



# Reimagine Healthcare

Building business resilience and agility



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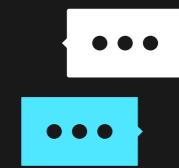
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Transforming healthcare in the cloud



# Charting a course

Modern technology is making the impossible possible in healthcare. The innovations we see today are just the beginning. The more we can **enable health organizations, pharmaceutical providers, and medical researchers to improve care and drive evidence-based insight** into diseases, the brighter tomorrow's healthcare landscape becomes.



## Respond

Countries and cities lock down to flatten the curve.

- Make everything remote.
- Adapt and respond in real time.
- Deliver solutions to help people stay productive and maintain business continuity.



## Recover

Nations fight the crisis and reopen at different times, but new lockdowns could happen.

- Adapt business models and product offerings.
- Focus on value and reduce cost.
- Restart customer demand.



## Reimagine

Vaccines and treatments become available, but uncertainty and volatility linger.

- Realize new opportunities and scenarios.
- Focus on growth.



said they anticipate increasing their investments in **digital transformation**.<sup>1</sup>



# The challenge

The promise of medical innovation is evenly matched by the arrival of new challenges. **The nature of healthcare is evolving**—emerging medical technology drives the need for new skill sets and resources. In addition, **public health crises on a global scale have exposed new obstacles across systems**, leading to communication and technological breakdowns.

Providers, payors, pharmaceutical companies, and patients require quicker and easier access to medical data, more personalized care, and the highest level of data security across all devices to prevent cyberattacks and data theft. **As such, all parties concerned require new solutions to both optimize emerging innovations** and to enhance collaboration to bring together information, people, and processes across the health ecosystem.



# Finding the solution

Thriving in the face of these challenges requires resilience. **Microsoft is uniquely suited to partner with you on your journey.** Microsoft Cloud for Healthcare brings together trusted and integrated capabilities, resulting in enhanced patient engagement, empowered health team collaboration, and improvements in clinical and operational data insights.



# What is Microsoft Cloud for Healthcare?

**It's a trusted cloud platform** that supports complete, enterprise-ready data and AI workflows, health team productivity and collaboration, and business processes.



**It provides integrated capabilities** to manage health data at scale and deliver automation and efficiency on high-value workflows.

**It's all about built-in security**, with industry-leading, intelligent protection against cybersecurity threats across people, devices, apps, and data.

# Imagine a healthcare landscape where:



**Health organizations and payors can analyze** a health system's patient population, securely collect outcome data to provide evidence-based support of medicines over time, and gauge treatment effectiveness.



**Patients can access their health data** and receive more prompt attention with help from remote devices that continuously monitor their conditions to inform personal treatment plans.



**Pharmaceutical companies and researchers can use faster genomic sequencing** to investigate diseases and tailor focused treatments to patients.



**Clinicians can bring data together from more sources**—including a patient's health records, personal medical devices, connected applications, and community health data—to improve care, spot the onset of diseases more quickly, and fuel better research.



**Administrative staff can orchestrate integrated operations** across facilities and personnel with a single, secure, and compliant platform for messaging, video, voice, photo annotation, and screen sharing.



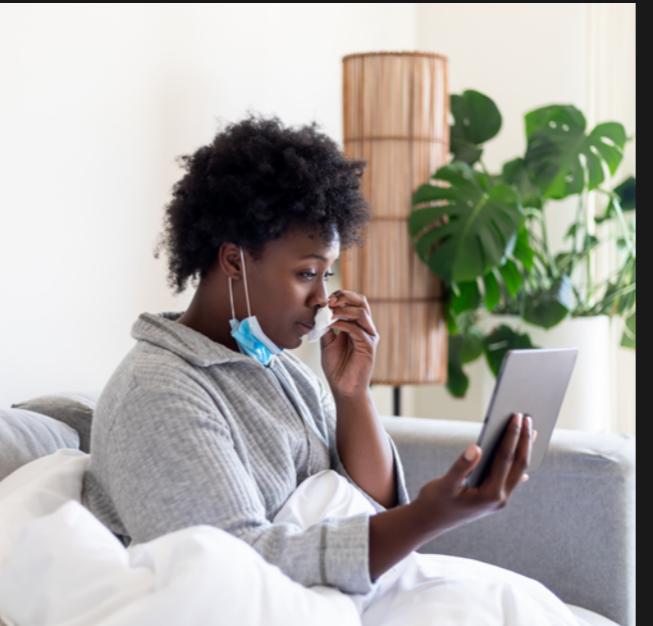
**Diagnostic medical equipment providers can use Internet of Things (IoT) technology** to maintain and provide support for their medical testing devices.

In this e-book, we'll explore major ways that technology is driving the future of healthcare. Learn how digital tools—from cloud solutions to sensor technology—are **enabling personalized care, accelerating scientific innovation, empowering care teams, and improving population outcomes** through a more connected digital infrastructure.

In each section, we'll explore how healthcare organizations **are using technology to improve health outcomes today** and highlight the research and pilot projects that can help reimagine healthcare solutions going forward.

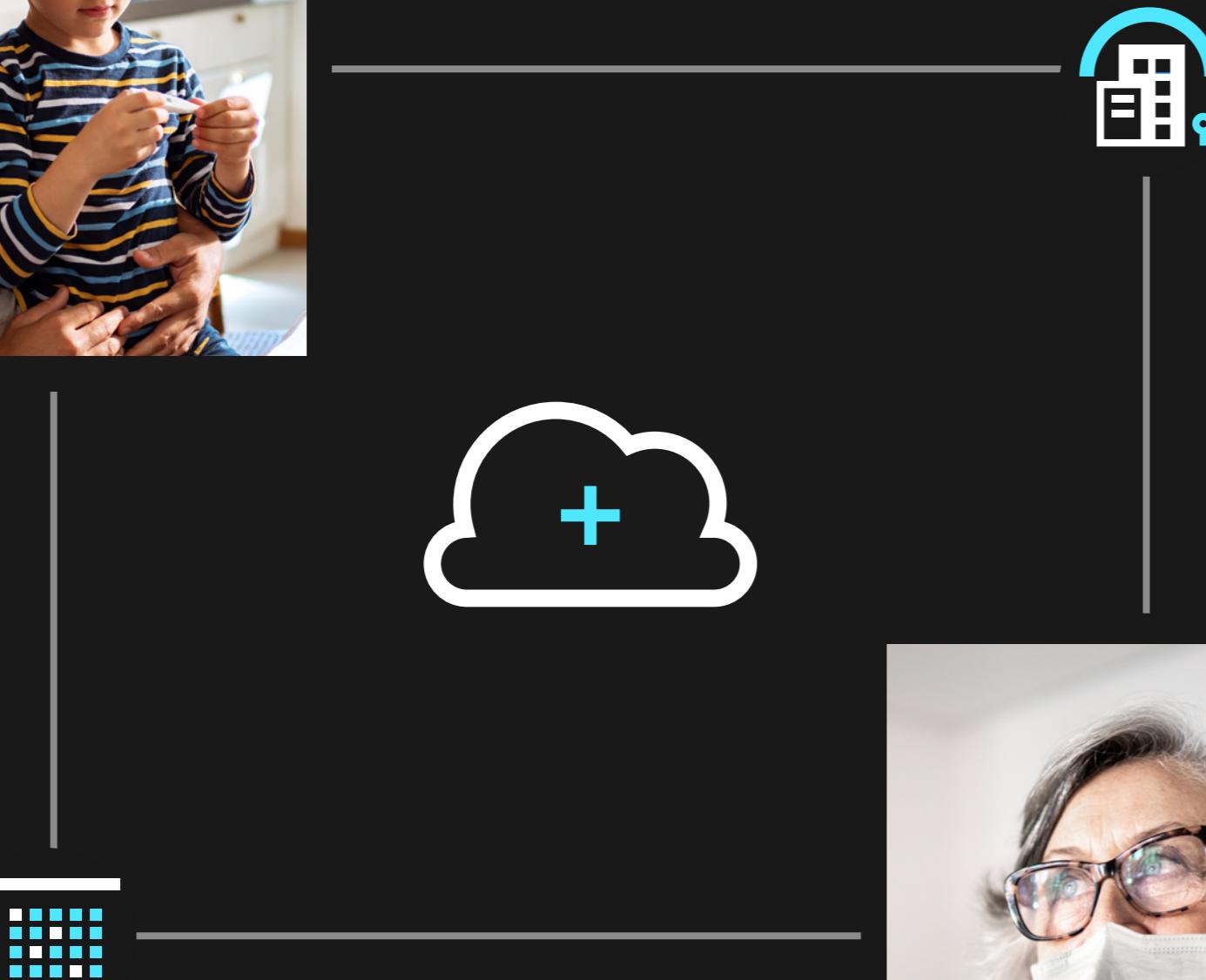


Learn more about how Microsoft Cloud for Healthcare can help reimagine healthcare today



# Enhancing patient engagement





# Improving patient experiences with cloud solutions

Healthcare organizations are discovering innovative ways of enhancing patient engagement by enabling enriched data to flow securely through every point of care. Using data and AI, healthcare providers can stay connected to patients and deliver enhanced value by **creating personalized patient journeys and interactions across the continuum of care**. Pharmaceutical companies and payors can better connect with providers to optimize the entire process.

What follows are just a few examples of how organizations can partner with **Microsoft Cloud for Healthcare to unleash this game-changing evolution in patient engagement**.

# How Microsoft Cloud for Healthcare enhances engagement

**Allows more flexibility** in self-scheduling virtual and in-person appointments.

**Creates a seamless platform** for wellness guidance.



**Integrates virtual health assistants** for triaging and scheduling.



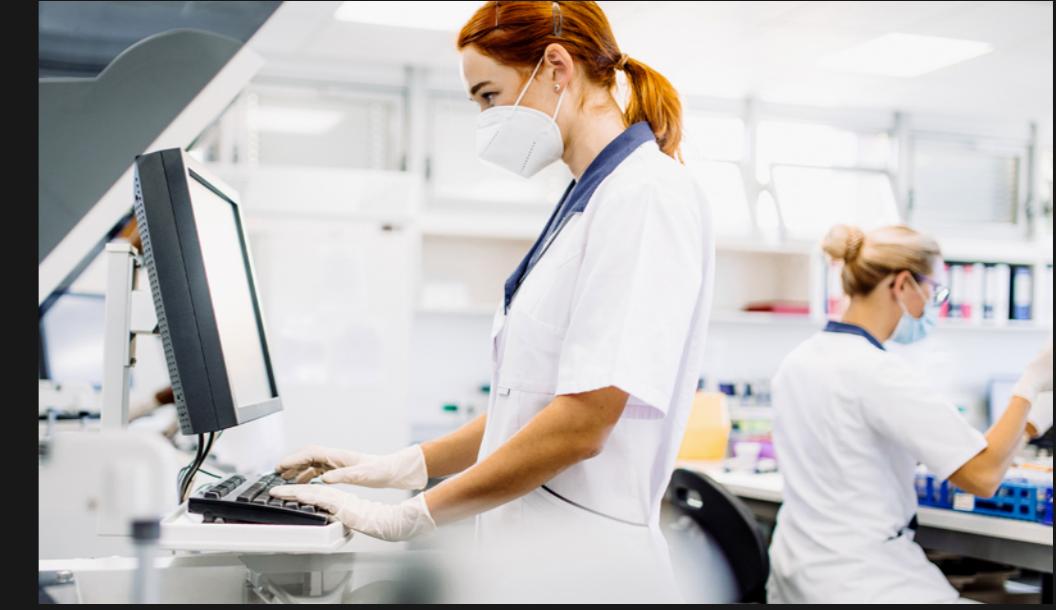
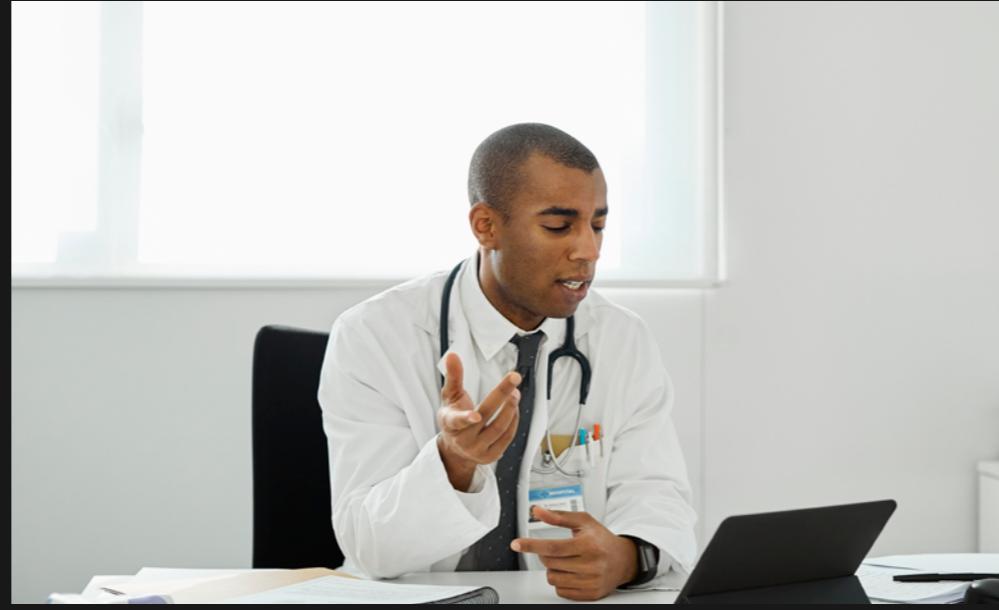
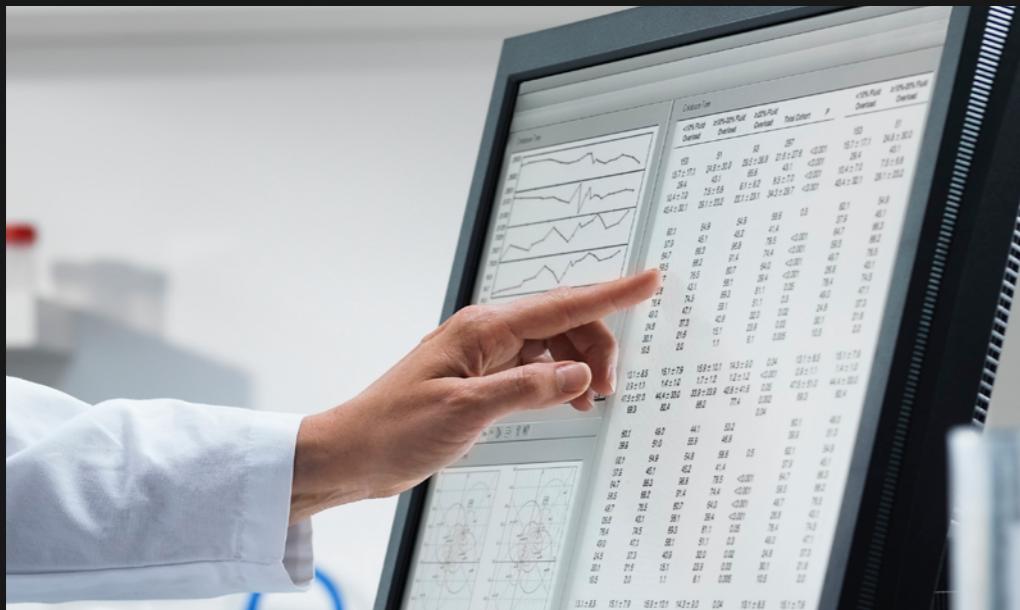
## The advantages

- **Health teams** can see what appointments are scheduled.
- **Support staff** can see who's waiting in the virtual clinic patient queue.
- **Health teams** can seamlessly move to the next visit.

# Microsoft Cloud for Healthcare in action

From modernizing data platforms to enabling virtual care, Microsoft Cloud for Healthcare is helping drive digital transformation for healthcare systems, research hospitals, and public health agencies around the world.

To learn more, check out these customer stories.



## PATIENT ENGAGEMENT IN ACTION

Providence



## ENHANCING VIRTUAL CARE

Lakeridge Health



## IMPROVING PATIENT ASSESSMENTS

Helsinki University Hospital

## PATIENT ENGAGEMENT IN ACTION

### Providence eases hospital overcrowding and modernizes its data platform

Providence is one of the largest health systems in the nation, delivering high-quality healthcare to a variety of diverse communities. To drive digital transformation, Providence decided to transition from an on-premises data ecosystem to a simple, cloud-based data platform.

Providence embarked upon a five-year strategic alliance with Microsoft, deploying Microsoft Cloud for Healthcare solutions to support its new Providence Healthcare Data Platform and build a real-time data streaming solution to address overcrowding.



[Discover more details about Providence's journey to better patient engagement](#)



"We want to digitally enable health for a better world, and we're doing that now through a strategic alliance with Microsoft and by unleashing the power of the cloud through Azure Databricks."

**Brett MacLaren,**  
Chief Data Officer, Providence



## ENHANCING VIRTUAL CARE

### Lakeridge Health keeps patients and staff safer

Faced with the disruptive challenges of the COVID-19 crisis, Canadian primary healthcare provider Lakeridge Health sought to increase virtual care capabilities to limit patient and staff exposure to the virus. By adapting Microsoft Cloud for Healthcare solutions into a new paradigm, Lakeridge not only increased virtual visits but also created a new electronic medical record platform.

By adding analytics to its system, Lakeridge was able to more effectively triage patients based on reported symptoms—a necessity during the early days of COVID-19 when testing supplies, swabs, and personal protective equipment were in short supply.

Lakeridge also used Microsoft Teams for virtual assessments and clinics, allowing medical workers to better understand the state of each patient's symptoms. This kept those who likely didn't have the virus safer by allowing them to stay at home.

"We used a combination of our Microsoft 365-powered bookings app and Teams to spin up over 30 new virtual clinics in just weeks. We were creating a new clinic every couple of days."

**Andrew Kelly,**  
Director of IT Strategy and Innovation,  
Lakeridge Health



[Read more about how Lakeridge Health leveraged cloud solutions to better connect with patients](#)

## IMPROVING PATIENT ASSESSMENTS

### Health bots drive improvements in patient self-assessment at Helsinki University Hospital

Helsinki University Hospital (HUS), Finland's largest healthcare provider, needed an innovative way to test, track, and trace the spread of COVID-19. The solution? HUS deployed a variety of tools from Microsoft Cloud for Healthcare to create a health bot service that allows citizens to take a self-assessment.

The bot-driven assessment includes booking tests, disseminating results, and contacting those who may be in danger of infection. Thanks to Microsoft's robust security measures, the collected data is compliant with security and privacy legislation. The data can then be shared to help researchers understand how the virus is contracted and spread.



[Discover how HUS improved patient outcomes with Microsoft Cloud for Healthcare](#)



**"The key is having all these services as part of Microsoft Cloud for Healthcare, and therefore natively interoperating. So, we can think of them as different tools from a magic toolbox."**



**Aki Puustjärvi,**  
IT Development Manager, HUS

# 02 Accelerating healthcare innovation





## AI, machine learning, advanced analytics, and research

In the healthcare, pharmaceutical, and life sciences industries, digital cloud transformation is enabling companies to drive faster clinical advancements. By using **AI to unearth new insights, advance discoveries, and modernize development, researchers, medical professionals, and their partners** can improve health outcomes globally. Microsoft is enabling organizations to **unlock clinical innovation and streamline business processes for payors**. Security capabilities keep data safe and resilient while not interfering with the agile data flow necessary to facilitate quick, accurate results.



# How Microsoft Cloud for Healthcare accelerates innovation

**Deploys AI and machine learning solutions** to transform and boost research projects

**Creates focused data analytics models** to enhance provider-patient connections for improved health outcomes



**Helps streamline operational processes** from the back office to the frontline

# Microsoft Cloud for Healthcare in action

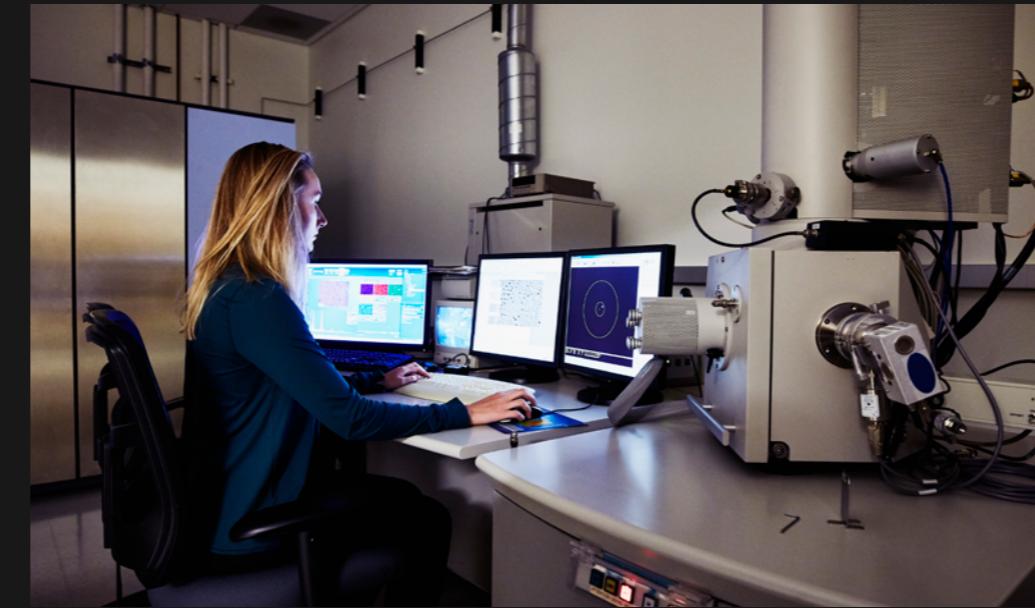
From advancing cancer research to deciphering genomes, global healthcare organizations employing Microsoft Cloud for Healthcare are on the cutting edge of advancements in the healthcare industry.

[To learn more, check out these customer stories.](#)



[ALL ABOUT DATA](#)

**BC Cancer**



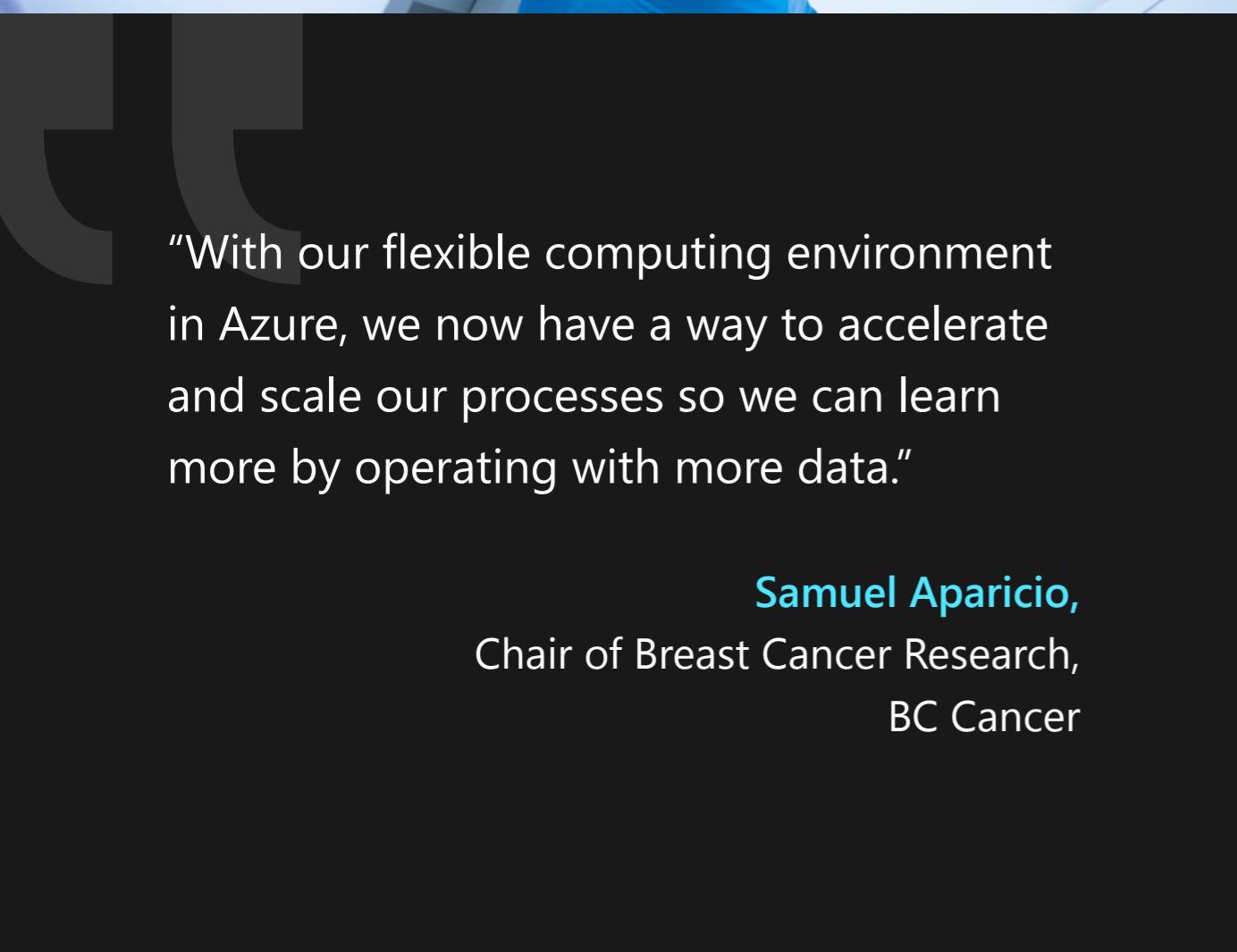
[USING AI TO CUT COSTS](#)

**National Health Service**



[MEASURING EVERY BREATH](#)

**Project Fizzyo**



“With our flexible computing environment in Azure, we now have a way to accelerate and scale our processes so we can learn more by operating with more data.”

**Samuel Aparicio,**

Chair of Breast Cancer Research,  
BC Cancer

## ALL ABOUT DATA

### How BC Cancer uses machine learning to accelerate cancer research

The modern struggle against cancer is fought with data. Canadian research group BC Cancer has led that data battle going back to 1950. By studying individual cancer cells from thousands of patients, scientists there create single-cell genome sequencing protocols to better understand the various types of cancers, their resistance to treatments, and how targeted treatments can eradicate cancerous T cells. This process requires copious quantities of data.

To handle the lab's tremendous volume of data, BC Cancer uses AI and machine learning algorithms to locate patterns within the genome sequencing. As such, researchers develop virtual machines that can pinpoint dangerous mutations within the genome. On average, lab officials say using Microsoft Cloud for Healthcare costs about 10 percent of a normal virtual machine.



[Learn more about how researchers are advancing against cancer with the power of data](#)

## USING AI TO CUT COSTS

### The National Health Service augments taxpayer value and promotes better health outcomes

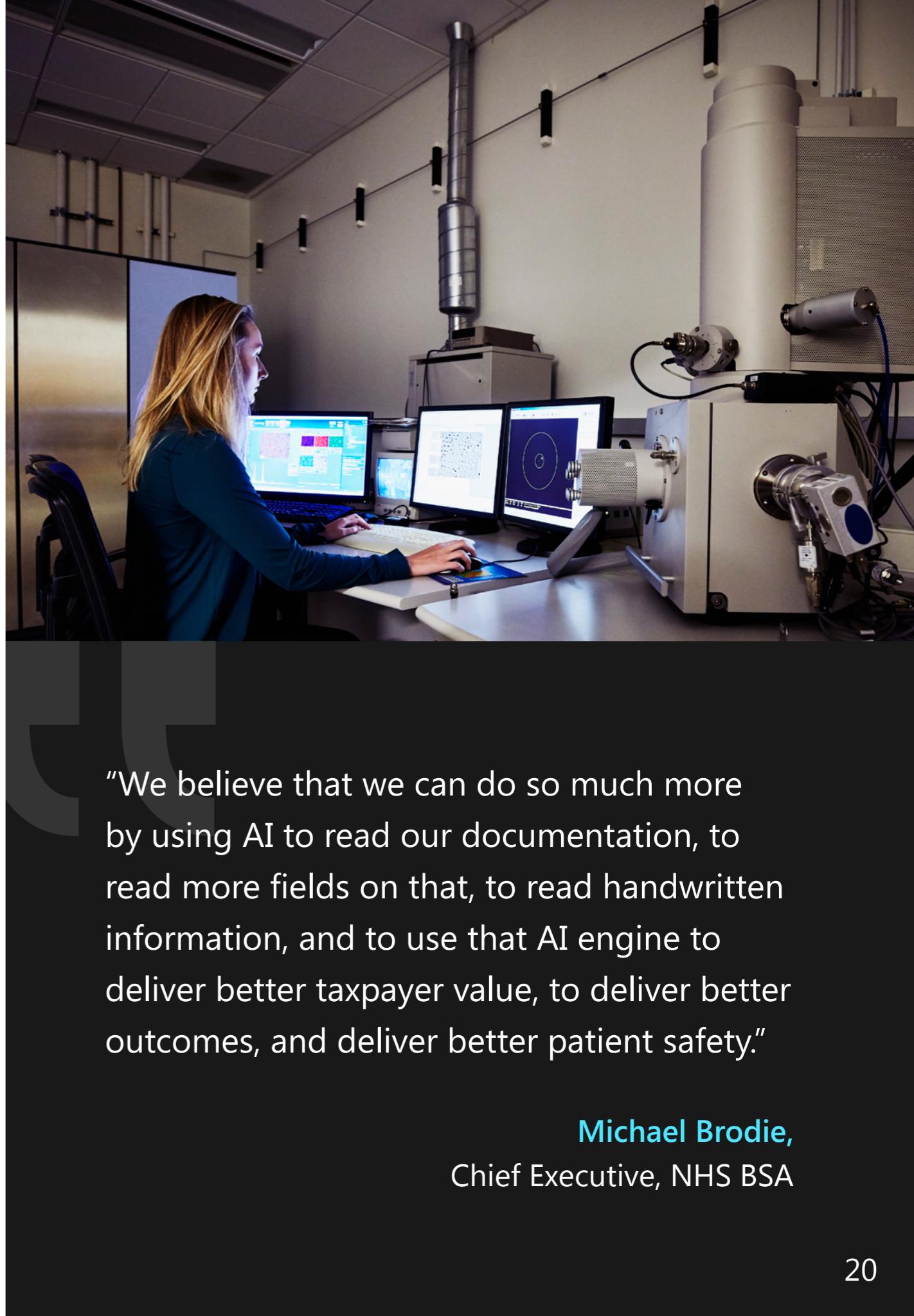
Great Britain's National Health Service Business Services Authority (NHS BSA) is a special agency that provides a range of critical, central services to NHS organizations, contractors, patients, and the public—everything from prescription services to dental management to health statistics.

Within its prescription service, NHS BSA sought a new way to streamline the processing of 54 million prescription inputs per month—30 million of which are on paper and must be manually keyed in.

By using Microsoft Cloud for Healthcare, operators can now feed handwritten forms into the new system for scanning and processing. NHS BSA captures the same data faster with lower costs, and officials report a 90 percent confidence rate from that data.



[Watch NHS BSA explain how Microsoft's innovative machine learning and AI solutions are cutting costs and improving patient care](#)



"We believe that we can do so much more by using AI to read our documentation, to read more fields on that, to read handwritten information, and to use that AI engine to deliver better taxpayer value, to deliver better outcomes, and deliver better patient safety."

**Michael Brodie,**  
Chief Executive, NHS BSA



"It's a miracle that data is pouring in, the likes of which we've never seen before. ... We can measure every single breath, of every single treatment, of every single day [while playing a game]."

**Eleanor Main,**  
Professor of Physiotherapy,  
University College London

## MEASURING EVERY BREATH

### Project Fizzyo brings new insight to cystic fibrosis research

Cystic fibrosis is a chronic, life-limiting condition that affects approximately 1 in 2,500 babies. Over the decades, improved preventive and treatment measures have improved life expectancy to an average of 41 years.

London-based Project Fizzyo brings together engineers and computer scientists to improve physiotherapy care for children with cystic fibrosis through the power of computer gaming.

The partnership developed the Fizzyo device, a wireless sensor that connects to existing cystic fibrosis physiotherapy equipment, turning breaths into controls for video games. This gamification allows physiotherapists to easily measure every breath during treatments throughout the day. Data scientists apply machine learning and AI tools to create focused advice for individual patients, improving outcomes and quality of life.



[Watch physiotherapist Nicky Murray talk more about the gaming device](#)

# Advancing clinical and operational analytics



## Improving vaccine distribution with big data

The vaccine supply chain is a key factor in overall population health. Vaccines need to be kept at specific temperatures to ensure potency and longevity, and that requires tracking the shipment of individual pallets of medicine as well as their temperature during transport. [Using big data analytics in Microsoft Cloud for Healthcare, pharmaceutical producer Merck analyzed 14 years of sensor data to determine the factors that could lead to unwanted temperature increases.](#) The result is a web portal that the business group can use to predict temperature changes, [improving the quality of vaccine transport.](#)



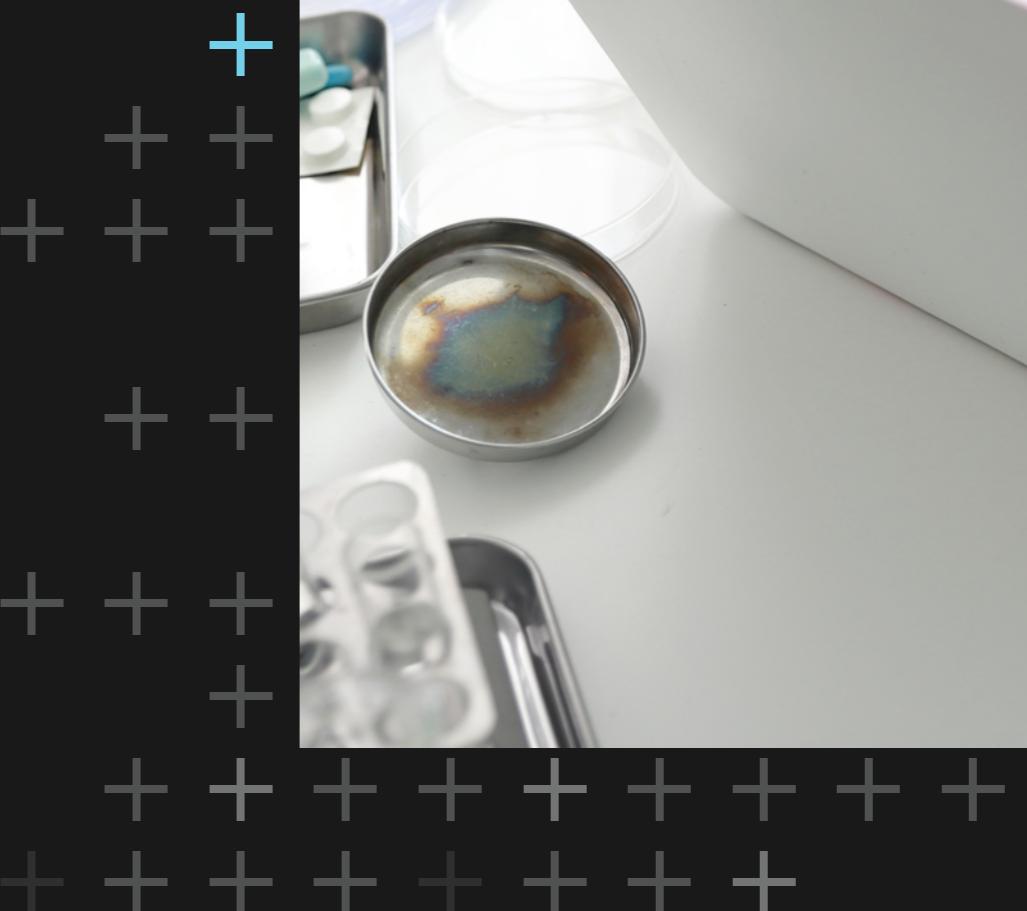
**60%–70%**

of the world's medical decisions are made with support from [in vitro diagnostics solutions.](#)<sup>2</sup>

# Extracting new insights with Text Analytics

With the introduction of Text Analytics in Azure Cognitive Services, Microsoft is developing a premier tool that enables developers to process and **extract insights from unstructured medical data** covering clinical notes, clinical trial protocols, and more.

Text Analytics for health enables pharmaceutical researchers, data analysts, medical professionals, and software vendors in the healthcare and biomedical space to unlock a wide range of scenarios. For example, a customer could produce analytics on historical medical data and create prediction models from the process. This helps match patients to clinical trials and can also improve clinical quality reviews.



# Microsoft Cloud for Healthcare in action

Microsoft Cloud for Healthcare is advancing new solutions in mixed-reality technology and speech recognition software to optimize care for clinicians.

[To learn more, check out these customer stories.](#)



TOOLS FOR TOMORROW

Alder Hey Children's Hospital



OPTIMIZING CARE

Nuance Communications

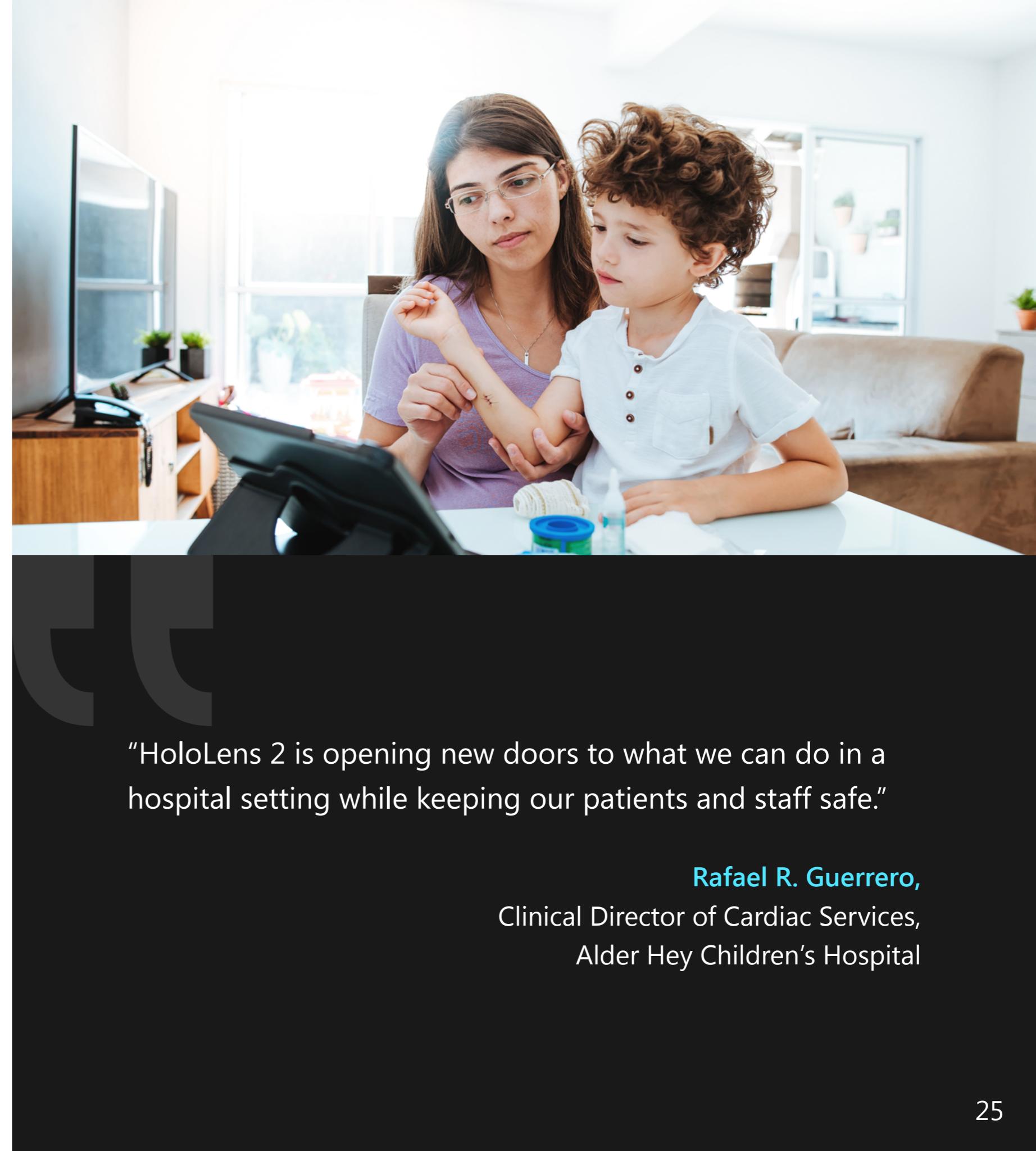
## TOOLS FOR TOMORROW

### Mixed-reality tech advances knowledge sharing during a crisis

One of Europe's biggest and busiest children's hospitals, Alder Hey Children's Hospital, deployed Microsoft HoloLens 2 to allow surgeons to connect with colleagues in remote locations to analyze and agree upon clinical strategies for operations during the initial days of the COVID-19 outbreak.



[Learn how HoloLens 2 connects medical teams in remote locations](#)



"HoloLens 2 is opening new doors to what we can do in a hospital setting while keeping our patients and staff safe."

**Rafael R. Guerrero,**  
Clinical Director of Cardiac Services,  
Alder Hey Children's Hospital



## OPTIMIZING CARE

### Cloud-based speech recognition software helps health teams deliver optimized care

Nuance Communications provides businesses and consumers with technologies such as speech recognition, computer-assisted health team documentation, computer-assisted clinical documentation improvement, and other solutions.

As speech recognition technology becomes more advanced, Nuance needed to migrate its back-end servers to a cloud infrastructure that could handle increased scalability.

Nuance deployed Microsoft Cloud for Healthcare to deliver its speech recognition software with enhanced responsiveness and performance across devices.



[Discover how Nuance deployed speech recognition solutions](#)

“Speech recognition has taken off in healthcare partly because the technology is getting so much better, with advances in machine learning and artificial intelligence, but also because of new healthcare delivery models.”

**Jonathon Dreyer,**  
Senior Director of Solutions Marketing,  
Nuance Communications

# OP3

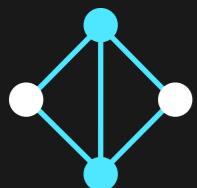
## Empowering health team collaboration



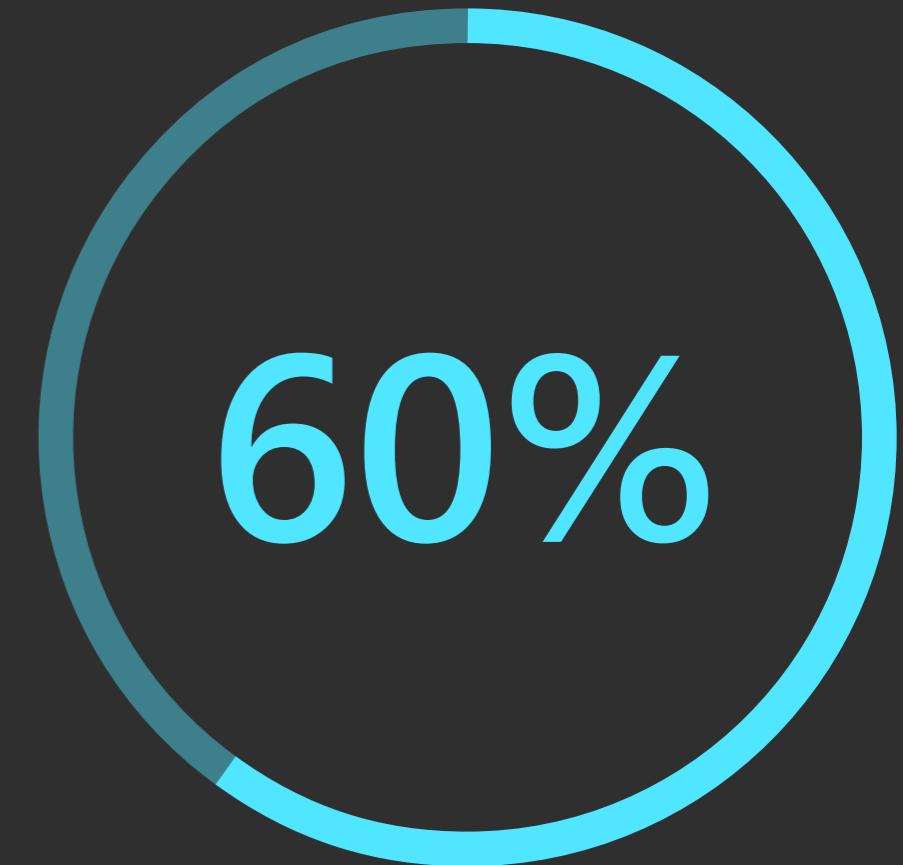
# Using virtual tools, telehealth, and teamwork to provide accessible care in and out of the hospital

If healthcare organizations today can make it faster and easier to share secure health data, collaborate, and generate insights that improve patient outcomes, imagine what can be done tomorrow.

Adopting innovative solutions such as Microsoft Cloud for Healthcare **helps health teams coordinate care in real time, empowering them to communicate and collaborate in a single secure space, which in turn accelerates and improves decision-making and speeds up treatment time**. Combined with IoT technological advances, Microsoft Cloud for Healthcare is opening up new horizons of quality care for more people in more locations.



**Health team collaboration** is all about improving the ability to coordinate care in a secure environment and simplify complex workflow management. As these innovations unfold, it's also vital to build added resilience into data flows to defend against the threats of hacking or data consistency issues. By doing so, healthcare providers ensure a stable, reassuring environment of trust among clinicians and patients. In addition, payors and pharmaceutical companies can collaborate more safely with healthcare providers, knowing their data is secure and compliant.



By 2023, **60% of chronic disease pathways** will involve remote medical monitoring—**up from 10% today**.<sup>3</sup>

# How Microsoft Cloud for Healthcare empowers health team collaboration

**Enables providers, payors, and pharmaceutical companies** to use collaborative data integrated across systems and apps

**Helps generate** secure, scalable data ingestion from IoT medical devices



**Builds a 360-degree patient view** to provide better insight into medical situations and needs

# Microsoft Cloud for Healthcare in action

Microsoft Cloud for Healthcare leverages collaborative tools like Remote Desktop to scale vital processes that can handle disruptive public health events.

[To learn more, check out these customer stories.](#)



[COLLABORATION ANYWHERE](#)

NLCHI



[QUICKER DEPLOYMENT, GREATER MOBILITY](#)

Caregility

## COLLABORATION ANYWHERE

### NLCHI ramps up remote work with Remote Desktop

The Newfoundland and Labrador Centre for Health Information (NLCHI) in Canada develops data and technical standards, maintains key health databases, and supports health research.

Just before the early days of the global outbreak of COVID-19, roughly 400 of the province's 20,000 healthcare workers regularly worked remotely using VPN connections and corporate laptop computers. By March 2020, COVID-19 case counts and admissions had accelerated quickly, and NLCHI needed to enable remote work just as quickly for as many workers as possible.

Because NLCHI uses collaborative tools in Microsoft Cloud for Healthcare that allow multiple concurrent interactive sessions, the organization was able to connect 1,700 healthcare workers to their Windows desktops and apps with their own devices.



[Learn more about NLCHI's remote collaboration journey](#)



*"The ability to scale down automatically helps us save on compute costs for Azure. ... We built a sustainable solution that's fiscally responsible and will help us recover some of its costs."*

**Rodney Keough,**  
Data Center and Unified Communications  
Manager, NLCHI



"When the pandemic began in March, we had a need for an explosion in data capacity. We were able to expand our capacity more than 10 times in a matter of days, which none of our competitors were able to do."

**Parth Natarajan,**

Vice President of Advanced Engineering Hosting,  
Yorktel (Caregility parent company)

## QUICKER DEPLOYMENT, GREATER MOBILITY

### Caregility uses Microsoft Azure to scale rapidly

New Jersey-based Caregility provides solutions that drive healthcare workflows for inpatient (ICU, acute care, and emergency department) and outpatient (virtual care or telemedicine) providers.

As COVID-19 outbreaks grew last year, the company stepped up to address issues of scale as more clients sought to deliver healthcare solutions virtually. Its datacenter at the time could not handle the influx of healthcare systems that needed increased bandwidth to deliver virtual telehealth solutions.

Caregility leaders decided to move the datacenter to the cloud, using Microsoft Cloud for Healthcare to scale and support the huge demand created by COVID-19.



[Learn how Microsoft Azure improved scalability for Caregility](#)

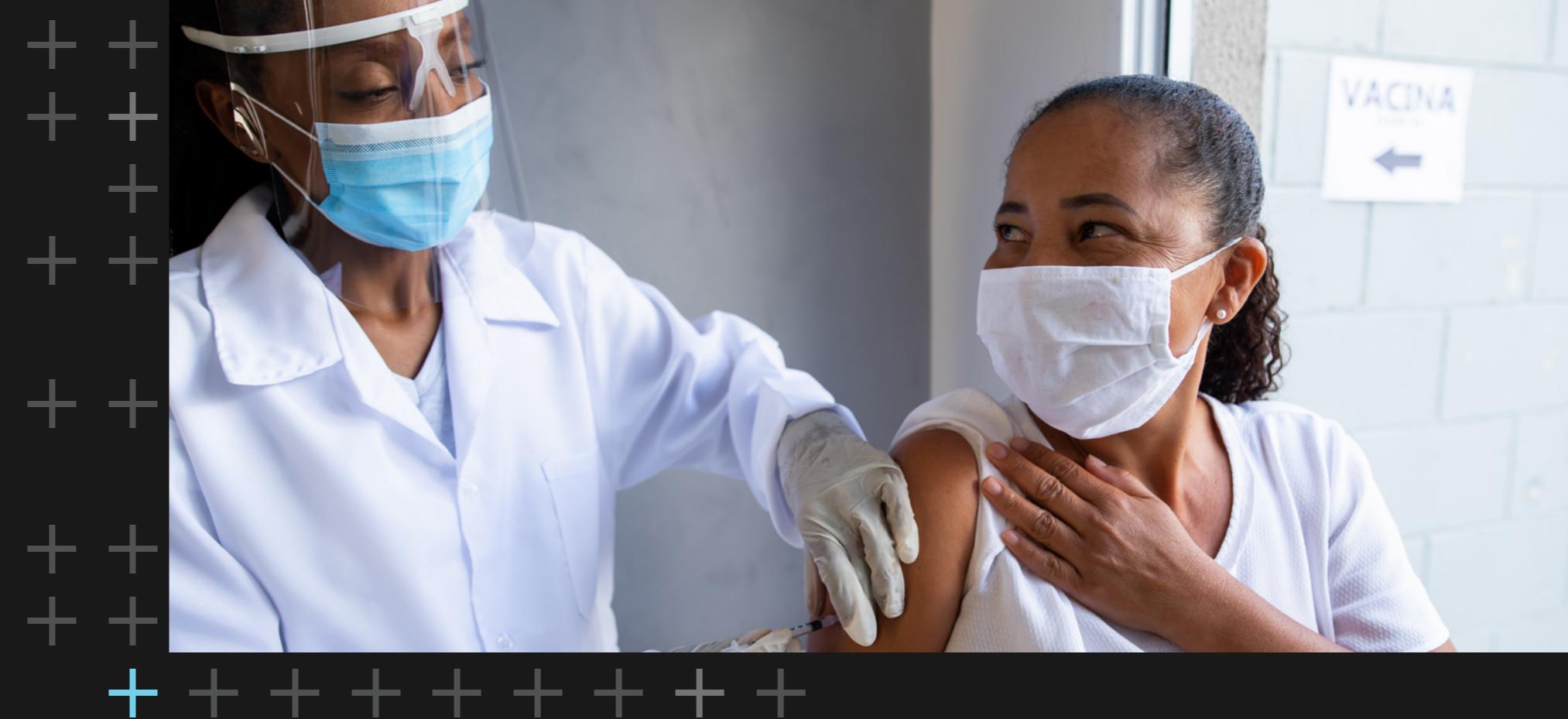
# Improving clinical and operational insights



# Siloed health data systems can make it difficult to access a complete view of a patient's or population's data

Recently, the conversation has been changing as healthcare organizations and technology companies alike recognize that bringing **all this siloed data together could improve clinical, financial, operational, and population health analytics, essentially transforming the delivery of healthcare.**

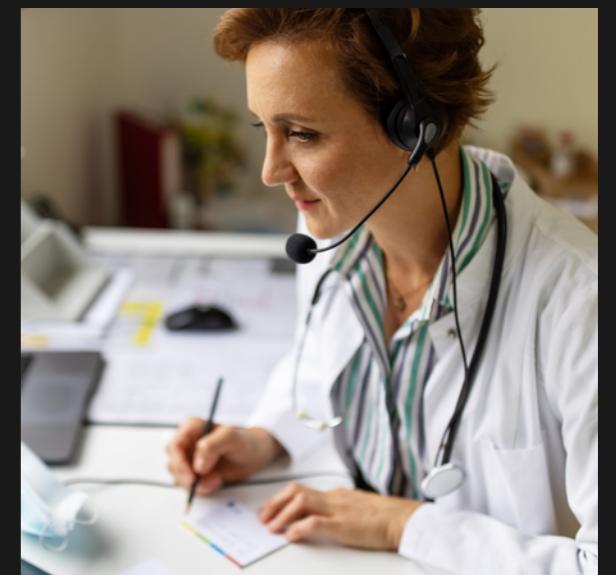
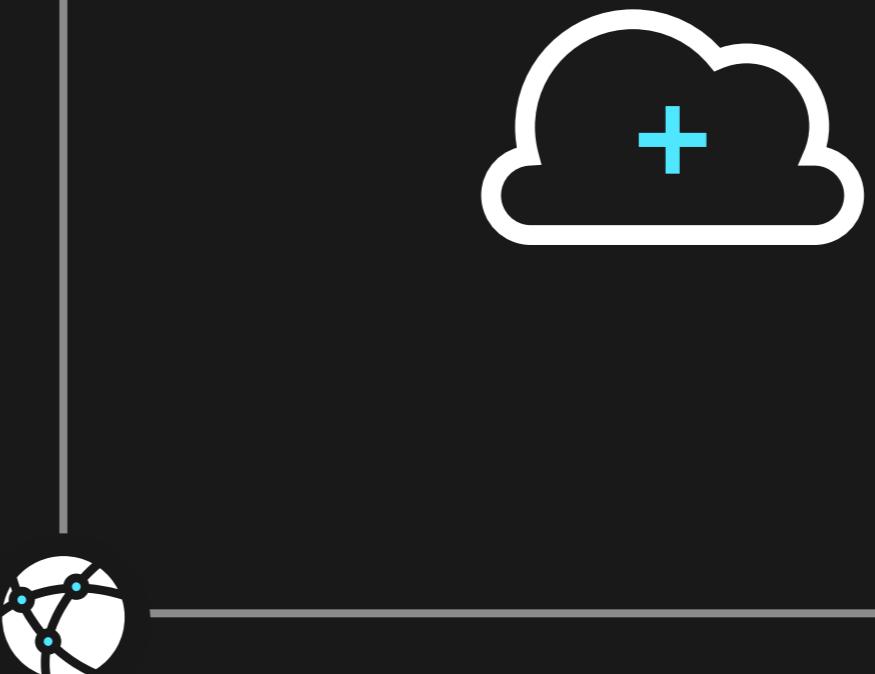
As such, the integration of previously **siloed data depends on choosing a solution that brings together trusted and integrated capabilities** to customers and partners, enhances patient engagement, empowers health team collaboration, and improves clinical and operational data insights.



# More connected and secure digital infrastructure drives population health anywhere

Historically, healthcare systems have been siloed by design—data is often segregated based on electronic health records, financial and billing systems, customer relationship management for marketing, and more.

Now, interoperability standards could change that.



# How Microsoft Cloud for Healthcare improves clinical and operational insights

**Deploys AI-driven predictive analytics** for data modeling, risk assessment, and decision support



**Extends patient data** with financial, operational, and medical device information to leverage insights for faster decision-making and help improve patient outcomes

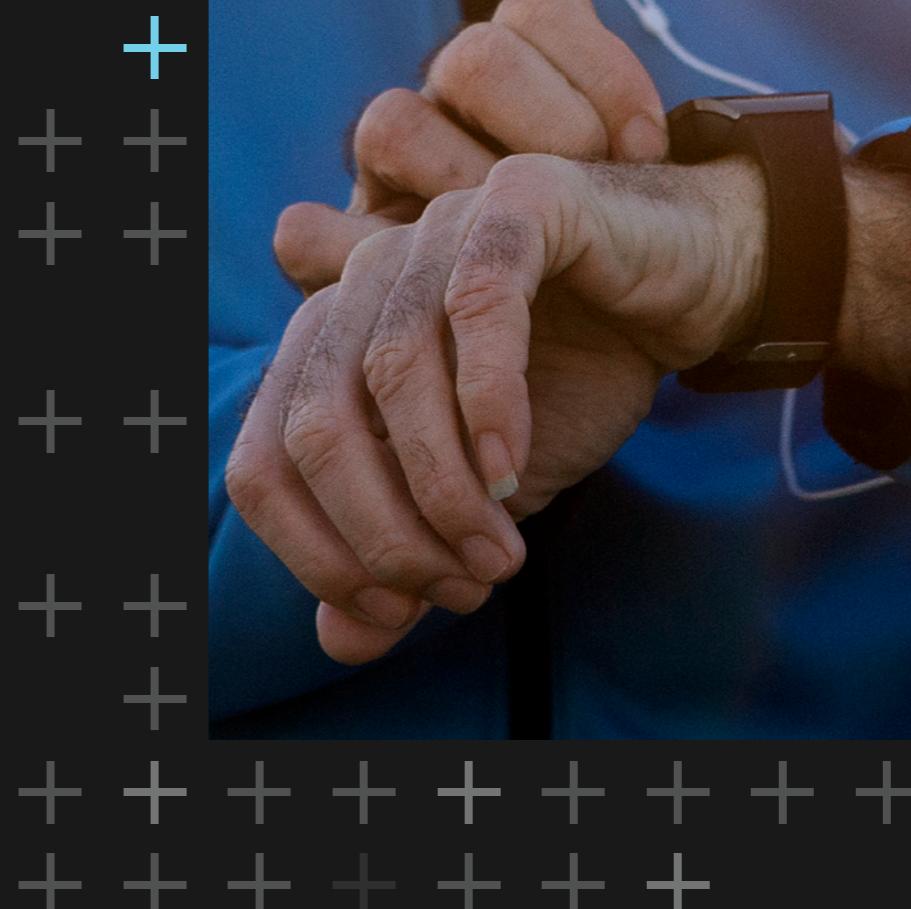
**Analyzes and quickly mobilizes clinical and operational data** for reporting, real-time assessment, and ongoing quality improvement

**Empowers providers to make decisions quickly** with all relevant patient data and history in one 360-degree dashboard

# But what about data interoperability?

Data interoperability is at the core of Microsoft Cloud for Healthcare, with a deep focus on security, cloud connectivity, and compliance. **That helps healthcare organizations normalize, transform, and enrich data while also opening up possibilities** across AI solutions, machine learning productivity, analytics, and secondary use of data. The power of magnified and optimized data personalizes healthcare, fueling data-based care decisions and informing research and analytics.

Microsoft Cloud for Healthcare embraces Fast Healthcare Interoperability Resources (FHIR), the **interoperability standard for the secure and private exchange of health data**. Microsoft Cloud for Healthcare provides cloud-based tools to promote and execute the secure and consistent exchange and control of protected health information across the cloud using FHIR standards. As such, **health organizations can quickly connect existing data sources, such as electronic health record systems or research databases, and accelerate machine learning capabilities with their data**.



# Microsoft Cloud for Healthcare in action

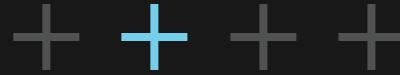
Microsoft Cloud for Healthcare is helping healthcare organizations connect innovative systems of tomorrow by using cutting-edge cloud solutions that are available today.

To learn more, check out these customer stories.



ACCESSING EXPERTISE  
ACROSS THE GLOBE

Mount Sinai



UNIFYING DATA  
ACROSS APPS

Rx.Health



A SIMPLER PATH  
**Walgreens Boots  
Alliance**



IMPROVED OUTCOMES  
**UCLA Health**

## ACCESSING EXPERTISE ACROSS THE GLOBE

### Mount Sinai and Ugandan surgeons collaborate in real time, bringing life-saving expertise to rural communities

Mount Sinai Health System in New York empowers patients by helping them access the expertise of medical specialists and surgeons who use cutting-edge techniques and state-of-the-art technology to provide an amazing level of care. However, such access is all but unobtainable for many people—like patients in Uganda, who are among the 5 billion people on the planet who don't have access to simple surgical operations.

Now, patients can travel to the Kyabirwa Surgical Centre in Eastern Uganda to receive safe, affordable surgeries from local surgeons who are connected to Mount Sinai counterparts 7,000 miles away in New York. Using Microsoft Cloud for Healthcare, providers like Joseph Okello Damoi, Head Surgeon at the Kyabirwa Surgical Centre, consult with colleagues in New York on cases and even share real-time views from the operating room.



[Learn more about Mount Sinai's collaboration within underserved nations](#)



"Microsoft Teams, Dynamic 365 Remote Assist, and HoloLens 2 allow us to bring our knowledge into a community, share that knowledge, and make it part of that surgical community on a long-term basis. It helps us create a sustainable program of surgical care."

**Dr. Michael L. Marin,**  
Chairman of the Department of Surgery and  
Surgeon-in-Chief, Mount Sinai Health System



“We needed a solution that would match our commitment to monitor and offer help to patients continuously. Azure complements that vision with its easy scalability and ease of management. And the help we’ve received from Microsoft has been commendable.”

**Sarthak Kakkar,**  
Chief Solutions Architect,  
Rx.Health

## UNIFYING DATA ACROSS APPS

### Rx.Health creates a scalable healthcare solution with Azure-based technology

Since very few patients spend an abundant amount of time at in-person visits, providers struggle to maintain visibility into patients’ normal daily activities—visibility that could enhance healthcare outcomes.

Rx.Health tackled this challenge by creating a digital health unification solution that provides visibility into a patient’s day-to-day life without interrupting it. Now, doctors can recommend a set of mobile apps to patients that focus on wellness areas such as mindfulness, exercise, and diet. Data gained from these apps can then be used to provide more holistic healthcare. To avoid the scalability issues that can come from unifying so many disparate apps, Rx.Health turned to Microsoft Cloud for Healthcare to create a solution that matches general patient data with corresponding electronic health record data to create a complete profile for each patient and unify data from across several apps.



[Learn how Rx.Health scaled up app deployment](#)

## A SIMPLER PATH

### Walgreens Boots Alliance boosts market-driven solutions for customers

The current healthcare market is a complex web of providers, payors, pharmaceutical companies, and consumers that complicates patients' paths to the care they need. Walgreens Boots Alliance is working with Microsoft to create a research and development effort that builds market-driven solutions for customers—connecting patients and their healthcare data with Walgreens stores. With this streamlined process, patients will be able to access needed services and care reminders, assured that their privacy is protected.

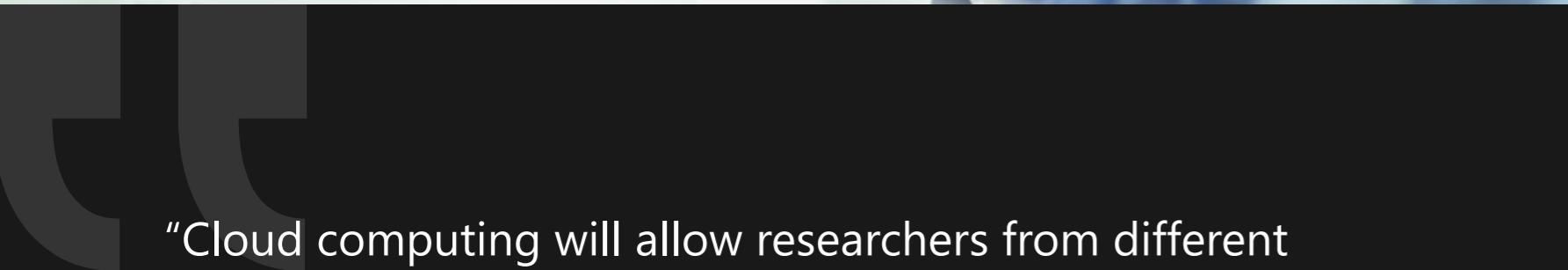


[Learn how Walgreens Boots Alliance is streamlining patient care features](#)



**“Our strategic partnership with Microsoft demonstrates our strong commitment to creating integrated, next-generation, digitally enabled healthcare delivery solutions for our customers, transforming our stores into modern neighborhood health destinations and expanding customer offerings.”**

**Stefano Pessina,**  
Executive Vice Chairman and Chief Executive Officer,  
Walgreens Boots Alliance



“Cloud computing will allow researchers from different fields and institutions to collaborate, joining data sets and software from different formats that could not previously be integrated in a simple way.”

**Paul Boutros,**  
Director of Cancer Data Science,  
UCLA Jonsson Comprehensive Cancer Center

## IMPROVED OUTCOMES

### **UCLA Health transforms clinical and research data**

With the digital transformation of healthcare comes a massive tide of data that can help diagnose diseases and treat patients with more personalized care if institutions have the tools to bring it together and analyze it. UCLA Health deploys Microsoft Cloud for Healthcare and AI solutions to synthesize vast amounts of clinical and research data to speed medical discoveries and improve patient care. UCLA’s vision is to allow researchers from different fields and institutions to collaborate, joining data sets that previously could not be integrated to solve some of the world’s biggest healthcare questions—while still protecting the privacy and security of the data itself. By connecting health data in the cloud in an interoperable way and using a variety of analysis tools, medical researchers and doctors can reach insights faster.



[Discover how UCLA Health is leading digital transformation in data](#)

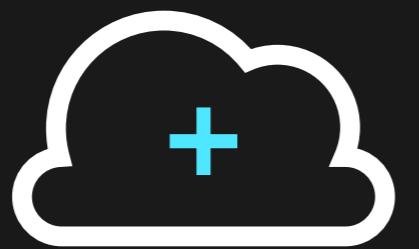


## A future worth imagining

As the pace of innovation in healthcare accelerates, new technologies challenge our perception of what's possible for expanding access to quality, personalized care for patients around the world. Given the promising advancements available today and the ambitious projects on the way tomorrow, better healthcare is becoming less imagined and more realistic every day.



**Microsoft runs on trust and is committed to being a partner that healthcare organizations can rely on as they digitally transform.**



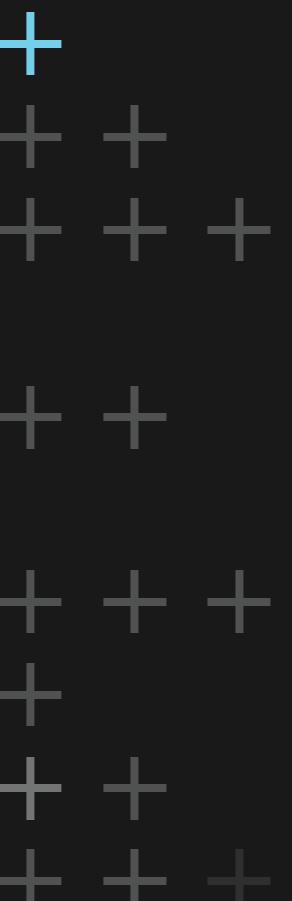
# 05 Transforming healthcare in the cloud





# Making healthcare more accessible and efficient

In an ever-changing global healthcare landscape, organizations must pivot to **embrace enhanced capabilities** in order to adapt to disruption while also safeguarding patients, care teams, and assets. In doing so, the global healthcare community—hospitals, researchers, pharmaceutical providers, and payors—will **drive innovation to make healthcare more accessible, efficient, and affordable for everyone**.



Microsoft is committed to making this world a reality with our evolving varieties of cloud solutions that provide digital capabilities with insights, tools, and resources to drive better experiences, insights, and care.

**How? Through Microsoft Cloud for Healthcare.**

# Microsoft Cloud for Healthcare

Capabilities enabling better experiences, better insights, and better care

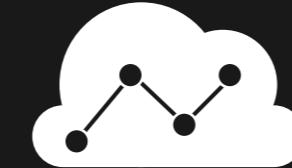
## Enhance patient engagement

- Personalized care
- Patient insights
- Virtual health



## Empower health team collaboration

- Care team collaboration
- Care coordination
- Continuous patient monitoring



## Improve clinical and operational insights

- Interoperability
- Operational analytics
- Clinical analytics



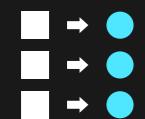
## Protect health information

- Security
- Compliance
- Privacy

# How Microsoft Cloud for Healthcare is transforming the industry



**Partners can build and extend** Microsoft Cloud for Healthcare as a platform to improve existing software as a service (SaaS)–based or platform as a service (PaaS)–based solutions.



**Organizations can augment** data and AI workflows, business productivity, and process workflows.



**Customers own and control** their data.



**Providers, payors, and pharmaceutical companies can access** secure, interoperable data access across structured and unstructured data.



# Leading a transformation in innovative healthcare

Recent events have hastened the technological transformation of the healthcare world—from patient care to team coordination to data resiliency and flow.

Healthcare professionals are **leading the charge to transform how, when, and where innovative digital cloud tools are deployed in the years to come**. Innovators are finding fresh ways to improve care access, expand critical care, support the well-being of their workforces, and **keep workers and patients safe**.

With future-forward solutions like Microsoft Cloud for Healthcare, Microsoft is joining our healthcare partners in **leading this global effort to improve every aspect of care delivery and data insights**.

Microsoft is committed to **leveraging technology that drives inclusive growth, nurturing a more sustainable future for all**. Microsoft Cloud for Healthcare is a vital component in Microsoft's mission to empower every person and organization to build that future together.



Learn how your healthcare organization can improve and expand care, team management, and insight analysis with **Microsoft Cloud for Healthcare**



# Sources

<sup>1</sup> Karalee Close, Michael Grebe, Phillip Andersen, Varun Khurana, Marc Roman Franke, and Roelant Kalthof, "[The Digital Path to Business Resilience](#)," Boston Consulting Group, July 6, 2020.

<sup>2</sup> Moska Najib, "[Reimagining Health: Diagnostics in a New Era](#)," *Roche Diagram*, 2019.

<sup>3</sup> Anurag Gupta, [Market Insight: Target U.S. IoT Remote Medical Monitoring Market Now to Attain Market Growth](#), Gartner Research, October 23, 2019.

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