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# REIMAGINING HEALTHCARE

## Your Guide to the New World of Healthcare Reimagined with Digital Communications

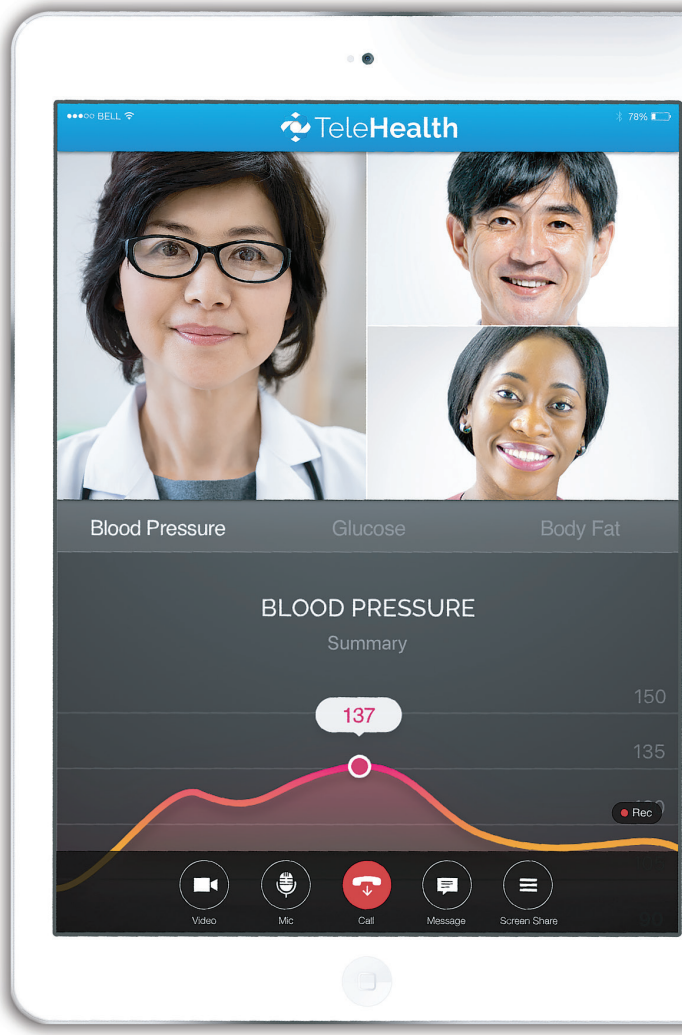
# Welcome to the New World of Healthcare

Digital, on-demand healthcare has arrived and by 2026 it will be a $16.7 billion global industry. Consumers now expect seamless, convenient, and personalized online experiences with every service they engage with, and healthcare is no exception.

Gone are the days of long waiting room visits. To succeed in the new healthcare economy, the patient experience must be front and center. However, healthcare providers across the globe face huge funding gaps, a short supply of staff, aging populations with a higher cost of care, and rising chronic disease. Driving operational and cost efficiencies, along with preventative care, are also top of mind for providers.

How can healthcare providers meet these challenges, and still deliver patient-centered care?

**This guide explores how healthcare is being reimagined with digital communications. You will learn how to create outstanding patient and practitioner experiences while improving operational efficiencies, lowering costs, and engaging patients in their ongoing health.**




> **In this new world, the consumer is at the helm—and success will come to those who go beyond the traditional, one-off interactions of yesterday in favor of a pervasive, on-demand health experience that lives up to their rising expectations.**
>
> – PWC, 2019

# The Digital Healthcare Revolution

**In order to redesign your healthcare service into a fully optimized experience with digital communications, you first need a picture of the new world that healthcare operates in.**

## Shortage of Physicians

The US could see a shortage of up to 120,000 physicians by 2030.

## On Mobile & On-Demand

Healthcare is now on-demand, on mobile, and in apps or wearable devices, known today as "telehealth."

- **71%** of healthcare providers are offering or considering telehealth enabled services
- **77%** of patients book medical appointments online
- **52%** of all web browsing is done on mobile

## Data-Driven

Healthcare providers and practitioners are combining all the power of modern medicine with AI and big data to deliver smarter and more personalized care.

- **57%** of healthcare companies believe that predictive data analytics will save them 25% per year
- The healthcare AI-powered tools market is set to exceed **$34 billion by 2025**

## Without Boundaries

Fast mobile Internet connections, cloud technology, and virtual reality are enabling healthcare delivery, collaboration, and training to happen anywhere in the world, in any setting.

- Surgeons who trained using virtual reality **performed surgeries faster and made 7 times fewer errors** than their non-VR trained peers

## Rising Healthcare Demands

The number of Americans with three or more chronic diseases is predicted to reach 83 million by 2030 unless there are health improvements.

## Record High Consumer Spending

Global healthcare spending is expected to rise 5.4% annually, reaching USD 10.059 trillion in 2022.

While healthcare faces many pressures, there is a huge opportunity for digital technology and communications to create optimized and innovative healthcare experiences of the future.

# Healthcare Reimagined with Digital Communications APIs

**While technology has transformed the delivery of care, up until now, communication technology has failed to keep up with the evolving needs of patients and practitioners.**

Today, the healthcare journey unfolds over time, across many scenarios, touchpoints, and communication channels. Patients manage appointments and results with a few taps of a device. Doctors and specialists from around the world collaborate remotely. And in many scenarios, in-person consultations are being replaced altogether with live video. The technology of choice used to power these customer interactions in healthcare, and across dozens of industries, are digital communications APIs.

## What are Digital Communications APIs?

API stands for Application Programming Interface. It's a standard way to make a defined set of software functionalities available for any business to use. Communications APIs make it easy for developers to add communication channels like voice, video, and messaging into any application or service.

Healthcare companies—from startups to established providers—are moving towards an API-based communications strategy that enables them to customize and personalize experiences at scale.

Combined with vast amounts of patient data, interactions can be programmed in any way imaginable using communications APIs—to deliver the right information to the right person at precisely the right moment.

## The API Building Blocks of Digital Communications in Healthcare

### Voice

High-quality, scalable, and flexible voice experiences with user context and data.

### Video

Live video chat with face-to-face human interaction.

### Messaging

MMS, SMS, social chat apps like WhatsApp, Facebook Messenger, or Viber.

### Authentication

Two-factor authentication used to validate an account and prevent fraud.

# A Quick Technical Guide to the New Standards in Healthcare Communications

**The technical fundamentals you need to consider when reimagining your healthcare experience with digital communications—across all channels.**


## AI-driven

Technologies such as speech recognition, sentiment analysis, and bots can be used to connect patients to the right service, right away.

## Embedded

Adding communications directly within the environment of a native web or mobile application.

## Programmable

Interactions can be automated and customized to trigger in response to actions and events, with or without human involvement.


## Interactive

Two-way engagement in real-time is intrinsic to interactions in healthcare and should be considered across all channels including voice, video, and messaging.

# What Digital Communications APIs Can Do for Your Healthcare Organization

**An evidence-based approach to achieving outstanding results with voice, video, messaging, and authentication.**

How your healthcare organization uses digital communications APIs is limited only by your imagination. Whether you want to enhance an existing service or build an entirely new one, chances are there are dozens of touchpoints across your healthcare journey waiting to be reimagined.

## Enhance the Patient Experience

### Offer a More Affordable and Accessible Healthcare Service

Reduce healthcare costs for your patients by offering video or voice-enabled healthcare services.

Telehealth appointments for non-emergency reasons typically cost around $45, compared to $100 for an in-person visit at a doctor's office or $160 at an urgent-care clinic.

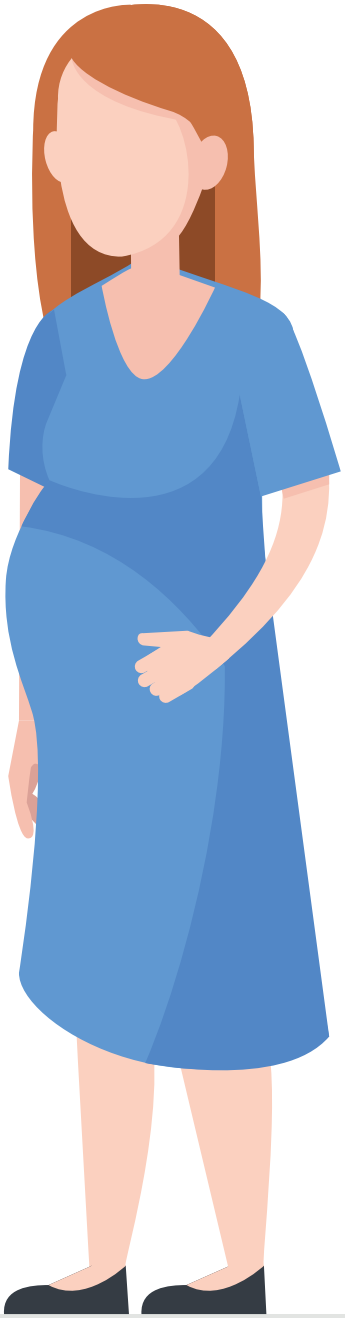
**How?**

### Expand Patient Access to Care —Anywhere, Anytime

Save patients travel time and money by offering on-demand healthcare such as remote consultations available with a few taps of a device, at any time, no matter the location.

A study of patients who used virtual consultations for sports medicine appointments saved an average of $50 in travel costs and 51 minutes in waiting and visit time.

**How?**



### Improve Patient Satisfaction & Loyalty

Offering patients a secure, on-demand and seamless experience available on their preferred channels drives high patient satisfaction that keeps them coming back.

A study 6 of patient satisfaction with telehealth services found that between 94-99% percent were very satisfied.

**How?**

### Reduce Wait Times

When you connect patients and physicians on their preferred device for non-critical visits, you can reduce wait times in the clinic and improve patient satisfaction.

On average, 85% of patients wait between 10-30 minutes to see their health care provider

**How?**

### Help Patients Stay Healthy

Healthcare doesn't end when a patient leaves a facility. Encourage better patient compliance and prevention by delivering discharge instructions, health tips, and reminders to their favorite channels.

A study found that cardiac patients achieved 94% better treatment compliance using telehealth.

**How?**

# Drive Operational Efficiencies

## Reduce Appointment No Shows

On-demand patient scheduling with automated appointment reminders can help reduce no shows and fill last minute appointment cancellations.

Missed appointments cost the healthcare system $150B each year in the US alone. Each no show costs a physician 60 minutes and $200 on average.

A study published in Health Services Research Journal found that SMS reminders substantially increase the likelihood of attending clinic appointments.

**How?**

## More Efficient Medical Collaboration

Enable fast and effective collaboration across multidisciplinary teams with digital communications tools such as interactive voice and video with screen sharing and annotation.

A study found that implementing provider-to-provider telehealth technology would result in annual net savings of $1.39 billion in avoided inter-emergency department transfers.

**How?**

## Discharge Patients Faster & Reduce Readmissions with Remote Monitoring

Take the pressure off your hospital or primary care clinic by using communications APIs to support post-operative check-ups and monitoring at home.

Combining telehealth technology with wireless monitoring devices, a remote monitoring program of cardiac patients has seen a 50% reduction in heart failure-related readmission rates saving an estimated $10 million.

**How?**

## Retain & Grow Your Patient Base

With remote consultations, you aren't limited to customers in your local area, or regular practice hours. Add an extra revenue stream to your healthcare business by increasing patient volume.

52 million Americans are more than 30 miles away from their closest hospital.

**How?**

## Optimize Customer Service with Contextual Communications

Empower your practitioners and staff to provide excellent customer service by giving them the right information and context about customers at exactly the right moment.

76% of consumers say they view customer service as a test of how much a company values them.

**How?**

# Secure Your Service

## Increase Security with Authentication

Improve security and patient trust in your digital healthcare service by offering simple two-step authentication via SMS or voice to validate an account and across account usage.

Confidence in the security of patient data increases use of healthcare apps by 62%.

**How?**

## Protect Your Customers & Business from Fraud

With simple phone number verification at sign-up, you can stop fraud before it infiltrates your digital healthcare service, ensuring you only serve legitimate patients.

Fraudulent account creation is on the rise across all industries. Losses from new account fraud increased from $3 billion in 2017 to $3.4 billion in 2018.

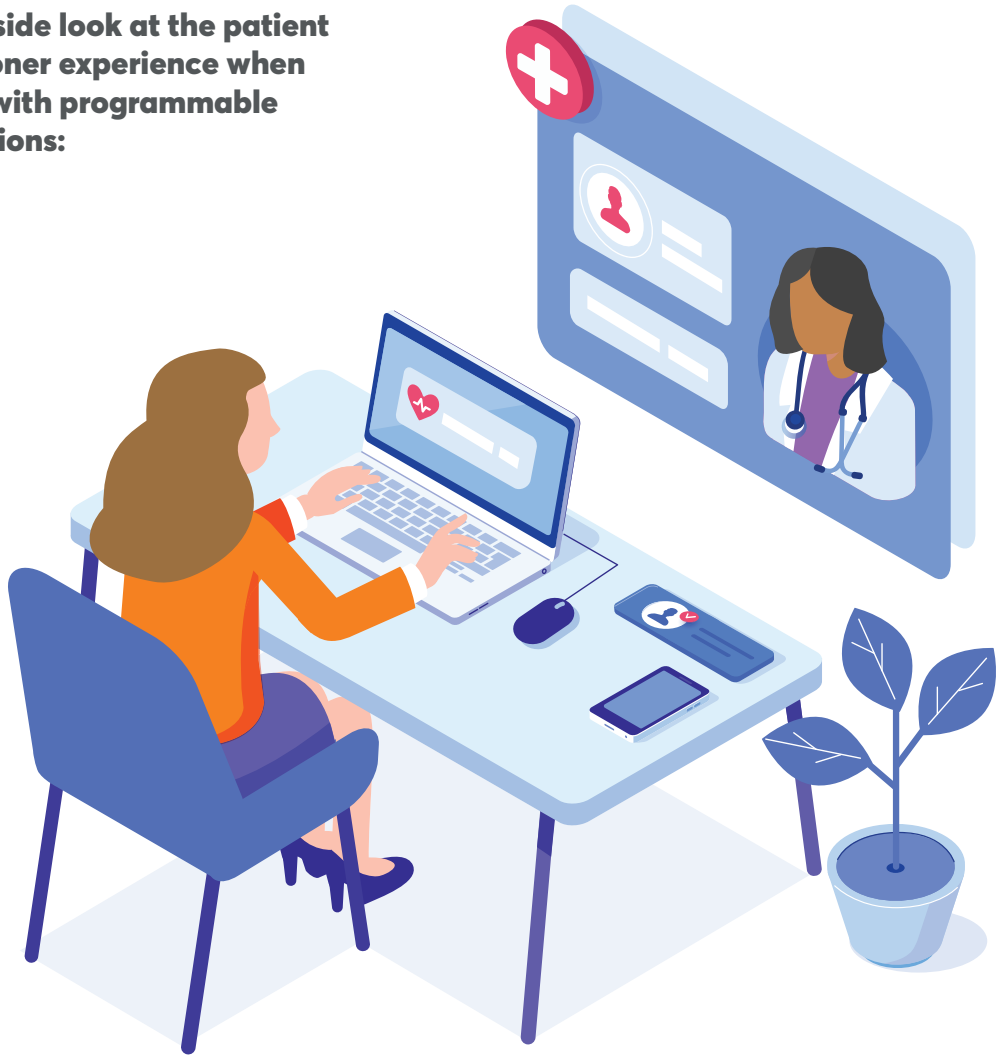
**How?**

# Programmable Communications Put into Practice

## A Perfect Day in Healthcare

By now, you've learned how adding digital communications to the healthcare journey can empower practitioners to deliver better care, increase patient engagement and streamline operations while lowering the costs and barriers to care. But what can a day in the life of patients and doctors actually look like when fully optimized with programmable communications?

**Here is an inside look at the patient and practitioner experience when reimagined with programmable communications:**



## Patient

**Francine** feels unwell. She can't afford to take time off work to see a doctor. She remembers her primary care provider has an app that lets her speak to a doctor from any device, at home or work.

## Doctor

**Dr. Diane** is a busy practitioner. Her clinic has a new telehealth app that lets patients book live video consultations. She can now help more patients than ever before.

# Virtual Consultations

8:15 am

## Identity verified

Francine downloads the app before reaching her office and registers an account. The last step is to verify her identity, and she enters a secure one-time code sent by SMS.

8:20 am

## Symptoms analyzed

A voicebot asks Francine to describe her symptoms. Using speech recognition, the bot determines if her condition is best addressed by a doctor via live video, a phone call, or by exchanging messages with a clinician.

8:30 am

## Appointment scheduled

Francine needs to see a doctor. She schedules a live video appointment for that evening. A message appears in the app with the doctor's details and she is delighted to recognize her from a previous visit.

8:30 am

## Appointment received

Dr. Diane sees an alert for Francine's appointment. She reads her recent medical history to prepare for the consultation.

6:00 pm

## Appointment confirmed

Francine receives an SMS reminder and confirms she will be attending by replying "YES".

6:01 pm

## Confirmation received

Dr. Diane and the practice receptionist receive Francine's confirmation. This helps them plan around potential no-shows and last-minute cancellations.

7:00 pm

## Video consultation joined

Francine decides to join the appointment using her laptop in the comfort of her own bedroom.

7:00 pm

## Consultation securely recorded

The video call is automatically recorded for compliance purposes. It also means Dr. Diane can devote her attention to Francine without having to take notes.

7:20 pm

## Follow-up appointment offered

Dr. Diane pinpoints the problem, explains a treatment plan, and prescribes a course of medication. She triggers a message in the chat to schedule a follow-up appointment.

7:25 pm

## Follow-up appointment scheduled

Francine can schedule her follow-up appointment with a reply in the chat, or a call. She taps to speak to the receptionist and sets it for two weeks' time.

Ongoing

## Health content delivered

The provider sends regular preventative health tips and reminders to Francine's favorite chat app, Facebook Messenger. This helps her stay engaged in her recovery and ongoing health.

Explore more healthcare scenarios reimagined with communications APIs including remote collaboration and group therapy in our guide:

**Digital Communications in Healthcare: A Perfect Day**

# Top Communication Challenges in Healthcare & How to Overcome them with Nexmo APIs

## Security & Compliance

From HIPAA to the HITECH Act, the healthcare industry faces strict security requirements when it comes to patient data.

For any exchange that involves personally identifiable information (PII), like patient information, it's crucial to choose a communications platform designed to help you build secure and compliant applications.

- The Nexmo OpenTok API helps you build HIPAA compliant video experiences that are fully encrypted with digital archiving of patient and practitioner interactions.
- Authentication APIs like Nexmo Verify maintain the integrity of your digital healthcare service while building trust with patients.

## Legacy Systems

Legacy technologies are still widespread across healthcare systems.

Any investment in new communication technology must be interoperable with existing infrastructure.

- Whether you're building for web, mobile or desktop the Nexmo API Platform is interoperable with existing systems and be integrated fast and seamlessly.

## Cost

With already high costs of healthcare delivery, the added expense of new communications technology can often deter projects from getting off the ground.

- Using API-based digital communications like the Nexmo API Platform gives you a flexible cost structure so you only ever pay for what you use.

nexmo® | The Vonage® API Platform

# Reimagine Your Own Healthcare Experience

## Get Started with Nexmo Programmable Communications APIs

Programmable communications APIs can help you elevate the healthcare experience, reach more patients and improve their level of care. If you're ready to reimagine your healthcare service, Nexmo can help.

With our flexible communications APIs, global platform, and expert support, it's now easier than ever to reimagine the healthcare experience—and your organization—with digital communications.

From growing startups to established organizations, healthcare companies such as Babylon Health, ResolutionMD, Intouch Health, and Maven rely on Nexmo to power seamless, secure and innovative interactions between patients, practitioners, and service providers.

**Learn more. Contact us at:**
**+1.415.941.5878 | sales@nexmo.com**



# Building Blocks

**Here are the communication building blocks you can use to make every interaction count:**

**Voice -** Build powerful voice products and engaging in-app voice experiences with the easy-to-use Nexmo Voice API and Client SDK.

**Video -** Integrate video directly into your website or mobile applications with the Nexmo Opentok API.

**Verify -** Verify any phone, anywhere with the Nexmo Verify API. Let us do the heavy lifting, and pay only for the results.

**Messaging -** Integrate multi-channel messaging, including SMS, MMS, and popular social chat apps, into your applications with Nexmo's Messages API. Build engaging in-app messaging experiences as well with the Nexmo Client SDK.

Want to find out how you can start building? Speak to an expert about implementation and best practices in healthcare.

GET STARTED