




OPINIONS, PERSPECTIVES, COMMENTARY

2026 Telehealth Predictions: Multidisciplinary Experts Weigh In

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Abstract

The rapid expansion of Virtual Hospital and Hospital-at-Home models has created new opportunities to detect early clinical deterioration in patients receiving acute care outside traditional hospital settings. Advances in continuous remote monitoring now enable the real-time collection of multimodal physiological data, including blood pressure, heart rate, oxygen saturation, respiratory rate, and hydration status. Here, the contributors examine how artificial intelligence (AI) can analyze the dynamic and interdependent relationships among these parameters to identify early, preclinical markers of physiological decompensation.

Rather than relying on isolated measurements or static alert thresholds, AI-driven models can detect subtle predictive trends, temporal patterns, and cross-parameter interactions that precede overt clinical decline. By shifting from reactive monitoring to anticipatory risk stratification, such approaches support earlier clinical intervention, personalized escalation pathways, and more efficient use of healthcare resources. The integration of predictive analytics into virtual care workflows has the potential to significantly enhance patient safety, clinical confidence, and scalability of home-based acute care, positioning AI-enabled monitoring as a foundational capability for next-generation virtual hospitals.

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Preclinical Determinants in Remote Monitoring

The expansion of home-based acute care, commonly referred to as the Virtual Hospital, represents one of the most significant paradigm shifts in contemporary healthcare delivery. Enabled by advances in telemedicine, wearable biosensors, and continuous remote patient monitoring, this model allows clinically stable yet high-risk patients to receive hospital-level care within their home environment. By 2026, Virtual Hospital and Hospital-at-Home programs have moved beyond pilot phases into scaled deployment across multiple health systems, placing renewed emphasis

on patient safety, early detection of deterioration, and operational resilience in non-traditional care settings.

Despite the proliferation of monitoring technologies and the availability of high-frequency physiological data, clinical decision-making in remote care continues to rely largely on traditional diagnostic frameworks designed for episodic, in-person assessment. Parameters such as blood pressure, heart rate, oxygen saturation, respiratory rate, temperature, fluid balance, and mobility trends are typically interpreted in isolation and assessed against fixed threshold values. While these thresholds remain clinically valuable, they do

not adequately capture the dynamic, interdependent, and time-varying nature of physiological change, particularly in patients managed outside the physical hospital.

Artificial intelligence (AI), and machine-learning approaches in particular, offer an opportunity to move beyond single-parameter alerts toward a more integrated and contextual understanding of patient physiology. Rather than focusing solely on absolute values, AI models can analyze evolving relationships between multiple parameters, identifying patterns of divergence, coupling, or instability that may signal early physiological stress. Subtle relational changes, such as a progressive rise in heart rate alongside a downward drift in oxygen saturation, or alterations in blood pressure coinciding with reduced activity and fluid intake, may represent early signatures of clinical decline that precede overt symptoms or conventional early warning triggers.

By examining temporal trends, cross-parameter correlations, micro-variations, and predictive trajectories, AI enables the identification of latent diagnostic signals that are not readily discernible through conventional clinical interpretation. This relational and longitudinal approach is particularly relevant for the early detection of deterioration related to sepsis, dehydration, pulmonary compromise, and cardiovascular instability in home-hospitalized patients. Predictive analytics can identify risk trajectories hours or days before traditional scoring systems or threshold-based alerts would be activated, allowing for earlier, more targeted intervention.

The ability to surface preclinical deterioration markers has significant implications for Virtual Hospital care, including improved clinical confidence, personalized escalation pathways, reduced unplanned hospital admissions, and enhanced patient safety. However, despite growing interest and early successes, the development of AI-driven diagnostic criteria for remote monitoring remains at an early stage. Key challenges include defining clinically meaningful relationships between physiological variables, validating predictive signatures across diverse patient populations, and embedding AI insights into workflows that are interpretable, actionable, and trusted by clinicians.

This article explores how AI can derive novel diagnostic constructs from continuous, multivariate monitoring data in Virtual Hospital settings. It examines methodological approaches to relational and temporal modelling, discusses the clinical relevance of emerging predictive patterns, and highlights the future potential of AI-enhanced diagnostic criteria to transform remote acute care from reactive surveillance to proactive, anticipatory management.

Mika Newton: xCures

Today, telehealth and digital health platforms are still grappling with healthcare's oldest problem of fragmented and inaccessible patient data. Clinicians waste hours searching for records, payers struggle to validate evidence, and patients bear the cost of inefficiency.

In 2026, we'll see the first real movement toward solving this challenge as interoperability mandates, payer pressure, and advances in GenAI begin laying the groundwork for what will ultimately become a longitudinal, auditable, and trusted source of patient truth, or what I call the "Golden Record." GenAI will not just extract facts from scattered documents; it will start to verify and operationalize multimodal evidence across structured data, unstructured notes, and images. These early steps will begin to collapse prior authorization timelines, automate quality reporting, and unlock new value in care delivery.

Just as importantly, telehealth will evolve into a strategic hub of continuous, data-driven care to power specialty pharmacy, life insurance, and coordinated provider systems. Healthcare innovation will no longer be about digitizing paper but about transforming data exhaust into actionable intelligence. In other words, we'll make real progress toward a future that finally marries efficiency with empathy.

Prediction: Hyper-Personalization Becomes the New Baseline in Patient Engagement

In 2026, AI won't just personalize—it'll anticipate. Digital health brands that deliver truly human-scale, predictive support will differentiate themselves in a crowded market. We'll see hyper-personalization evolve from a competitive edge to an expectation: messaging that feels less like automated outreach and more like an ongoing, empathetic conversation tailored to each patient's unique journey.

Voice agents such as Medisafe's Voice Intelligent Agents (VIA) are already bringing that vision to life. VIA complements our platform-based omnichannel interactions by delivering voice-driven, conversational touchpoints, enabling patients to engage verbally and receive support in the channel they prefer. Under the hood, our JITI (Just-in-Time Interventions) engine drives the entire system: it continuously analyzes behavioral data, persona profiles, and real-time signals to decide *which* message, *when*, *how*, and *through which channel* it should be delivered.

The emerging frontier is integration—blending voice, omnichannel technology, human support, and real-world data into a seamless patient companion. In 2026, success will go to those who can bridge the gap between clinical intent and lived experience, using AI not just to personalize but to *connect* at scale.

John Campbell, MBA, CHCIO, Principal, Campbell Healthcare Digital Associates, LLC

In the next year, the Centers for Medicare and Medicaid Services (CMS) is expected to approve a 5-year extension of the Hospital at Home waiver: one of the most significant shifts in healthcare delivery since the expansion of telehealth. This decision will open the door for hundreds of new Hospital at Home and Acute Care at Home programs

to launch nationwide. For health systems, it's a clear signal to invest in the infrastructure, workforce models, and digital capabilities needed to safely deliver acute-level care in the home, supported by evidence showing equivalent or better outcomes, higher patient satisfaction, and reduced costs.

For healthcare IT and technology solution providers, the implications are equally transformative. The extension will give healthcare solution providers the confidence to invest in the next generation of tools, including remote patient monitoring platforms, logistics orchestration systems, clinical documentation models, and secure connectivity frameworks, that make Hospital at Home operationally viable and scalable. The home will effectively become a node on the hospital network, demanding enterprise-grade interoperability, cybersecurity, and real-time data exchange.

This is a moment for health IT leaders to move from pilots to platforms, and to build a connected ecosystem that enables safe, reliable, and patient-centered care anywhere. The organizations and vendors that act now will shape the blueprint for the next decade of care delivery.

Srinivas Karri, Founder, AI Center of Excellence, AICOE.IO

Enterprise AI in healthcare has reached an inflection point—not because of technological breakthroughs, but because organizations finally understand that AI adoption is a business model challenge, not a technology problem. In 2026, I predict the collapse of traditional 12- to 18-month AI implementation cycles in favor of rapid prototyping methodologies delivering functional prototypes in days and production-quality applications in weeks.

The organizations that win will adopt a “prototype-first, fail-fast” approach: validate AI use cases through quick iterations before committing to full-scale deployment. This shift will expose the real bottleneck: not computing power or algorithms, but organizational readiness—governance frameworks that enable experimentation, change management processes that address clinician resistance, and business models that align incentives between technology vendors and healthcare providers.

I also predict regulatory clarity will accelerate adoption. Healthcare systems that proactively establish AI governance frameworks—defining liability boundaries, ensuring explainability, and embedding compliance into rapid iteration cycles—will see 3 to 5× faster ROI realization compared to those treating governance as an afterthought.

The implication: by Q4 2026, the market will segment into two categories—organizations that have operationalized rapid AI prototyping with embedded governance and those still locked in traditional procurement cycles. The gap between these groups will widen dramatically.

Anup Gupta, Associate Director, LTIMindtree

The coming year will mark a turning point for healthcare enterprises as they move from experimentation to operational maturity in AI-driven transformation. In 2026, organizations will shift focus from algorithmic innovation to governed intelligence, embedding transparency, bias control, and auditability into every stage of system design.

As frameworks such as the EU AI Act and evolving U.S. health AI guidance gain traction, compliance will increasingly depend on demonstrable fairness, traceability, and explainability. Health systems that treat governance as a design principle, not a regulatory checkbox, will set the standard for safe and responsible AI adoption. Governed AI will no longer be viewed as a compliance task but as a strategic differentiator. Enterprises will invest in validation pipelines that track how models are trained, tested, and deployed across diverse datasets. Independent audits and algorithmic transparency reports will become part of standard practice, providing clinicians and regulators with confidence in model behavior. This structural discipline will help move the industry from reactive governance to proactive assurance, where trust is built into the workflow instead of retrofitted after deployment.

At the same time, the digital health ecosystem will expand beyond isolated applications into connected data networks that power holistic patient understanding. The fusion of clinical, claims, behavioral, and social determinants data will enable true Patient 360° ecosystems, supporting personalized digital therapeutics, predictive interventions, and continuous engagement. With predictive and generative AI layered across these data platforms, care delivery will shift from reactive response to anticipatory health management—identifying risks before they escalate and improving both outcomes and efficiency across payers and providers.

This level of integration also requires a renewed commitment to privacy and interoperability. In 2026, the convergence of data standards, cybersecurity, and consent management will shape enterprise strategy as much as clinical priorities. Organizations will adopt secure architectures grounded in Fast Healthcare Interoperability Resources protocols, blockchain-enabled auditability, and granular consent controls that give patients visibility into how their information is used.

The companies that can maintain data integrity and trust at scale will distinguish themselves in an increasingly regulation-conscious marketplace. Ultimately, success in 2026 will be measured not by how many digital tools are deployed but by how responsibly they are governed. The next phase of digital health leadership will belong to those who can harmonize AI ethics, data stewardship, and human-centered innovation, turning governance from a constraint into a catalyst for trust, equity, and long-term value in global healthcare. By embedding accountability

within design, healthcare enterprises can transform technology from an operational asset into a source of credibility and care confidence.

Vaishali Lambe, Solutions Consultant—Data Scientist, UBS Business Solutions U.S., LLC

Looking ahead to 2026, market predictions indicate that generative AI will maintain its growth trajectory over agentic AI in telehealth and medicine, with key trends including the use of synthetic data for privacy-preserving simulations of treatments and medical trials, as well as accelerated breakthroughs in drug discovery and disease curing.

This dominance is expected amid ongoing pilots for agentic systems, but generative models' ability to integrate seamlessly into existing workflows without requiring extensive autonomy will fuel broader adoption, projecting overall AI healthcare investments to triple by year-end.

The sustained rise of generative AI in 2026 is closely tied to persistent industry concerns around trust and transparency in AI models, data privacy and protection, security, regulation, and compliance, as well as challenges in accessing quality integrated data and navigating geopolitical silos that hinder global solutions.

These factors make healthcare providers cautious about deploying more autonomous agentic AI, which, despite promising advancements in digitizing and streamlining processes such as prior authorizations, patient scheduling, and remote monitoring in telehealth, remains in early stages, with only 18% of organizations deeming themselves AI-ready for full implementation.

While agentic AI is forecasted to reach mass-market adoption levels by 2026 in some sectors, its rollout in medicine will likely be tempered by the need for robust governance frameworks, human-in-the-loop safeguards, and compliance with privacy laws, allowing generative AI to lead in areas such as real-time diagnostics and predictive analytics for virtual care.

Monzur Morshed Patwary William H. Foege Fellow, Emory University—Rollins School of Public Health

Frugal Innovations in the Global South

The massive decline in donor funding will catalyze a great reset for public digital health in low- and middle-income countries (LMICs) and low-income countries (LICs). In 2026, we might see a shift from large-scale donor-backed pilot digital health programs to locally led, cost-effective “frugal innovations” that focus on key high-priority areas. These innovations will be streamlined and optimized for low bandwidth. In the absence of donor dependency, we will get to see increased local ownership and governance of digital health systems. Last but not least, South-South knowledge exchange may emerge as a vital strategy in maintaining digital health services.

From “Promise to Practice” in the Global North

Conversely, in the Global North, generative AI will shift from being “potential” to “practical” through expanded use cases. Furthermore, AI-boosted diagnostics and clinical decision support systems (CDS) will become more mainstream, and integration of Internet of Things devices will accelerate as well. Virtual care will see even deeper integration with existing health systems as remote patient monitoring becomes the norm for managing various health conditions. These advancements, however, will lead to an increased digital health divide in health care, where well-endowed countries incorporate state-of-the-art technology in telehealth while LMICs and LICs will struggle to maintain their basic digital infrastructure due to the aid cuts.

Drew Schiller, CEO, Validic

Consumer health innovation will continue to outpace traditional healthcare. While hospitals debate how to govern the use of AI, tens of millions of people will turn to generative AI as their first point of contact for health advice and as a second opinion when the system falls short. Everyday personal data will evolve from a source of lifestyle curiosity into a foundation for clinically meaningful insights, guided by AI-powered coaches. The consumer health and well-being markets will keep expanding as GLP-1 medications reshape obesity rates and create millions of new consumers who are motivated to maintain their health.

By moving slowly within a broken system, health organizations are effectively training well-resourced consumers to seek care elsewhere. The predictable outcome is that traditional healthcare providers will serve only the sickest and least profitable patients. The question is not whether healthcare incumbents will adapt, but whether they can afford not to.

Karsten Russell-Wood, MBA, MPH, Chief Marketing & Experience Officer, Equum Medical

In 2026 we are expected to have achieved the milestone of a half-decade since the COVID epidemic. What does that mean for us in the world of telehealth? The COVID pandemic was not only a catalyst for accelerating innovation and adoption in virtual care, but it has also left lasting residual effects that continue to shape healthcare delivery today. This translates to rationalizing investments made to date to emphasize efficiency in operations and addressing the core challenges of care delivery, which are how to expand capacity to care and alleviate workforce strains. My confidence in my predictions rests in my experiential discussions with health system CXO's, the pace of innovation in tech and service models, and telehealth program data that is entering the mainstream through peer-reviewed publication, which is generating confidence in broader acceptance and

integration into care delivery. Telehealth for 2026 will be an integral pillar for acute care delivery, and with it my reasons are:

1. **All U.S. Hospitals Will Have Some Form of Virtual Care by the End of 2026.** In fact, we may be there already thanks to survey data, but today's telehealth is more than a post-pandemic stopgap; it is integral to hospital operations and strategy. From this starting point, organizations will adopt adjacent services to add capacity and optimize patient flow without adding beds and eliminate the need for physical physician presence to deliver specialist care. Workforce shortages and low margins will drive this, as will the additional funding via the Centers for Medicare and Medicaid Services Rural Health Transformation Program broadened Physician Payment Schedules for telehealth.
2. **AI Augmentation Will Elevate Virtual Care Delivery.** Cameras and bi-directional solutions are in every room, and with it the promise of rich ambient data to improve/automate care allowing our care providers to deliver the most personal care to patients in person. AI-driven triage tools and assistants are increasing the standardization of data entry and data capture, and AI algorithms are helping to identify adverse trends before they become adverse events, while sensing is increasing the ratio of providers to patients for remote monitoring with digital assistant interventions. As the Smart Room moves to integrate patient, provider, and environmental data, a unified patient experience will occur.
3. **Consolidation and Investment Shape the Virtual Care Market.** The post-COVID "cooling" period in capital investment appears to be behind us, and funding is returning to telehealth as the value of telehealth is becoming clearer through evidence-based outcomes. Expect "telehealth" to be the broad market term that the 800+ vendors in the US consolidate to remove overlapping services and integrated platforms will replace the patchwork of point solutions. "Telehealth" and the virtual care industry will see strong players unify solutions for optimized acquisition, and ecosystem partnerships will integrate elements of technology and services for long-term impact. If we do all this really well, "telehealth" will be replaced simply by "health," and we can benefit from its value throughout the care continuum.

**Dr. Robert Matthews, Chief Technology Officer,
Aware Custom Biometric Wearables**

To address the ever-increasing costs of healthcare and the oncoming aging population crisis, we need a fundamental shift in how we approach well-being. The future lies in our ability to monitor people's health at home, subtly nudge them toward better choices, and provide scalable

assistance in home settings. This proactive approach will keep individuals healthier and out of expensive, high-acuity care centers.

The reality is that human nature often works against long-term health goals. We lapse on exercise, miss medications, and let our diets drift despite our best intentions. This is why the future of remote medicine will depend on technologies that are effectively "compliance-independent"—systems that work in the background, demand minimal effort, and deliver immediate, tangible value in daily life. Too many at-home devices follow a predictable arc: initial novelty gives way to abandonment because they require too much conscious effort. Even widely adopted tools such as the Apple Watch have limitations, as the wrist is not the ideal location to capture many of the critical physiological signals needed for comprehensive clinical insight.

This is where "hearables" emerge as a transformative platform. Millions of people already wear earpieces for calls, music, and connectivity, and many older adults rely on hearing aids as a part of their daily routine. This existing comfort level significantly lowers the barrier to adoption for next-generation in-ear systems. These devices can combine hearing enhancement and protection, high-fidelity audio, seamless connectivity, physiological sensing, and even targeted neuromodulation to improve sleep, stress, and metabolic control. The ear's unique proximity to the brain and major vascular pathways provides access to a richer and more stable set of physiological data, including EEG-adjacent activity, heart rate, SpO₂, and temperature, with fewer motion-related distortions.

Interestingly, the development of these advanced in-ear technologies is being accelerated by the U.S. defense ecosystem. In-ear devices that merge communication, hearing protection, and continuous health monitoring are being developed to enhance warfighter readiness. This follows a long tradition of military-driven innovation—such as the Global Positioning System and the internet—that eventually transitions to civilian life. These devices will be entering clinical trials shortly and soon after be made available in medical markets. As these platforms mature, they are expected to shape the next generation of remote medicine and at-home healthcare.

The continuous stream of high-quality data from these in-ear devices enables Large Language Model-based AI agents to deliver personalized, just-in-time guidance. These are not intrusive alerts but small, contextual nudges that can drive meaningful behavior change without adding to the user's cognitive load. This transforms wellness from a series of tasks into a background function that is seamlessly woven into the rhythm of daily life.

To complete this ecosystem of proactive care, we can turn this guidance into action with the help of autonomous

home robots. These robots can handle routine tasks, reinforce healthy habits, and identify early signs of concern long before they escalate into more serious issues. Unlike human caregivers, robots don't get tired, distracted, or offended, ensuring consistent and steady support. Early humanoid systems are already moving from prototypes to real-world pilots, demonstrating how quickly these capabilities are becoming a practical reality.

By combining unobtrusive sensors, AI-driven guidance, and autonomous assistance, we can create a continuous, personalized care environment. This new model of proactive, precision-guided support has the potential to expand access to care, strengthen independence, and transform healthcare from a reactive system to one that is delivered seamlessly and at scale. Within the next few clinical validation cycles, we can expect hearables to become a core channel for telehealth intake, with AI agents automating triage and micro-coaching based on continuous in-ear data, and home robotics operationalizing care plans to measurably improve access, experience, effectiveness, and cost.

Lestter Cruz Serrano, MD, BCMAS, Head of Global Medical Affairs & Health Sciences Strategy, Cognizant Technology Solutions

From Human-Only to Hybrid: The Rise of Field Medical Virtual Partner (fMVP) in Medical Affairs

2026 will mark the dawn of the Field Medical Virtual Partner (fMVP)—a governed, AI-driven augmentation layer for Medical Science Liaisons (MSLs). Far from replacing human expertise, fMVPs will act as intelligent collaborators, accelerating evidence synthesis, engagement planning, and insight capture while preserving compliance and scientific integrity. This evolution will unlock unprecedented agility in delivering pharma and med-tech innovations—enabling real-time scientific exchange, hyper-personalized healthcare professional (HCP) engagement, and faster translation of insights into clinical and

educational strategies. The HCP—medical science liaison conversation remains human, but elevated.

However, this transformation will bring challenges: accountability will remain human-centric, requiring robust governance frameworks to ensure transparency, bias mitigation, and auditability. Organizations must implement international standard for AI systems management, risk management framework & controls, and SOPs for non-human contributors to maintain trust and regulatory readiness. Those who succeed will not only scale medical affairs operations but redefine the standard for ethical, data-driven engagement—positioning fMVPs as the cornerstone of hybrid human-AI collaboration in life sciences.

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