Virtual Care in Every Room: How Intermountain Healthcare Integrated Telehealth Across the Enterprise, From TVs to the EHR

Utah-based Intermountain Healthcare, one of the largest healthcare providers in the West, is notable not only for the scope of its telehealth services but also for its continuous innovation and its clear vision for virtual care: embedded throughout the enterprise, seamlessly integrated in operations and care delivery, and responsive above all to the needs of patients and providers. At the core of Intermountain's strategy is a careful balance between centralized operations and local control over clinical programs. As telehealth expands into new services and use cases, Intermountain has partnered with Amwell on a series of key integrations — involving the patient portal, the EHR, and even hospital room TVs — to preserve that careful balance and ensure that telehealth remains an integrated service rather than a separate, segmented care delivery model.

USE CASES

- URGENT CARE
- INPATIENT CARE
- SCHEDULED VISITS
- PATIENT PORTALS

PRODUCTS AND SOLUTIONS

- EHR INTEGRATION
- HOSPITAL TV KIT
- SOFTWARE DEVELOPMENT KIT
- QUICK CONNECT

With 25 hospitals and 225 clinics, a Medical Group with 2,800 employed physicians and advanced practice clinicians, and a health plan with nearly 1 million members, Intermountain Healthcare is among the largest healthcare providers in the West. Covering eight states in all, the Utah-based nonprofit's vast and mostly rural footprint stretches from New Mexico to the Canadian border and continues to expand, yet it feels smaller and more connected than ever thanks to Intermountain's investment in virtual care. A pioneering telehealth program that began with a series of pilot projects in 2013 now reaches every corner of the enterprise, spanning 100-plus clinical programs, 35 clinical services, and a variety of endpoints ranging from telemedicine carts to mobile apps — all of it overseen by a cross-functional team in a 20,000-square-foot command center in Salt Lake City.

This sprawling, thriving ecosystem reflects years of planning and innovation, broad buy-in at all levels of the organization, and a single-minded focus on the patient and provider experience. The common thread is a thoughtful balance between central oversight and local flexibility. The centralized operations and governance that culminated in the telehealth command center, built in 2019, is a pillar of Intermountain's strategy — as is local control over clinical programs. From the

Intermountain Healthcare's Telehealth Ecosystem

Since its inception in 2013, Intermountain's telehealth program has steadily expanded to cover the full spectrum of care across home and hospital settings.

URGENT CARE

Launched in 2016, **Connect Care** is a mobile application for on-demand, low-acuity urgent care. The health system recently expanded Connect Care to include behavioral health, to load-balance the need for behavioral health services across its ecosystem and meet the growing demand for mental health services brought on by COVID-19.

SCHEDULED VISTS

Intermountain Video Visits allows clinicians in offices to connect virtually with patients in their homes for scheduled visits, for everything from primary care and behavioral health to sleep medicine and other specialty care. "This area saw dramatic growth last year during the pandemic," says Tim Lovell, director of operations at Intermountain.

ACUTE CARE

Intermountain's acute telehealth program, Intermountain TeleHealth, enables the health system's expert clinicians to provide specialty care and peer-to-peer consults in any location. The program aims to reduce unnecessary transfers and keep patients out of acute care settings by providing access to care in the home, at a clinic, or in regional hospitals.

REMOTE PATIENT MONITORING

Remote patient monitoring (RPM) services enable Intermountain clinicians to monitor and manage patients from the health system's virtual command center. These RPM services — which have been instrumental during COVID-19 — ensure that patients get the care and intervention they need for a variety of chronic conditions.

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very beginning, the architects of the telehealth program cultivated partnerships with clinical as well as operational leads, empowered providers to take ownership of clinical programs, and sought to embed telehealth in existing workflows and standards of care.

Technology is essential to maintaining this balance. To standardize and minimize technology across the enterprise — a third pillar of Intermountain's strategy — the health system has adopted the Amwell platform for both home- and hospital-based care, with the ultimate goal of consolidating telehealth services on a single platform. At the same time, Intermountain and Amwell have partnered together to embed telehealth in other existing technology — including Intermountain's patient portal, the EHR, and even hospital room TVs. These integrations preserved the flexibility clinicians need, improved the patient and provider experience, and ensured that telehealth remains an integrated service and not a separate, segmented care delivery model.

Telehealth and the digital front door

By the end of 2018, Intermountain had developed a collection of stand-alone consumer applications and websites that included a patient portal for medical records and test results, a bill pay platform, an online symptom checker, and an urgent care telehealth app known as Connect Care. Though patients were using them, these tools required separate log-ins and passwords and provided a user experience that was less than intuitive, so Intermountain set out to combine them in a single application. The result, **MyHealth+**, is a digital front door that offers synchronized identity management and a near-frictionless experience for patients.

One of the first steps in creating MyHealth+ was to integrate the Connect Care app using Amwell's software development kit (SDK). In addition to improving the patient experience, embedding telehealth in the digital front door has enabled Intermountain to refine and expand the telehealth experience by developing new workflows and care pathways. The symptom checker, for instance, is now fully integrated with

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amwell

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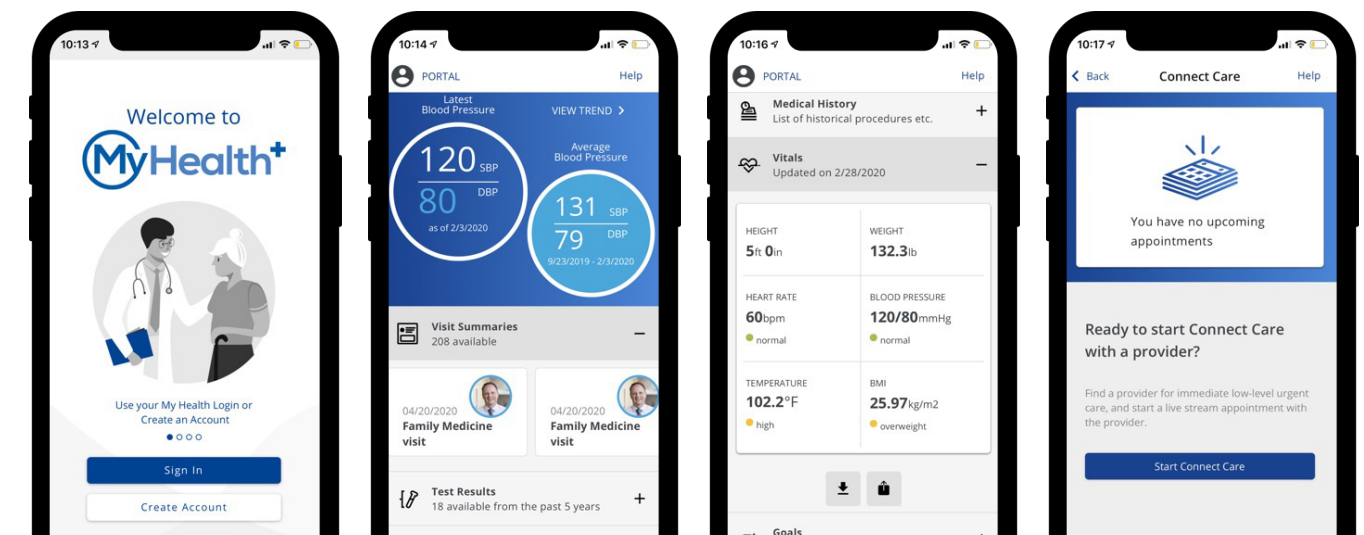
the telehealth experience. Based on a patient's symptoms, MyHealth+ directs the patient to the appropriate care location, whether that be the emergency room, an urgent care center, or a Connect Care visit. "If a telehealth visit makes sense, we can direct that person right into the visit utilizing the SDK," says Brian Roundy, senior director of software engineering at Intermountain.

The SDK's flexibility also enabled Intermountain to respond nimbly to COVID-19. While Connect Care had previously been used only for low-acuity urgent care, Intermountain extended the app to scheduled visits in April 2020, as Intermountain's clinics and hospitals were being inundated with requests for telehealth. The restyled app, known as **Intermountain Video Visits**, enabled clinicians to shift their existing patients to virtual care, but Roundy and team quickly realized scaling the service would require simplifying the patient onboarding workflow. Using Amwell's Quick Connect solution, which is designed for easy-to-launch yet secure video visits, the Intermountain team whittled what had been a five-step process — download the app, create an account, receive an appointment reminder, log in, enter a virtual waiting room — down to just two. Now, 24 hours before an appointment, a patient receives an email reminder with tips for a successful video visit, and then, right before the appointment, a link to join the visit.

"The work to make telehealth a core piece of the consumer experience has already started to pay dividends, and we expect additional workflows and customization to evolve over time," Roundy says.

Improving the EHR experience for providers

Prior to COVID-19, Intermountain had already integrated the Amwell platform with its Cerner EHR and developed three distinct workflows, for on-demand visits, scheduled visits, and staff support (such as scheduling). The successful launch of Intermountain Video Visits laid the foundation for embedding the Quick Connect experience in the EHR.

Two of the key principles that have shaped Intermountain's telehealth program are 1) keeping workflows simple and aligned with clinic care processes, and 2) blending in-person and digital clinical practice models. Just as they had zeroed in on the patient experience when integrating telehealth in MyHealth+, with the expanded EHR integration the Intermountain team focused on simplifying and improving the provider experience for each of the three core workflows:

- **On-demand visits.** A list of patients now automatically flows from Connect Care into the EHR, eliminating the need for an Intermountain patient service representative to dual-register the patient in both systems. This also allows the provider to document directly within Cerner during a virtual visit, so an urgent care record is visible to primary care physicians and other providers.

- **Scheduled visits.** A clinician or staff member is now able to send a link from Cerner to the patient to join a video visit. The provider then receives a notification when the patient has entered the waiting room. Providers can also document these visits directly in the EHR.

Intermountain has embedded telehealth in the Cerner EHR and clinical workflows using FHIR APIs.

"We've worked hard to keep the workflows simple. The complexity behind the scenes should not be a concern for caregivers and patients."

BRIAN WAYLING
Executive Director of Technology and Development, Intermountain Healthcare

■ **Staff support.** In addition to scheduling visits, staff members can now join visits if needed and coordinate care across multiple appointments. This level of support is especially important for specialties such as transplant services, in which a patient may meet with a sequence of four or five different caregivers (including a surgeon and a transplant coordinator) during a single visit.

Adding these features and flexibility to the existing workflows involved a transition from an HL7 integration to one based on Fast Healthcare Interoperability Resources (FHIR). The use of FHIR APIs creates a tighter coupling between telehealth and the EHR and enables the seamless blend of virtual and in-person care the Intermountain team has been working toward. For instance, every scheduled visit within the EHR now has its own virtual room, and clinicians and staff members can use the EHR to move in and out of that room in the same way they would with a physical room. "We've worked hard to keep the workflows simple," says Brian Wayling, executive director of technology and development at Intermountain. "The complexity behind the scenes should not be a concern for caregivers and patients."

Telehealth TVs: 'A foundational piece of hardware'

Integrating telehealth into hospital room TVs enables Intermountain clinicians to round more easily — even more easily than with existing telemedicine carts or tablets, which require some coordination to be moved from room to room. With the TV kit, providers can dial into a room from a remote location without any additional equipment. Multiple caregivers and teams can also appear on screen at the same time, which makes it easier to add interpreters, infectious disease specialists, palliative care teams, and other support staff to a patient consultation.

Intermountain has deployed more than 1,200 telehealth-enabled TVs across its enterprise, in areas including critical care, medical-surgical units, and the emergency department. As the health system's physical presence continues to grow, the Intermountain team plans to add more. "These TV room kits are baked into the design of a new building," Roundy says. "When we launch a new hospital, the expectation is that telehealth is part of the in-room televisions. It's a foundational piece of hardware that is part of every single room."
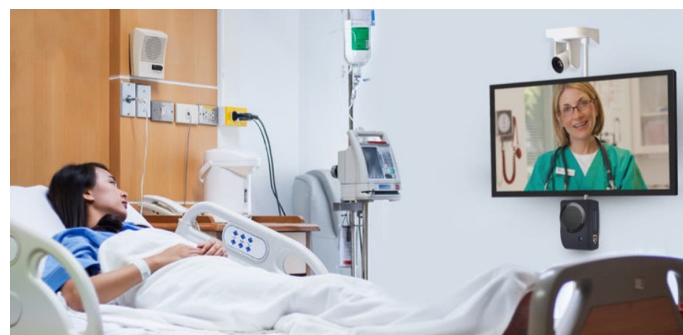
Telehealth-enabled TVs in hospital rooms enable remote Intermountain clinicians to round more easily.

As the pandemic recedes, Intermountain has no intention of slowing down. The hospital TVs are just the latest example of the health system's eagerness to innovate and its continued focus on embedding telehealth into all aspects of care delivery, making virtual care a seamless and intuitive experience for patients and providers alike. "We all recognize that despite the boost we saw last year from COVID-19, this is really just the beginning," says Wayling. "We will continue to evolve as more caregivers and more uses cases come to the forefront."