



STRATEGIC HEALTHCARE PROVIDER NETWORKS

Leveraging T-Mobile 5G for Clinical Excellence

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Executive Summary

- **Unmet Connectivity Needs:** Healthcare providers are grappling with connectivity challenges as they adopt EHR systems (like Epic), telehealth, and IoT medical devices. Many hospital campuses have dead zones and rely on aging Wi-Fi, while home health programs require robust cellular coverage for field staff.
- **T-Mobile's 5G Advantage:** T-Mobile's **nationwide 5G** network (built on a standalone 5G core) offers superior coverage and capacity for healthcare. It provides broad low-band coverage (600 MHz reaching ~98% of the country) and ultra-fast mid-band speeds, ensuring clinicians stay connected inside hospitals and across wide regions. T-Mobile is years ahead of competitors in 5G deployment (the only US carrier with a fully standalone 5G network), enabling capabilities like network slicing and priority access for critical healthcare applications.
- **Healthcare-Specific Solutions:** T-Mobile can deliver secure, reliable connectivity tailored to healthcare needs. Features like T-Mobile's "T Priority" service can give clinical communications precedence on the network, and network slicing can dedicate bandwidth for mission-critical apps (e.g. telemetry or remote monitoring). Edge computing integration keeps sensitive data local (reducing latency and enhancing HIPAA compliance), and even satellite backup (via Starlink) is on the horizon to ensure no patient data or call is dropped even in remote areas.
- **Proven Success:** Real-world examples illustrate T-Mobile's value. For instance, a large health system with hundreds of visiting nurses might equip field staff with iPads or other cellular-enabled devices to access EHRs and telehealth apps during home visits. T-Mobile's expansive 5G network can keep those mobile clinicians connected wherever they travel, ensuring real-time chart updates and even safety wearables (linked via Bluetooth to the tablets) remain online. In a separate case, Boston Children's Hospital partnered with T-Mobile on a major network upgrade and saw tremendous results – deploying hundreds of new cellular antennas and connecting thousands of devices with virtually zero connectivity-related trouble tickets over the first year.
- **T-Mobile's Advantage:** With its cutting-edge network, commitment to flexible solutions (e.g. neutral-host DAS, device-as-a-service models), and growing track record in healthcare, T-Mobile is uniquely positioned – or has the "right to win" – as a preferred connectivity partner for healthcare provider networks. T-Mobile can meet healthcare organizations' needs for ubiquitous coverage, reliable performance, strong security, and cost-effective deployment, enabling providers to focus on patient care rather than network issues.

Introduction

Healthcare providers today face unprecedented connectivity demands. Hospitals and clinics are rolling out **new digital health platforms** and **mobile devices** at scale, from system-wide EHR migrations to expanded telehealth services. At the same time, they struggle with patchy coverage and legacy infrastructure. Clinical staff working across large hospital campuses often hit cellular **dead zones** in older buildings or basements, and overtaxed Wi-Fi networks can jeopardize critical applications. Outside hospital walls, caregivers like visiting nurses and mobile health workers need reliable links to patient records and telemedicine tools during home visits – yet connectivity in the field can be hit-or-miss with traditional carriers. In short, many provider networks are **outgrowing their current communications setup**, and the stakes for patient care and safety couldn't be higher.

T-Mobile's opportunity (or "right to win") in this environment is clear: by leveraging its advanced 5G network and healthcare-specific solutions, T-Mobile can bridge these gaps for healthcare organizations. This white paper explores how T-Mobile's network capabilities align with the urgent needs of healthcare provider networks, and why T-Mobile is strongly positioned to become a leading connectivity partner for healthcare providers. We'll examine the challenges providers face, T-Mobile's differentiating strengths, and examples of these solutions in action – all illustrating a compelling case for T-Mobile in healthcare.

Healthcare Connectivity Challenges Driving Change

Healthcare executives know that digital transformation is only as good as the network that underpins it. Several trends are converging to stress-test provider networks:

- **EHR Migrations & Device Proliferation:** Hospitals are migrating to modern EHRs (for example, moving from Cerner to Epic) to improve care coordination. These go-lives involve **thousands of new mobile devices** – from iPad-based clinical workflows to connected workstations-on-wheels. Entire floors may be repurposed as training centers during the transition, and many staff temporarily work from home or satellite offices during the cutover. A large multi-hospital system undergoing an Epic rollout in 2026, for instance, planned to deploy roughly **1,200 iOS devices for clinicians** (while supporting ~800 legacy devices) as they standardize on mobile access for the new EHR. Supporting this surge in devices (all needing constant, high-bandwidth connectivity) is a monumental task for existing networks.
- **Remote and Home Care Expansion:** Care is increasingly delivered outside the hospital. For example, a large health system with hundreds of visiting nurses might equip its field staff with iPads or other cellular-enabled devices to access medical records, document visits, and communicate with physicians in real time. Those nurses collectively conduct thousands of home visits across urban and rural communities. Ensuring reliable connectivity across an entire region is critical – clinicians can't afford dropped connections when accessing an electronic chart or a telehealth video call from a patient's living room. Yet relying on patients' home Wi-Fi or spotty cellular service can undermine these programs. Healthcare providers are seeking carrier partners who can guarantee **extensive coverage and consistent performance** for their mobile workforce. (In this hypothetical scenario, a robust 5G network like T-Mobile's would allow a visiting nurse to seamlessly pull up an X-ray image or update a care plan from anywhere in the territory, without hunting for Wi-Fi or losing signal.)
- **Indoor Coverage & Capacity Issues:** Many hospital facilities have poor indoor cellular coverage. Older buildings (e.g. thick concrete structures or subterranean labs) often have **"dead zones"** where critical staff can't get a signal. Hospitals have traditionally leaned on Wi-Fi for internal connectivity, but Wi-Fi networks can become overloaded – especially with the influx of IoT medical devices and guests connecting. There are also **security concerns** with visitors on hospital Wi-Fi; IT teams increasingly prefer to offload non-critical traffic to

cellular networks to segregate guest devices from hospital systems. To provide five bars of service everywhere on campus, many providers will need to invest in indoor cellular solutions (DAS or small cells) and ensure all carriers have coverage for staff, patients, and families. These infrastructure upgrades require a carrier with both technical expertise and the willingness to implement **neutral-host solutions** (so that a hospital isn't serving only one carrier's users).

- **Security and Compliance Requirements:** Data security is paramount in healthcare. As more devices connect via cellular, providers must ensure **HIPAA compliance, encryption, and authentication** are in place across the network. They may also need to control how and where sensitive data travels. For instance, if a bedside monitor sends an alert via the cellular network, that data might need to stay within a hospital's local network or cloud environment for compliance reasons. Networks must support these needs through features like private APNs or edge computing. Additionally, hospitals often seek **priority access** for certain communications (e.g. a code blue call or an ambulance telemetry feed should never face congestion delays due to public traffic). Traditional carrier networks don't automatically provide such prioritization or granular control.

In summary, provider networks are under pressure from all sides: **more devices and apps, broader coverage needs (campus-wide to region-wide), and uncompromising requirements for reliability and security**. This is the backdrop against which T-Mobile has a timely opportunity to step in with solutions that meet and exceed these challenges.

T-Mobile's Network Strengths Aligned to Healthcare

T-Mobile has undergone a transformation in recent years that uniquely positions it to address the above challenges. No longer just a consumer phone carrier, T-Mobile now boasts **network capabilities and services tailor-made for enterprise and healthcare use cases**. Key strengths include:

- **Nationwide 5G Leadership:** T-Mobile was the first carrier to deploy a **5G Standalone (SA) core** – meaning its 5G network runs independently of older 4G infrastructure. This technical leap gives T-Mobile a multi-year head start over competitors (who mostly still use non-standalone 5G that depends on 4G cores). In practical terms, T-Mobile's 5G is a **"true" 5G network** offering higher capacity, lower latency, and advanced features that others simply cannot match yet. It's akin to an 8-lane superhighway built exclusively for 5G traffic, versus others' 2-lane highway that mixes 5G and 4G. For a hospital, this means T-Mobile's network can handle extreme loads (think thousands of simultaneous device connections or data-heavy imaging files) with room to spare. T-Mobile also holds a rich spectrum portfolio ideal for healthcare needs: **low-band 600 MHz spectrum for deep coverage (penetrating buildings and covering vast areas) and mid-band 2.5 GHz for high-speed capacity**. In fact, T-Mobile's low-band 5G covers 98% of the U.S. population, including rural and suburban areas that many health systems serve. Whether in a dense city hospital or a remote clinic, T-Mobile can provide a strong 5G signal, which is the foundation for connected care everywhere.
- **Unmatched Coverage & Neutral Host Solutions:** In scenarios where indoor coverage is lacking, T-Mobile has proven willing to partner on solutions. The company can design and deploy **distributed antenna systems (DAS)** or small-cell networks to blanket hospital campuses with reliable service. Importantly, T-Mobile often supports **neutral-host DAS**, allowing other carrier signals to ride the same infrastructure. This is a big win for hospitals – rather than each carrier installing separate antennas (or leaving gaps), T-Mobile can act as a lead and ensure all carriers' subscribers (staff and patients alike) have coverage. Furthermore, T-Mobile offers **managed services** to handle the ongoing support of these multi-carrier systems, taking the burden off hospital IT. The bottom line: T-Mobile not only has excellent macro 5G coverage (covering nearly all sites of even large health systems with minimal gaps), but also the willingness to fill any remaining gaps through custom indoor solutions.
- **Network Slicing and Priority Access:** Because of its advanced 5G core, T-Mobile can offer **network slicing** – essentially carving out a dedicated "lane" on the network for specific use cases or customers. For healthcare, this could mean a slice optimized for critical telemetry devices (ensuring ultra-reliable, low-latency data flow for patient monitors) or a slice for a hospital's IoT sensors separate from general guest traffic. T-Mobile has already developed priority services like **T-Mobile's "T Priority"** which gives first responder agencies precedence on the network. Healthcare providers could similarly benefit by prioritizing, say, an emergency department's communications during a crisis. These capabilities translate to **consistent performance even under congestion** – a hospital's devices won't have to compete with consumer video streaming in the area, for example.
- **Security & Edge Computing:** T-Mobile's network is built with security in mind, touting **automatic encryption and mutual authentication** in 5G SA that make it one of the most secure wireless networks. For healthcare data, this built-in security (on top of application-level encryption) provides confidence that PHI (protected health information) stays safe over the air. Additionally, T-Mobile is rolling out **MEC (Multi-access Edge Computing)** solutions – essentially placing cloud compute resources at the network's edge (sometimes on-premises at a hospital or in nearby hubs). Edge computing allows data from devices to be processed or stored locally rather than traveling over the public internet. A hospital could leverage this for use cases like imaging analysis or AI-powered monitoring that need instant response and data privacy. For instance, an AI algorithm analyzing patient vital signs could run on an edge server right at the hospital, fed by 5G-connected devices, without that sensitive data ever leaving the premises. T-Mobile's **Edge Control** offering enables such architectures, which can be crucial for HIPAA compliance and low latency needs.
- **Future-Proof Coverage (Including Satellite):** T-Mobile is also looking ahead to cover the extreme edges of connectivity. Through a planned integration with **SpaceX's Starlink satellites**, T-Mobile aims to provide satellite-to-phone service as a fallback in areas with no terrestrial coverage. In healthcare terms, consider emergency responders in wilderness areas or a rural home health visit in a dead zone – in the future, a T-Mobile device could seamlessly switch to satellite mode to stay connected. This kind of redundancy underscores T-Mobile's commitment to **100% coverage** for critical communications, virtually anywhere on the planet.
- **Enterprise & Healthcare Focus:** Beyond technology, T-Mobile has reorganized to serve enterprise and government clients (including healthcare) with dedicated support. Its **Advanced Network Solutions** team, which includes healthcare specialists, works closely with hospital IT departments. This means healthcare customers get more than a generic phone plan – they get consulting on network design, device provisioning, and even financing models that fit their budget cycles. For example, T-Mobile is open to **OpEx-based models** (operational expense) where the carrier provides equipment and services for a monthly fee rather than requiring large upfront capital from

the hospital. This was demonstrated when T-Mobile provided devices to a major children's hospital as part of a network upgrade on an as-a-service model. Such flexibility in procurement is a big plus for health systems facing capital constraints but needing immediate upgrades.

Real-World Example: Boston Children's Hospital's Network Overhaul

One of the best illustrations of T-Mobile's impact in healthcare comes from Boston Children's Hospital, a leading academic medical center that recently modernized its network infrastructure. According to a T-Mobile case study, Boston Children's undertook a massive upgrade to support its Epic EHR implementation and the explosion of mobile devices among staff and patients. The hospital's main campus (nearly 3 million square feet across 19 interconnected buildings, plus multiple off-site clinics) had areas of weak coverage and an aging DAS. The solution implemented with T-Mobile included expanding from 80 antennas to 534 indoor antennas across the campus, all powered by T-Mobile's network. The results were remarkable: after cutover, the hospital saw zero cellular connectivity-related trouble tickets for over 14 months of operations. In other words, clinicians and staff experienced a full year without complaints of "no signal" or dropped calls, despite the immense scale of the facility.

Furthermore, Boston Children's connected an array of devices through this project: approximately 4,000 iOS devices (iPhones and iPads for clinicians), 3,000 VoIP handsets, and 700 iPads for patients and interpreters were all seamlessly integrated onto the T-Mobile network. They also enabled BYOD (Bring Your Own Device) for staff via secure eSIM provisioning – something only feasible with the right carrier support. New innovative use cases became possible too. For instance, the hospital equipped ambulances with T-Mobile priority connectivity so that stroke specialists can be consulted en route (transmitting CT scan data and vitals instantly). They even piloted remote-controlled ultrasound robots that use 5G to allow off-site experts to guide ultrasounds in real time. These advanced telehealth and telemedicine scenarios were successful because the underlying network could guarantee bandwidth and low latency when it mattered most.

Boston Children's experience showcases how a partnership with T-Mobile can fundamentally improve a provider's network reliability and unlock new clinical capabilities. It's a proof point that T-Mobile can handle the most demanding healthcare environments – large hospitals with complex needs – and deliver a solution that not only fixes coverage issues but creates a platform for future innovation (like AR/VR training headsets and other IoT devices, which the hospital added post-upgrade). For healthcare executives, it's a compelling story of moving from a patchwork of connectivity to a unified, carrier-grade network that just works.

The Home Health Connectivity Scenario

In addition to major medical centers, T-Mobile's value extends to health systems focused on home health and community care. Imagine a scenario (drawn from common real-world challenges) involving a large regional health system that operates a Visiting Nurse program. This program has, say, 600+ visiting nurses providing in-home care across dozens of communities. Each nurse uses a tablet (e.g. an iPad with a cellular data plan) to access scheduling, document patient interactions, and tap into telehealth consultations if needed during visits. The health system also issues personal safety devices to these nurses – perhaps Bluetooth pendants that can trigger an alert through the nurse's phone if they feel unsafe on a call. For such a program to succeed, flawless wireless connectivity is essential: the devices must work in dense city neighborhoods, suburban towns, and rural outskirts alike, wherever patients live.

This is where T-Mobile's network shines in a hypothetical deployment. Thanks to ample low-band coverage, T-Mobile could ensure that nearly every home in the service area has strong signal. And with mid-band 5G, even high-bandwidth tasks like video consults or uploading wound photos can happen in real-time. If the health system also partners with T-Mobile for device management, nurses' tablets could come pre-loaded with secure SIM profiles and relevant healthcare apps, managed centrally. The carrier's network priority features could be used to guarantee that an emergency alert from a nurse's safety device gets immediate network access, even if the nurse is in a crowded event area. Additionally, T-Mobile's commitment to service continuity (including plans for satellite backup) means those nurses remain connected even during scenarios like natural disasters or outages that might knock out other options. In short, T-Mobile can provide a carrier-grade "safety net" for caregivers, enabling the health system to expand home-based care confidently, knowing the tech backbone is solid. This generalized scenario mirrors the kind of needs many provider networks have today – and it underscores T-Mobile's readiness to fulfill them, whereas slower-moving competitors have yet to prioritize these niche but critical use cases.

Why T-Mobile is Poised to Win in Healthcare

Healthcare provider networks present a complex and high-stakes arena – one that historically has been dominated by legacy telecom players or piecemeal solutions. However, the landscape is shifting. As hospitals and health systems rethink their connectivity for the next decade, **T-Mobile has emerged as a strong contender to lead these transformations.** Here's a recap of why T-Mobile holds the "right to win" in this space:

- **Comprehensive Coverage & Capacity:** T-Mobile offers a 5G network blanket that can cover an entire health system's geography, from major hospitals to remote clinics, typically with minimal additional infrastructure. Where enhancements are needed (such as indoor coverage), T-Mobile brings the tools and is willing to invest in solutions that benefit the provider (e.g. multi-carrier DAS). This means a health system can deal with one lead connectivity partner and get ubiquitous coverage for all stakeholders – an attractive proposition versus juggling multiple vendors or accepting gaps.
- **Innovation Leadership:** With its **technology lead in 5G**, T-Mobile can deliver capabilities now that others are only piloting. Hospitals looking to future-proof their operations will find T-Mobile's network ready for things like mass IoT connectivity, augmented reality training, tele-surgery pilots, and beyond. T-Mobile is essentially offering healthcare organizations a platform to innovate on – a fast, flexible network fabric – which is a key differentiator. It's not just about basic coverage, but about enabling the next generation of healthcare applications (AI, remote care, wearable tech integration) which require that advanced network performance.
- **Reliability and Security:** The examples and features discussed all point to a network that can be trusted with life-critical operations. Whether it's a year with zero dropped-call complaints in a flagship hospital, or the inherent security of a standalone 5G architecture, T-Mobile checks the boxes for reliability and safety. This is vital for healthcare executives who must ensure any partner meets stringent uptime and security standards. T-Mobile's network, by design, offers **carrier-grade resilience** (with redundant paths, power backups, etc.)

and **end-to-end encryption/authentication** at the network level, which complements the healthcare provider's own IT security measures.

- **Cost-Effective and Flexible Partnerships:** T-Mobile's challenger mindset (from its consumer market days) carries into its enterprise dealings – the company is often **more flexible on pricing and business models** than incumbents. For budget-conscious health systems, T-Mobile can craft solutions that minimize capital expense: for instance, bundling equipment costs into the service plan, or leveraging operational budgets. Additionally, by using one provider for a wide range of connectivity needs (in-hospital, mobile, IoT, backup, etc.), organizations might achieve economies of scale. Simply put, T-Mobile is motivated to win healthcare clients and is likely willing to customize agreements in ways that legacy carriers may not, potentially delivering better value.
- **Focus and Support:** T-Mobile has made healthcare a focus within its business segment, meaning dedicated account and support teams that understand healthcare workflows. This is not just a generic sales pitch; the Advanced Network Solutions team includes people who have worked with hospital networks and know the language of clinical and IT requirements. For the healthcare consultant or CIO, this means conversations with T-Mobile tend to align with their priorities (e.g. ensuring Epic downtime is minimized during a network cutover, or making sure biomedical devices get VLAN isolation – things a generalist vendor might miss). The value of a knowledgeable partner cannot be overstated in complex deployments.

In conclusion, the combination of **cutting-edge technology**, **tailored solutions**, and a **partner-centric approach** makes T-Mobile a formidable player in healthcare connectivity. As provider networks strive to support digital health initiatives, clinician mobility, and patient connectivity, they need more than a commodity telecom vendor – they need a **strategic partner** who understands the mission. T-Mobile's investments in 5G, its successes in challenging healthcare environments, and its willingness to go the extra mile (literally to outer space, with satellite) to cover every need, all signal that it is ready to lead in this sector.

For healthcare executives evaluating their network strategy, T-Mobile deserves a close look as a primary partner. The right connectivity foundation can empower everything from better patient outcomes to improved operational efficiency. Given the evidence and capabilities presented, **T-Mobile has earned the right to claim that foundation in healthcare provider networks** – delivering the connectivity that saves lives, improves experiences, and future-proofs healthcare organizations for the innovations to come.