment logistics. A generative AI agent can explain options, confirm eligibility, and help patients schedule or prepare for telehealth visits.

- **Deployment time:** 4–6 weeks
- **Value drivers:** Patient access improvement, patient satisfaction improvement
- **Relevant metrics:** Telehealth appointment completion rates, reduced no-shows

Vaccine and preventive care information

During flu season or public health initiatives, call volumes spike with questions about vaccines and preventive services. A generative AI agent can provide up-to-date, compliant information and help patients schedule appointments.

- **Deployment time:** 4–6 weeks
- **Value drivers:** Efficiency gain, quality assurance
- **Relevant metrics:** High first-contact resolution, high containment during campaigns

Chronic condition support and follow-up

Patients managing chronic conditions often need guidance on follow-up visits, labs, or care programs. An AI agent can provide educational support, remind patients of next steps, and help coordinate appointments.

- **Deployment time:** 2+ months
- **Value drivers:** Patient satisfaction improvement, quality assurance
- **Relevant metrics:** Improved adherence to follow-up care, reduced avoidable utilization

Personal information and account updates

Patients frequently need to update demographic information, communication preferences, or authorized contacts. A generative AI agent can authenticate the patient, update records across systems, and confirm changes in real time.

- **Deployment time:** 2–4 weeks
- **Value drivers:** Efficiency gain, quality assurance
- **Relevant metrics:** High containment for account updates, reduced downstream errors

Automating service without compromising care or compliance

Each of these use cases demonstrates how generative AI agents can modernize healthcare provider contact centers, improving access, reducing administrative burden, and enhancing the patient experience.

By starting with high-volume, low-risk interactions and expanding over time, provider organizations can deploy AI responsibly while tracking performance metrics to ensure real clinical, operational, and financial impact.

For more information on ASAPP's approach to identifying and deploying high-value AI agent use cases, see Identifying the Ideal Use Cases for GenerativeAgent.

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About ASAPP

ASAPP is an artificial intelligence solution provider committed to solving the toughest problems in customer service. Its AI-native Customer Experience Platform, powered by GenerativeAgent® integrates with existing systems and uses generative, personalized interaction to bring radical efficiency to every customer workflow. Because we automate what was previously impossible to automate, our AI-native solutions deliver more than efficiency gains. They redefine the role of AI in the contact center and lay the groundwork for businesses to reimagine their customer experience delivery for the agentic enterprise. ASAPP delivers personalized, context-aware interactions by giving every customer their own AI agent powered by their interaction history and enterprise data. Leading enterprises rely on ASAPP's generative and agentic AI solutions to dramatically expand contact center capacity and transform their contact centers from cost centers into value drivers. To learn more about ASAPP, visit www.asapp.com.