Intelligent Healthcare Solution Brief

The world is faced with a steep learning curve in managing health—especially with patients worrying about going to hospitals because of COVID-19. According to Evidation’s COVID-19 impact study, 42% of individuals are worried or very worried about going to the doctor’s office for necessary care because of the coronavirus outbreak. On top of this, the aging population and increasing rates of chronic illness mean pressure on healthcare resources will intensify, making proactive measures essential.

The healthcare industry has not only increased safety measures, but also fast-tracked remote patient monitoring, which reduces in-person visits, boosts patient convenience, lowers readmission rates, and increases clinician productivity. There are two consistent barriers that prevent broad adoption of this remote monitoring: first, the interoperability of IoT-based medical device data with healthcare data, and second, the rapid and secure exchange of protected health information (PHI) from these devices.

There is an incremental need to securely aggregate data from wearables, medical devices, EHRs, and other sources into a single hub platform without using a datacenter or the public cloud. The answer lies within edge solutions—including Microsoft Azure Stack Edge. Powered by Intel technologies, Azure Stack Edge gathers information and provides analysis locally to enable faster decision making in healthcare. It allows disconnected and remote processing in cloud-like solutions inside the hospital or clinic with or without access to the Azure cloud, thereby reducing latency.

The intelligent hybrid remote patient monitoring solution

1 Evidation’s COVID-19 impact study
Let's look at intelligent healthcare use cases with Azure Stack Edge, powered by Intel processors.

**Intelligent healthcare in action**

**Real-time patient care and analysis**
Clinicians can perform remote patient diagnostics while taking notes on a laptop that is able to host PHI. This is enabled by:
- An application portal running on the clinician’s Microsoft Surface laptop, powered by Intel Core processors
- Azure Stack Edge

**Continuous patient monitoring**
A patient is continuously monitored from the comfort of their own home, with real-time feedback from their care team. This is enabled by:
- An application portal running on the patient’s Microsoft Surface laptop, powered by Intel Core processors
- Azure Stack Edge for local processing

**Intelligent clinical and operational data insights**
The care team can enrich patient insights and enable smarter decision making without the use of the public cloud. This is enabled by:
- Azure Stack Edge for local data inferencing
- Azure Cognitive Services to run AI models

**Reimagined healthcare with the secure data platform**
PHI data is stored and managed in the native FHIR format. This is enabled by:
- FHIR Server API OSS runs on Azure Stack Edge to simplify data ingestion
- Backend Microsoft SQL for a secure environment

**Enhanced care delivery and teamwork**
Clinicians can enhance patient care by sending data back from the edge to the cloud when needed for further analysis. This is enabled by:
- Logic app, which sends an alarm or notification on Teams to trigger a remote doctor appointment
- Microsoft Dynamics 365 for a third-party triage management system to support medical records

**All the technologies featured in the intelligent healthcare use cases are available today.**
From intelligent edge devices to the cloud, these Microsoft products are powered by the latest Intel technologies and work together to discover, manage, and analyze data in real time.

For more information, visit: visit aka.ms/remotepatient

To get started today, connect with your Microsoft representative.