HealthManagement
Promoting Management and Leadership

How Connectivity Solutions Can Serve Hospital at Home

The Hospitals in the Home (HiTH) care model, dating back to the 1950s in France, has gained traction globally, with implementation in countries like Australia, the UK, Canada, Israel, Spain, and the US. In Australia alone, it accounted for over 595,000 days of care in 2017-2018, constituting over 5% of acute care bed days. HiTH aims to alleviate healthcare capacity issues, enhance efficiency, cut costs, and improve patient experience by shifting care from hospitals to homes, with demonstrated benefits such as reduced infection risk, improved triage, and optimal resource utilisation. Studies and pilots have showcased cost savings of 20%-40% compared to inpatient care, attributed to shorter hospital stays, fewer tests, and reduced sedative use. Research indicates a 26% lower risk of readmission for HiTH patients, reduced long-term care admissions, lower depression and anxiety levels, and higher satisfaction rates compared to in-hospital care.

The Promise of HiTH for Underserved Communities

The Hospitals in the Home (HiTH) model holds significant promise for underserved populations such as rural residents, low-income individuals, and the elderly. In the US, where 80% of rural residents lack adequate medical services, HiTH presents a solution by offering high-level hospital care and reducing the risk of hospital-related complications among the elderly. Patients in HiTH programs receive continuous monitoring from their care team through a combination of in-person and video visits, along with ongoing biometric monitoring via telehealth technologies. Technological advancements like artificial intelligence, digital health platforms, and connected devices further enhance the feasibility of the HiTH model.

Non-Medical Challenges: Connectivity Solutions for HiTH Success

Ensuring the success of the Hospitals in the Home (HiTH) care model requires addressing non-medical challenges associated with transitioning hospital care to the home environment. Key considerations include patient eligibility and education, staff training, and adjustments to home environments. Effective communication is crucial, facilitated by reliable connectivity for timely information exchange among healthcare professionals. Different HiTH services, like telehealth, telemetry, testing, and treatment, have varying connectivity needs, from high-quality video streaming for virtual sessions to high bandwidth and low latency for augmented reality therapy.

Bridging the Digital Divide: Connectivity Solutions for Equitable HiTH Access

Ensuring equitable access to the Hospitals in the Home (HiTH) model requires addressing connectivity disparities, particularly for underserved populations like rural communities, low-income individuals, and the elderly. A "digital divide" could worsen existing healthcare inequalities, with one in five US households lacking internet access, often due to affordability issues. A dedicated communication platform is vital to bridge this gap, enabling seamless wireless connectivity, HD video conferencing, and real-time data exchange. Such a platform also fosters innovation in HiTH through applications like automated treatment responses, AI-powered screening for mental illness, and AR/VR-enabled remote procedures, enhancing the model's effectiveness and reach.

Connectivity Challenges: Solutions for Effective HiTH Implementation

Progress in accessible connectivity options is underway, with advancements in wireless broadband and emerging technologies like 5G networks and Low Earth Orbit (LEO) satellites. While 5G offers high speeds, it's weather-dependent and requires direct line of sight to towers. LEO satellites, exemplified by SpaceX's Starlink service, provide reliable connectivity even in areas lacking cable or fibre networks, with median download speeds of 79 Mbps.

However, no single connectivity solution fits all HiTH locations. Secure, reliable, and scalable connectivity is crucial for successful HiTH implementation. A dedicated communications platform, provided by a trusted third party, should include components like an Intelligent Home Gateway, a robust and redundant network incorporating multiple operators, zero-trust network security, a Network Operations Center (NOC), AI-

powered intelligent network management, coverage mapping tools, and user-friendly interfaces and APIs. Such a solution ensures optimal connectivity and facilitates the effectiveness of the HiTH model.

While the idea of a healthcare-focused communications platform to support hospital care at home isn't entirely new, previous attempts, like Qualcomm's LifeComm in 2005, faced challenges and didn't succeed. However, examples like Google Fi, a consumer cellular service, demonstrate elements of such a platform, with features like automatic network switching and encrypted data. In the public safety realm, MVNOs like ASTRID's Blue Light Mobile provide mission-critical services.

The Hospitals in the Home (HiTH) care model is vital for healthcare systems, but its success hinges on addressing connectivity challenges. Technological advancements offer an opportunity to develop a dedicated HiTH communications platform, extending access to underserved populations and fostering innovation and expansion of the HiTH model.

Source: HealthCare Transformers

Image Credit: iStock

Published on : Tue, 4 Jun 2024