

The Healthcare TA Leader's Guide to AI Agents

How healthcare talent teams are use conversational AI to hire faster, smarter, and with less burnout.



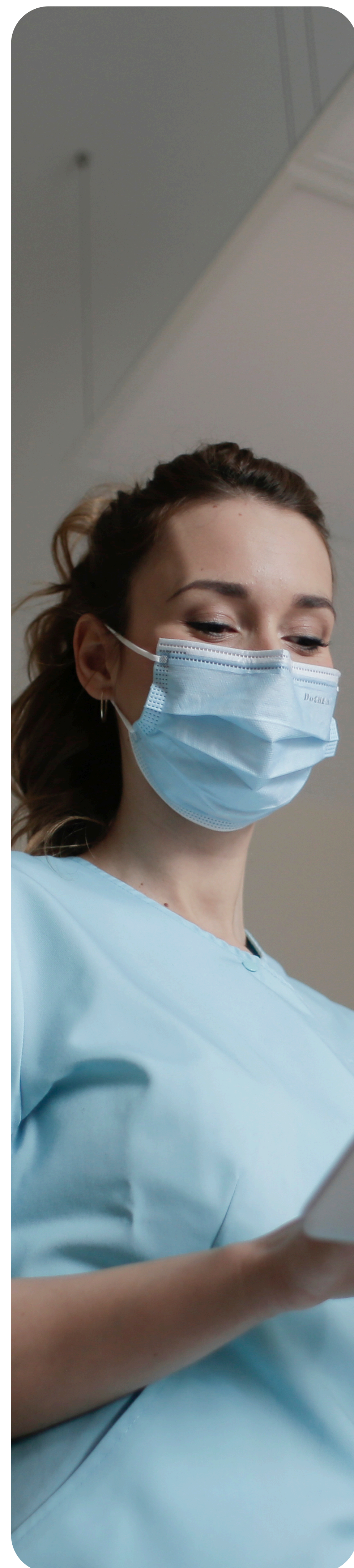
Healthcare today faces serious hiring challenges.

Record burnout, high turnover, and growing patient demand have made it harder than ever for recruiters to keep up. The stakes are high: according to the U.S. Bureau of Labor Statistics, **healthcare employment is projected to grow 13%** from 2021 to 2031, adding about 2 million new jobs—more than any other industry.

At the same time, healthcare recruiters are overwhelmed by candidate volume, redundant manual tasks, and disjointed hiring tools. It's no wonder **41% of healthcare recruiters say their biggest challenge is simply "finding time to engage qualified candidates."** (Source: iCIMS 2023 Healthcare Hiring Report)

Enter AI Agents: intelligent, conversational tools that support recruiters by automating repetitive work, engaging candidates 24/7, and helping teams move faster while maintaining a high-touch experience.

In this guide, we'll explore how AI Agents are transforming healthcare recruiting and how Humanly's platform is helping teams unlock speed, quality, and candidate satisfaction without burning out.



The State of Healthcare Hiring in 2025

The healthcare labor market continues to face immense pressure:

- **2x higher turnover rates** compared to the national average (Becker's Hospital Review, 2024)
- **1.9M open roles** across hospitals, long-term care, and home health (American Hospital Association, 2025)
- **35% of HR teams** cite high-volume screening as a top pain point (Hireology 2024 Survey)

Challenges Facing Healthcare Recruiters:

- High volume of applicants for entry-level and support roles
- Shortage of specialized clinical talent (e.g. RNs, respiratory therapists)
- Limited bandwidth for personalized outreach or follow-up
- Pressure to reduce time-to-fill while maintaining compliance and quality standards

Traditional systems like job boards and ATSs weren't built for this scale or speed. The result? Candidate drop-off, recruiter burnout, and missed hiring targets.



What Is an AI Agent and How Does It Help?

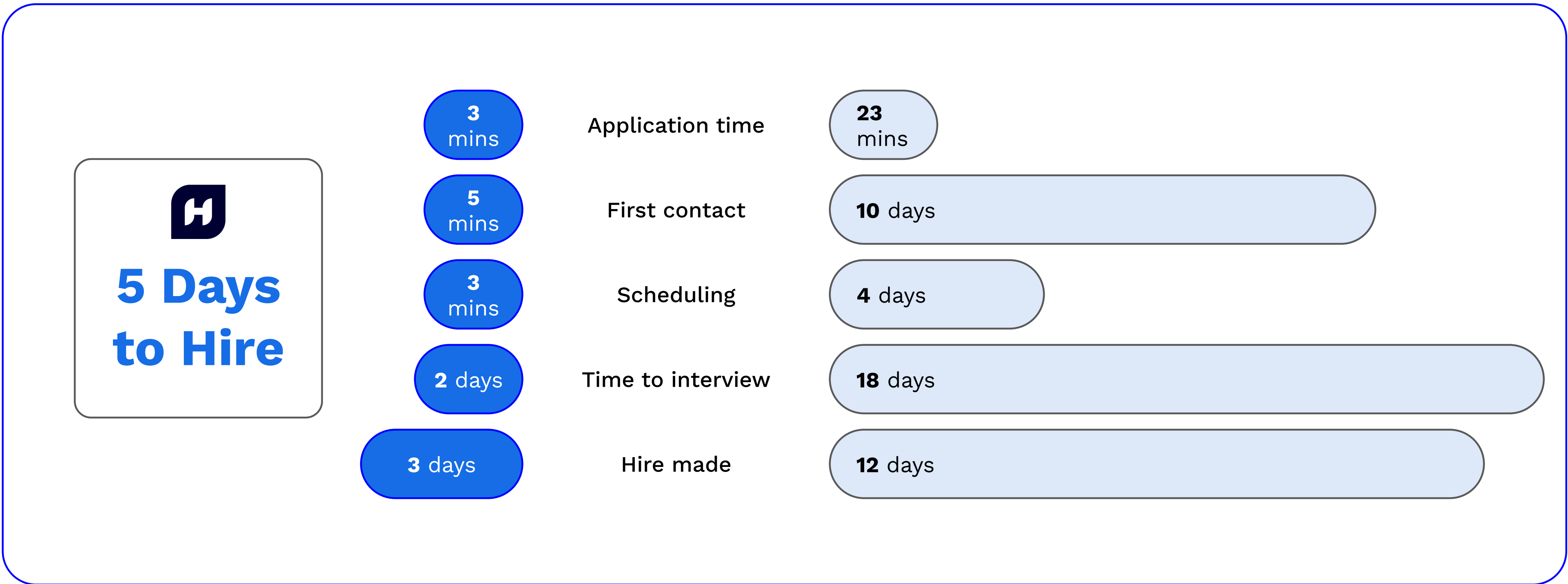
AI Agents are software tools powered by conversational AI and automation that can:

- Greet and pre-screen candidates via chat, SMS, or voice
- Qualify applicants based on custom criteria
- Answer FAQs and provide job recommendations
- Schedule interviews automatically
- Re-engage past applicants stored in your ATS

Benefits in the Healthcare Context:

- Immediate engagement: Candidates can interact 24/7 on their schedule
- Faster qualification: AI can screen and rank thousands of applicants in minutes
- Recruiter efficiency: Teams can focus on high-value conversations
- Reduced no-shows: Automated reminders and confirmations improve attendance
- Improved candidate experience: Consistent, friendly touchpoints throughout the funnel

How Hiring with an AI Agent Cuts Healthcare’s Time-to-Hire From 44 Days to 5 Days



Agents in Action: How Humanly Helped TheKey Reinvent Their High-Volume Healthcare Hiring



TheKey, a provider of concierge-based medical care, faced a common challenge in healthcare: high turnover, time-intensive applications, and poor visibility into hiring data. Traditional tools weren't meeting their needs. Applications were taking up to 30 minutes to complete, and conversion rates were lagging.

The Humanly Solution: With Humanly's AI-powered platform, TheKey:

- Reduced average **application time from 30 minutes to just 3 minutes** (a 10x improvement)
- **Doubled their conversion-to-hire rate** from 1.7% to 3.5%
- Gained access to actionable data to improve hiring strategy
- Integrated seamlessly with their ATS and sourcing vendors

Key Features Used:

- Personalized AI chat flows to engage and qualify applicants quickly
- Easy-to-launch landing pages with built-in tracking
- Data capture and insights for continuous improvement
- Flexible integrations to support existing workflows

Impact Highlights:

- 10x faster application process
- 2x increase in hire conversion
- 4.58/5 average candidate satisfaction
- Rapid implementation and seamless ATS integration

This success story underscores how AI Agents can simplify and elevate the hiring process for high-volume, high-urgency roles in healthcare.

Why Humanly for Healthcare Recruiting

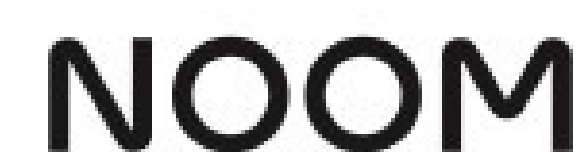
Humanly is built for the pace and pressure of healthcare talent acquisition. With seamless ATS integrations, 24/7 candidate engagement, and a recruiter-friendly interface, Humanly gives hiring teams the tools they need to:

- Screen smarter, not harder
- Engage at scale without losing the human touch
- Fill roles faster, from entry-level to hard-to-fill clinical positions

Key Platform Features:

- Conversational AI across chat, SMS, phone, and email
- Automated scheduling with calendar integrations
- AI-powered CRM for talent pipelining and rediscovery
- Campaign tools for sourcing and re-engagement
- Hiring event support with built-in registration and reminders

Leading healthcare providers trust Humanly



Ready to see it in action?

[Get a demo](#)

About Humanly

Humanly is an AI recruiting platform that helps hiring teams engage, qualify, and convert candidates faster. Our tools are trusted by healthcare organizations across the U.S. to reduce time-to-hire, improve candidate experience, and empower overworked recruiting teams.