# What is Adaptive Communications for Healthcare?

Adaptive Communications is a new approach and technological milestone in the field of digital conversational interfaces, first conceived and developed by Hyro.

In essence, Adaptive Communications refers to capabilities endowing any communications channel, including chatbots, virtual assistants, voice assistants, smart speakers, call centers, applications, etc., with the flexibility required to match the scale of growth of enterprises.

Adaptive Communications is founded on advanced language-based techniques such as computational linguistics and knowledge graphs. Rather than following pre-set guidelines (as most conversational AI interfaces do), Adaptive Communications Platforms (ACPs) model the human language and are capable of parsing sentences and understanding context to ensure higher success rates.
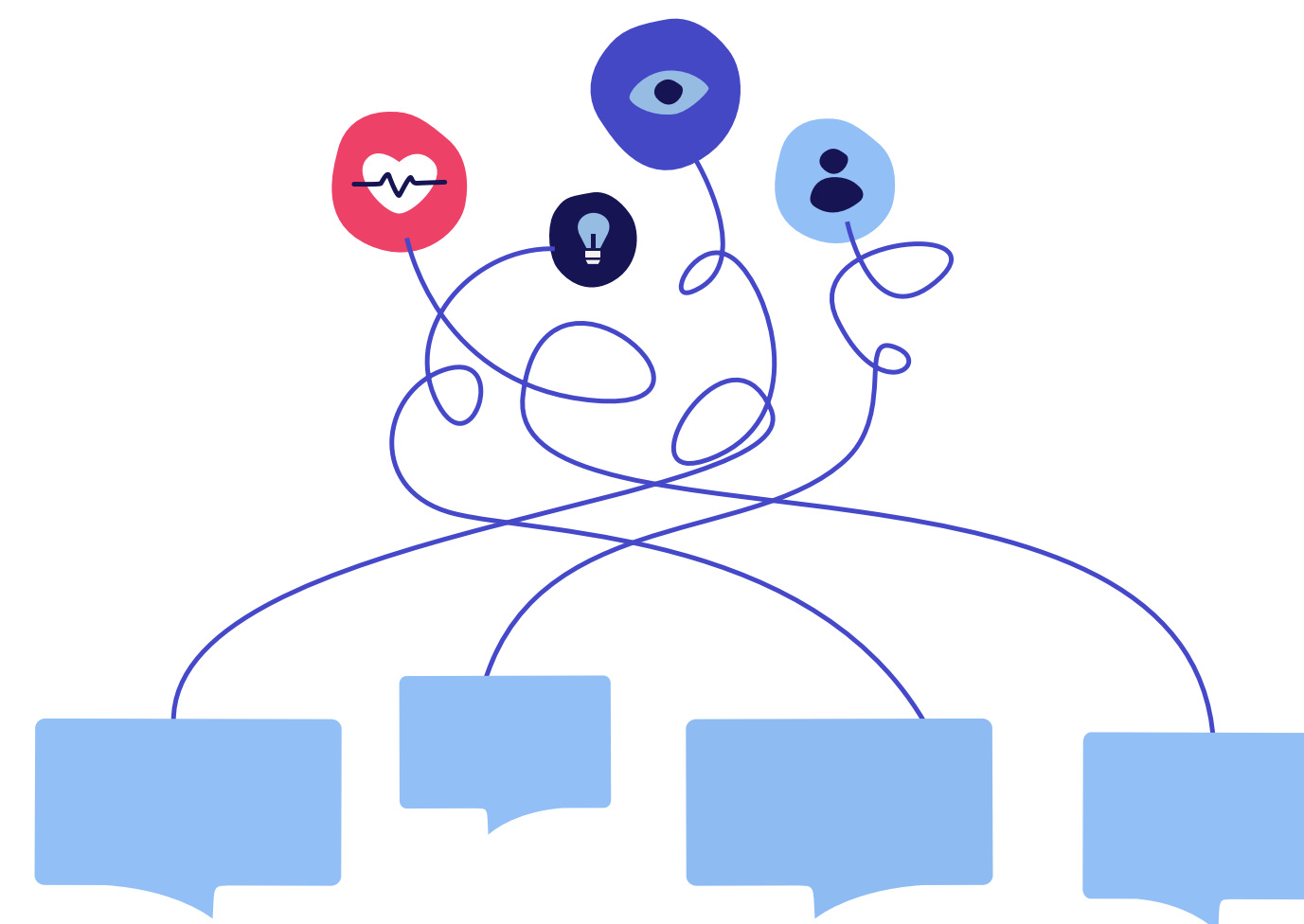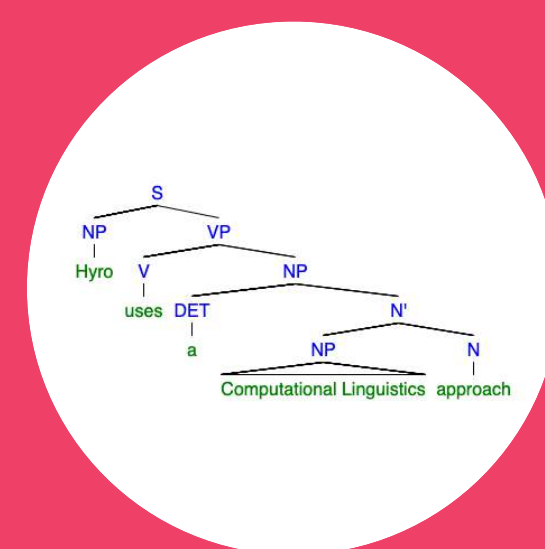
A Hybrid Language-Based Approach Featuring Knowledge Graphs and Computational Linguistics
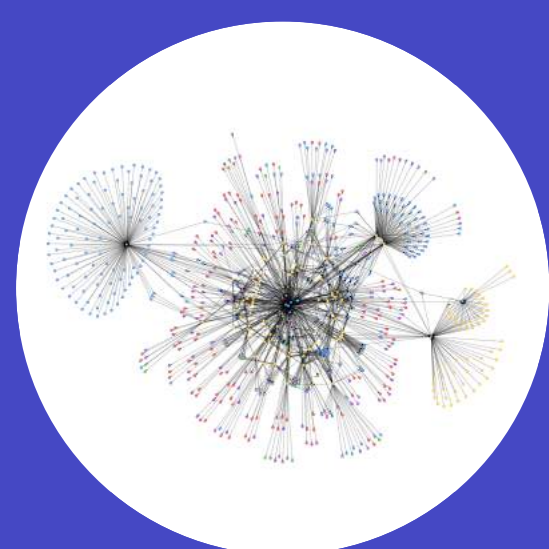
Knowledge Graph

Allows for instant deployment and seamless maintenance (vs. manually designing conversational flows)

Computational Linguistics

Allows for high quality and rapid improvement without relying on data (vs. machine learning approach)

Adaptive Communications Platforms generate revenue, cut custs and optimize digital channels by fully automating their customer-facing (and in many cases internal) conversational interfaces.

Their unique composition eliminates costly and energy-consuming manual deployment and maintenance that is typical of conversational AI solutions. Their understanding of natural language and context allows them to assist or fill in for live support staff without missing a beat.

Why are Healthcare Organizations Moving Towards Adaptive Communications?

By the end of 2021, interactions with conversational interfaces will grow by 250% across the globe. According to a 2021 Gartner report, 75% of U.S. States have implemented conversational AI on their websites, and 50% of enterprises will spend more money this year on conversational interfaces than on traditional mobile app development.

Of all sectors impacted by COVID-19, none had to change and adapt as quickly and as drastically as the healthcare industry. Seemingly overnight, ongoing medical care (non-COVID-19-related) shifted entirely to the digital sphere. Hospitals across the nation became or were perceived as COVID-19 hotbeds, and due to strict social distancing measures or out of fear, patients hesitated to visit hospitals and clinics.

According to Becker's Healthcare, between March 1st to March 29th 2020, Hospital visitation volumes dropped by 32%-60% compared with pre-COVID-19 levels, and in April 2020, emergency room visits in the U.S. fell by more than 40%.

Healthcare systems found themselves forced to migrate their entire operations into the virtual space, including telehealth, and had to accelerate digital offerings previously considered low priority into the forefront of their patient engagement and retention strategies.

To meet this sudden surge in demand for constant digital communication and engagement with their patients, healthcare

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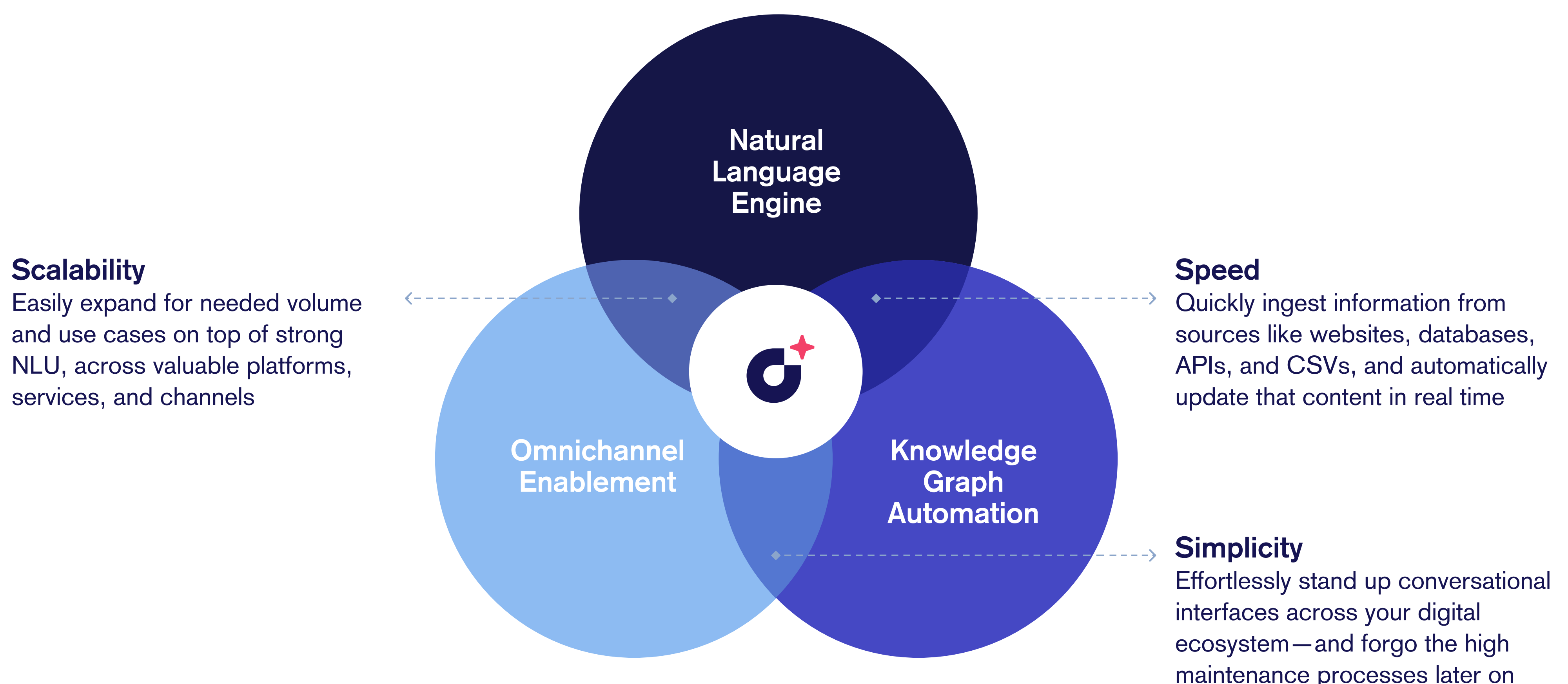
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systems had to adapt at warp speed, in some cases standing up new conversational interfaces in 48 hours. In contrast, healthcare organizations that failed to respond and migrate their services online and communicate policy changes to their patients found themselves losing millions of dollars in cancelled appointments and logging all-time high patient churn rates.

During the pandemic and beyond, U.S. healthcare organizations such as Weill Cornell Medicine, Mercy Health and Montefiore Health System have turned to Hyro's Adaptive Communications Platform to ensure easy bi-directional communication through text, touch, and voice capabilities, between health systems and their end-users: patients.

As opposed to rigid intent-based chatbots and IVRs, Hyro's platform is both linguistics and knowledge based, meaning that its conversational AI learns human language first then continuously layers use cases, skills and domain knowledge on top of that understanding engine.

Providing those conversational interfaces with such a strong lingual foundation allows large enterprises to keep pace with ever-changing content, datasets, and customer demands. As data is added or adjusted across websites, databases, CSVs, APIs, and other sources, Hyro automatically updates its knowledge graph so that the information provided to end-users remains accurate.

Adaptive Communications Platform

Scalability
Easily expand for needed volume and use cases on top of strong NLU, across valuable platforms, services, and channels

Speed
Quickly ingest information from sources like websites, databases, APIs, and CSVs, and automatically update that content in real time

Simplicity
Effortlessly stand up conversational interfaces across your digital ecosystem—and forgo the high maintenance processes later on

Natural Language Engine

Omnichannel Enablement

Knowledge Graph Automation

5 Use Cases for Adaptive Communications in Healthcare

1   **Physician Finding and Appointment Scheduling**

Adaptive Communications Platforms can be deployed across any digital channel as flexible conversational interfaces on your organization's website, mobile app, smart speakers, call centers, SMS system and more. Powered by a hybrid model of computational linguistics, Natural Language Understanding (NLU), and knowledge graphs, Hyro's Adaptive Communications Platform enables patients to search for and zoom in on the physicians they need by filtering results (using voice and text) via attributes such as specialty, location, spoken languages, and even accepted insurance plans. With some large healthcare enterprises employing more than 8,000 physicians (The Permanente Medical Group, for example), changes to staff, locations, and services are

constant and typically demand continuous manual updates and revisions to organizations' webpages and datasets.

By automatically scraping and ingesting updated information from the healthcare organization's resources, Hyro's Adaptive Communications Platform eliminates one of the greatest pain points of deploying conversational interfaces; maintenance. The platform's end-to-end integration with Epic and other EHRs means that patients can schedule, revise or even cancel their physician appointment all through naturally flowing conversation with a virtual assistant and have that appointment seamlessly logged within their preexisting medical records.
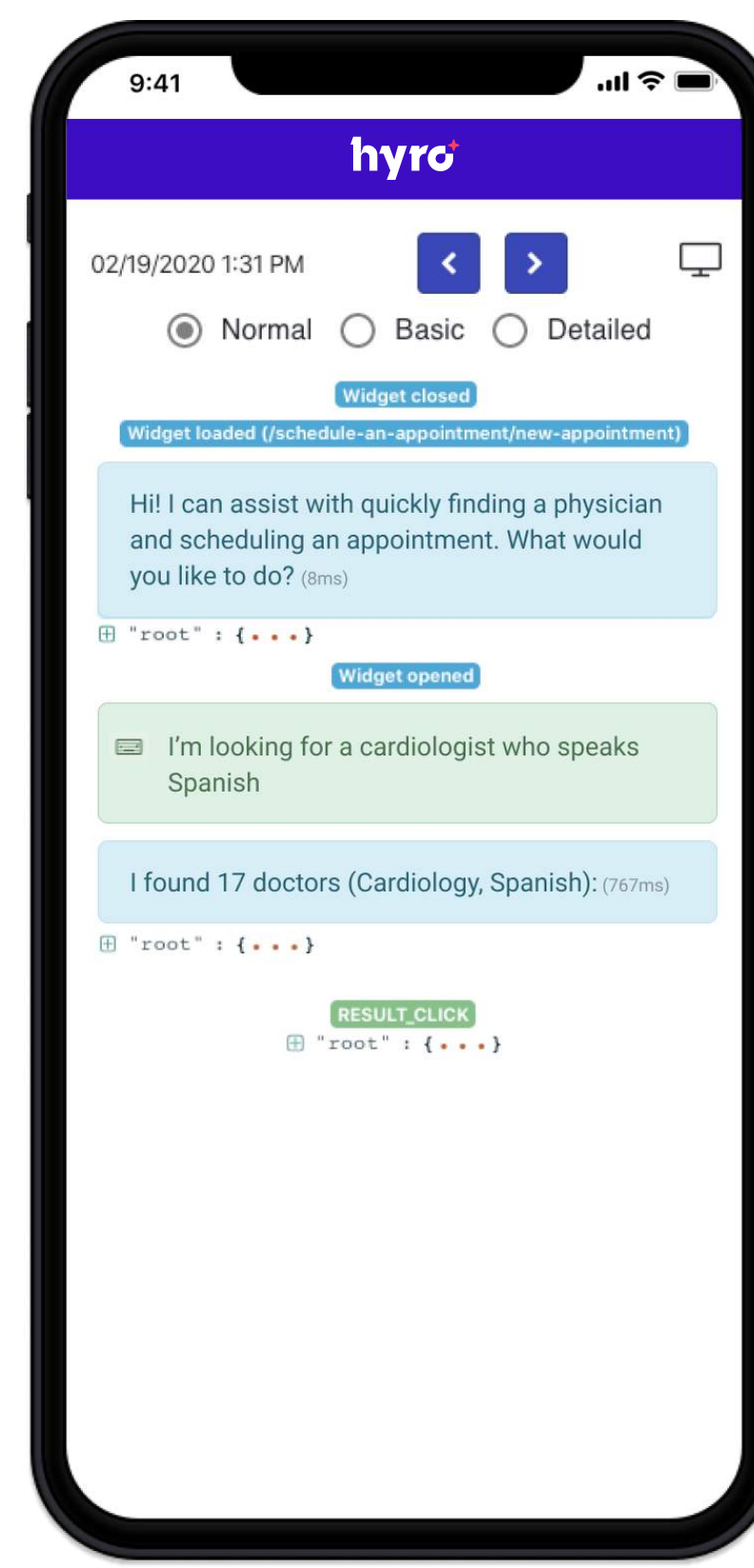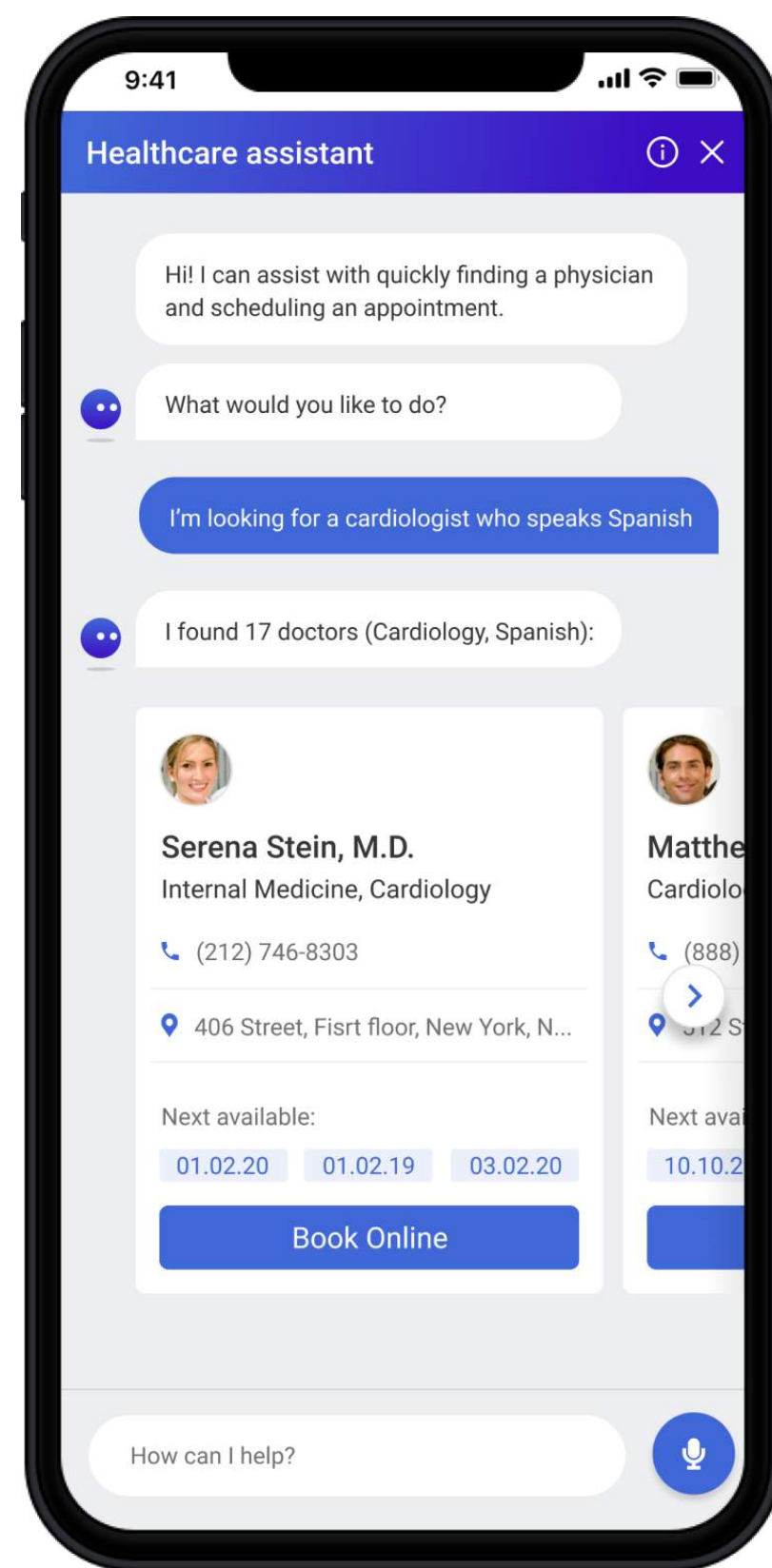
Patient View

Admin View

Auto-scraped Directory

- Language
- Department
- Expertise
- Gender
- Insurance
- Location

Auto-scraped Attributes

- Full Name
- Photo
- Phone Number
- Address

Tracked user actions

- Date & time
- Desktop / Mobile
- Voice / Text
- User utterances
- Bot utterances
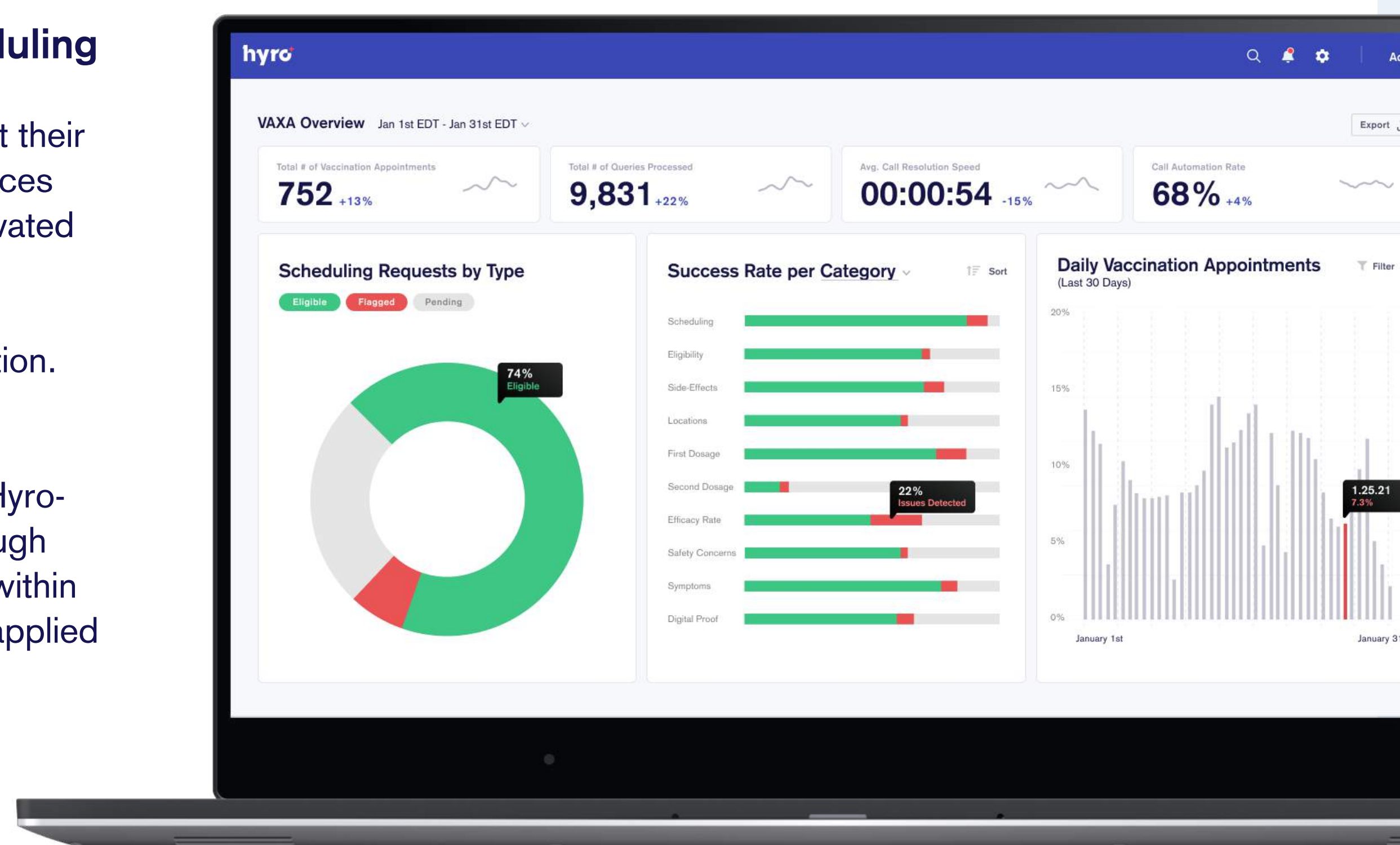- Click events

2   FAQs and Troubleshooting

The same scraping and ingesting mechanism that allows Hyro's ACP to keep physician information up-to-date can be used towards patients' FAQs. Rather than calling their healthcare provider's support center, holding on the phone for eight minutes on average, and taking up a precious spot on the queue for a low-touch inquiry, patients can receive the answers they seek in mere seconds from an AI virtual assistant which can handle more than 85% of calls to support centers. By automatically collecting information from the health system's FAQs resource page and freely available public information from certified sources such as the Center for Disease Control and the World Health Organization, Hyro's ACP delivers the most relevant answers to patients' most pressing questions, 24/7, on all digital channels.

3   COVID-19 Vaccination Information and Scheduling

Healthcare organizations deploying Hyro's platform can connect their vaccination apparatus to designated Hyro conversational interfaces embedded as website text and voice assistants or as voice-activated call center agents. Hyro's Adaptive Communications Platform automatically fields patient FAQs and schedules vaccination appointments quickly, without the need for zero human intervention.

To assess and confirm vaccination eligibility, patients provide identification which is promptly verified (or rejected) through a Hyro-EMR integration. Any vaccination appointments scheduled through Hyro's AI-powered agents are seamlessly routed and updated within the organization's EMR system. The same architecture can be applied to all vaccination roll-outs (e.g., seasonal flu).

For more information regarding Hyro's Adaptive Communications Platform please visit **www.hyro.ai**, or email **contact@hyro.ai.**

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4 Live Agent Handoff

Hyro's Adaptive Communications Platform is a force multiplier for support agents. AI assistants can handle repetitive, exasperating questions freeing up live agents from menial and monotonous tasks. These tasks are a prime cause of burnout and are endemic in live support centers, leading to annual agent turnover of 35% and above.

Adaptive Communications is instrumental in supporting and bolstering customer support. However, when necessary, user interactions can be handed off to a live representative. Vital information such as the caller's name, age, insurance, and service requested are collected by the AI assistant—which acts as a digital front door—and is delivered to the live agent before they assume control of the call, enhancing the speed and quality of their service.
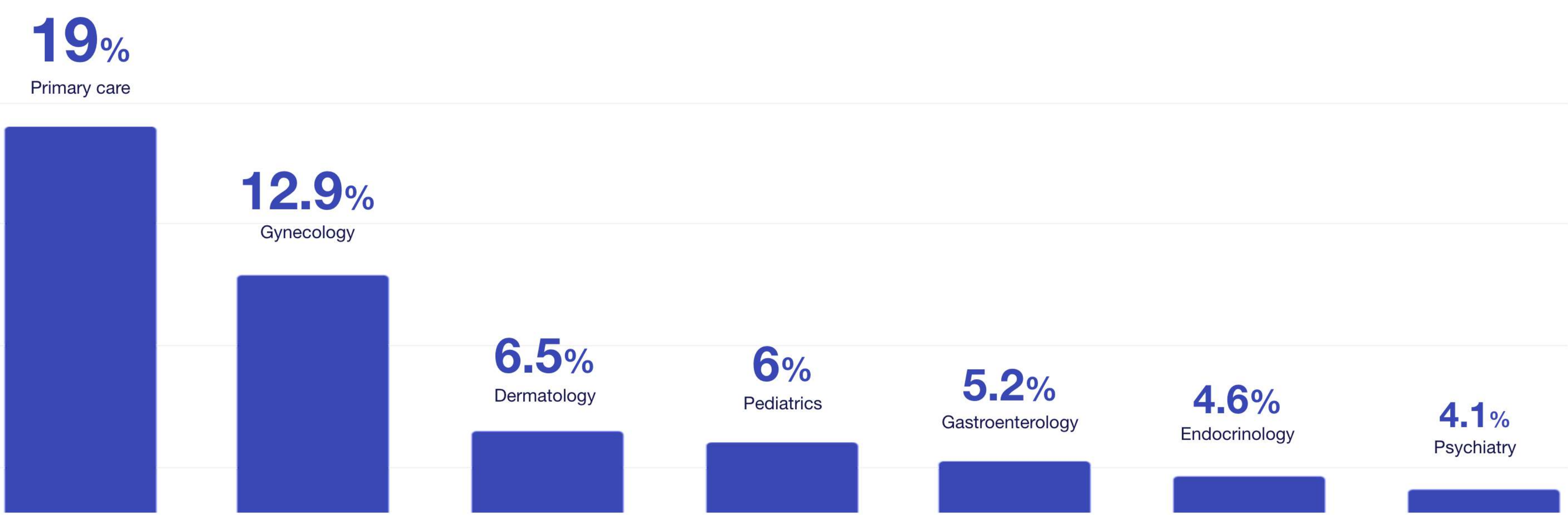
5 Conversational Intelligence

Hyro's ACP conducts hundreds of thousands of patient interactions a day. Each of these exchanges contains valuable conversational insights that provide healthcare organizations with a holistic and objective 360-degree view of their patient population's most urgent needs, services requested, questions asked and topics raised.

This data is automatically relayed and presented to decision-makers in a comprehensive dashboard that they can use to identify trends, pain points, and blind spots in their patients' digital journeys and key areas of service that require attention and improvement. By exposing missing datapoints, conversational intelligence allows data teams to optimize digital channels before low patient satisfaction scores can surface, without the need to conduct patient surveys.

Conversational Intelligence in Action: Hyro's ACP on a Major Health System's Website
March 1st - September 1st, 2021
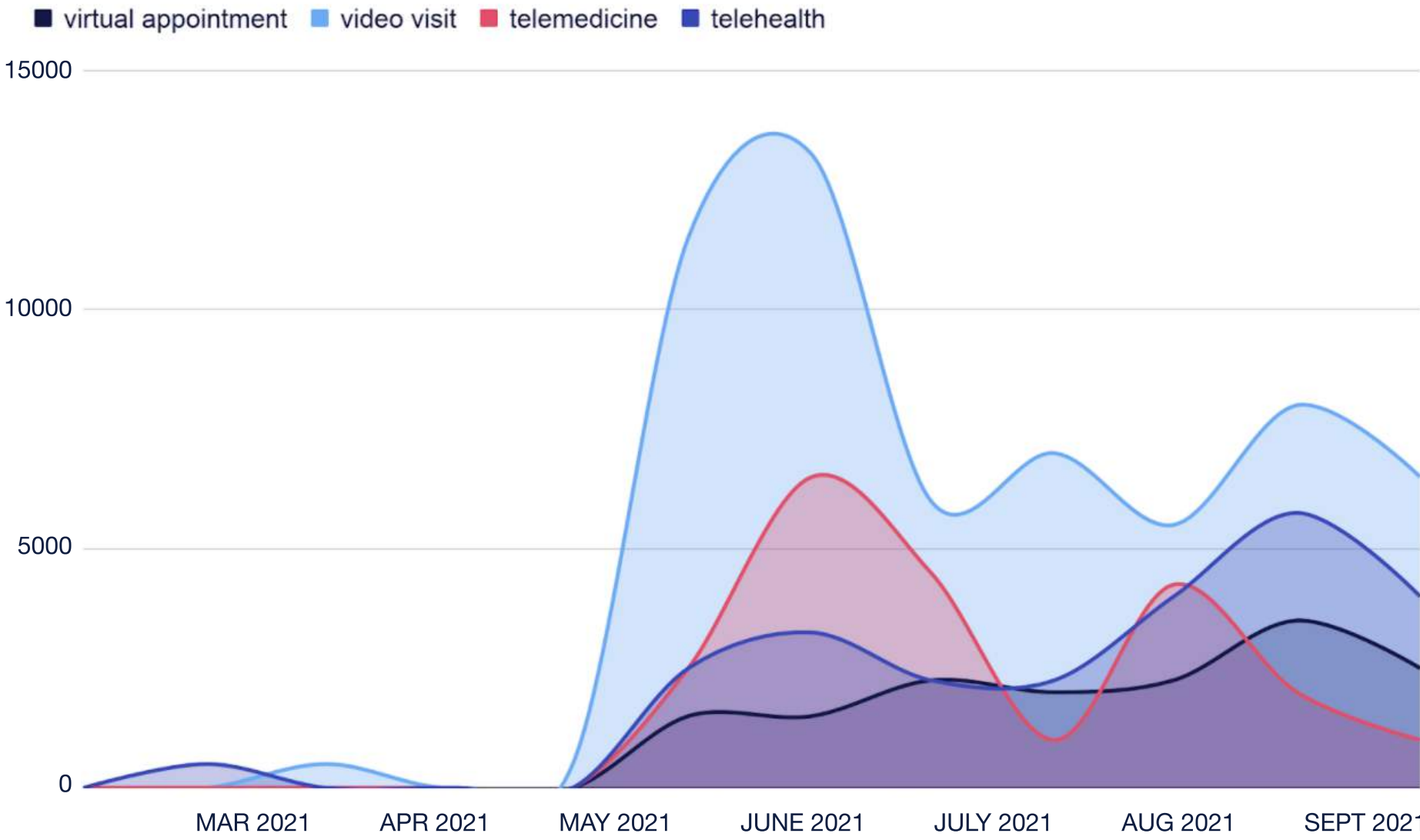
Top Specialties Patients Searched For

19% Primary care

12.9% Gynecology

6.5% Dermatology

6% Pediatrics

5.2% Gastroenterology

4.6% Endocrinology

4.1% Psychiatry

Popular Terms Mentioned By Users Over Time

Appointments

Video/Virtual/Telemedicine/Telehealth

■ virtual appointment ■ video visit ■ telemedicine ■ telehealth

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What Healthcare Leaders Are Saying About Hyro's Adaptive Communications Platform

Weill Cornell Medicine

"What attracted us to Hyro was the sophistication and flexibility of their approach. They adapted to us rather than us having to adapt to them. Their ability to quickly add and scale new use cases with little client-side maintenance is increasingly valuable in a world where digital engagement has become essential."

Dr. Curtis Cole
Chief Information Officer
Weill Cornell Medicine

NOVANT HEALTH

"Hyro's conversational AI is a differentiator for our business, vastly improving patients' experiences by making it easy to access information and take actionable next steps across the digital channels of their choice. Hyro is putting real-time information at our patients' fingertips, which has proven priceless especially during the coronavirus pandemic."

Amber Fencl
Senior Director, Product Development
Novant Health

Montefiore

"We had a solution on our website in less than 48 hours. During the first week of deployment, we were already witnessing hundreds of daily conversations with the COVID-19 virtual assistant and have also been able to direct users to other key areas on our site."

Adrin Mammen
AVP, Patient Access Transformation Officer
Montefiore Health System

AUSTIN REGIONAL CLINIC

We have been pleased with the quick implementation by Hyro and the easy adoption by our patients. Hyro continues to further improve our experience by offering insightful recommendations based on how patients are using the virtual assistant.

Heidi Shalev
VP Marketing, Communications, & Engagement
Austin Regional Clinic

Success Story: Novant Health

As vaccination delivery took center stage in January 2021, Novant Health needed help with solving a new, unique challenge through Adaptive Communications—providing their patients with vaccination assistance. In record time, Hyro armed Novant with VAXA, an AI-powered vaccine access solution which actively automates and deflects 85% of all incoming calls to their Care Connections support centers, drastically decreasing hold times and improving their patients' experience. Through VAXA and other successful components of their Adaptive Communications Platform, Novant Health's patients now enjoy unparalleled, omnichannel digital care. They can schedule vaccinations, assess their eligibility and obtain critical information relating to COVID-19 and corresponding vaccines, getting the help they need quickly, easily and at all hours.

85%
Automated the majority of Novant's incoming calls

~250
Handled ~250 daily calls surrounding COVID-19 FAQs

3 Seconds
Reduced wait times from 8 minutes to 3 seconds

Eliminate Fake News
Mitigated misinformation across Novant's footprint

What this means for you:

✦ **Extreme call deflection—**
Provide 60-85% lift for your call center staff by automating FAQs and repetitive tasks

✦ **Unlimited access to certified information—**
Provide patients with access to reliable data via scraping of key webpages and certified sources such as the CDC and WHO

✦ **Boost patient acquisition rates—**
Convert callers into loyal patients with fast omnichannel experiences that reduce wait times

✦ **End-to-end AI-powered scheduling—**
Effortlessly sync with APIs, EMRs and databases to schedule appointments

✦ **Industry-leading natural language capabilities—**
Increase your scope of engagement by understanding a wide range of patient phrasings, synonyms, slang and dialects

✦ **24/7 coverage of patient inquiries—**
Connect to patients without pause, including during off hours or while out-of-office

✦ **Automatic scraping and restructuring of service catalog—**
Effortlessly pull from key directories and databases to keep your conversations fully updated and accurate

A stellar patient journey starts with Hyro.

Request your demo today

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