



## Case Study

# Comprehensive communications solutions enhance complex clinical care at Grace Hospital



### About Grace Hospital

Grace Hospital is the first certified long term acute care facility in Cuyahoga County, Ohio. The non-profit hospital provides long-term acute care at four facilities that are housed in Cleveland-area hospitals. It is a center for excellence for the provision of specialized healthcare services and comfort for patients and families coping with catastrophic illness and injury. Grace treats an average of 750 patients per year with sophisticated and highly coordinated services.

### Situation

Grace Hospital is committed to providing the best clinical care to patients with complicated health conditions. It looked to enhance its clinicians' ability to focus on direct patient care, while reducing alarm fatigue and increasing protection of patients' personal health information. The hospital also wanted to improve the communications between its four locations in order to increase efficiencies and support centralized functions.

### Solution

Today HipLink® presented by AT&T mobilizes a new bedside monitoring system from Fukuda Denshi, allowing clinicians to quickly respond to critical alerts they receive on their smartphones. Security for these devices is enhanced through AirWatch from AT&T, a mobile device management solution. An AT&T Virtual Private Network seamlessly connects Grace Hospital's locations, allowing for a cost effective means to offer centralized support for billing and pharmacy services. AT&T Network-Based Firewall service helps to protect the security of patient information.

### Treating the Complex

As a long-term acute care facility, Grace Hospital provides many sophisticated services including ventilator weaning, pulmonary rehabilitation, organ transplant, rehabilitation and wound care.

"We take care of the most medically complex patients" said Raj Khanna, CEO of Grace Hospital. "By focusing on these patients, we have become undisputed experts in providing complicated treatments. We help ensure that our nurses and other clinicians have the opportunity to provide the bedside care that is needed."

Indeed, the hospital concentrates its efforts on restoring patients to the highest level of independence. For Grace, this laser-like attention on care quality has resulted in a number of recognitions including the Joint Commission accreditation.

While Grace has competitors, Khanna feels that there are a couple of things that set it apart. "We are a not-for-profit organization so are more community oriented," he said. "And because we are located in a hospital, we have all of the diagnostic services of the short-term acute hospitals available to us."

### Facing Challenges

Leaders are continually focused on creating an environment that enables clinicians to spend as much time as possible at the patient bedside, fully immersed in providing the sophisticated care that they require. Working in such a clinically intense environment, however,

## Grace Hospital Facts

### Business Needs

Assist clinicians to quickly respond to patient needs

### Networking Solution

Enterprise Messaging platform delivers critical alerts to smartphones protected by Mobile Device Management solution; Virtual Private Network layered with Network-Based Firewall links facilities

### Business Value

Clinicians empowered to quickly meet patient needs; staffing costs reduced; network performance enhanced and expenses lowered

### Industry Focus

Healthcare

### Size

205 employees in four locations

means that common industry concerns such as labor shortages and alarm fatigue are ever present. “Nurses are in short supply in our marketplace as are physical and occupational therapists. Recruiting for these positions is challenging,” Khanna says.

Alarm fatigue occurs when clinicians become desensitized to the barrage of alerts and warnings emanating from patient monitoring devices. At Grace Hospital, the complex care that patients receive requires thorough monitoring. It gets to be a challenge to respond to each and every beep, especially if there is not a way to assess the urgency of each situation.

“Nearly every piece of equipment in our hospital setting has an alarm with it,” said Barbara Moran, Chief Nursing Officer. “It is very easy when various alarms are going off all day long to really become fatigued or not react as quickly as you need to.”

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– Raj Khanna, CEO, Grace Hospital

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### Battling the War Room

While technology can offer solutions, it can pose some challenges as well. “Because we are a small hospital, we are handicapped when it comes to technology,” said Khanna. We can’t afford to invest millions of dollars.” As such, Grace looks for cost efficiencies in the solutions that it employs.

In order to enhance patient care, the hospital had recently purchased Fukuda Denshi bedside monitoring stations for the critical care units with alarms that are set off when patients require clinical attention. As part of the solution, Grace had to set up a central monitoring station or “war room” to keep tabs on these alarms.

This war room needed to be staffed around the clock by up to five full-time clinical professionals to analyze the alarms and dispatch clinicians to attend to patients as required. As this was an expensive proposition, Grace was open to an alternative approach.

### Mobilizing Critical Alerts

AT&T consultants recommended using HipLink presented by AT&T, a highly secure messaging platform that is configured to automatically send bedside monitor alarms directly to clinicians’ mobile devices. With this system in place, Grace was able to eliminate the need to staff the central monitoring stations.

“When an alarm goes off, HipLink immediately sends a message to the nurses’ smartphones,” said Khanna. “They get the messages in real time and can respond directly to the patient’s needs without waiting for anyone from the war room to initiate the communication.” This has resulted in significant cost savings for Grace Hospital.

“The biggest savings emanate from the labor costs,” said Khanna. “We have four sites and would have to have clinicians sit and monitor alarms at each, 24x7.” In addition to reducing costs, the nurses can be re-assigned to direct patient care.

Grace also is relying on AirWatch from AT&T, a mobile device management system. With this capability, the smartphones are equipped with a “wiping” feature that makes it possible to remotely clear sensitive, confidential patient information from the phones if they are lost or stolen.

### Battling Alarm Fatigue

Now because the alarms are routed directly to nurses’ phones, there is no need to constantly listen for – and then respond to – the various beeps and rings that go off on the patient floors. They receive alerts about their patients, even while they are moving about the hospital. The solution helps to battle the challenges of alarm fatigue.

“The nurses know that all of our highest priority, red alert alarms, go to the phone,” said Moran. “It really separates the important alarms from others such as an intravenous pump or a tube feed pump beeping or from the false positives that sometimes go off simply because wires are crossed. As a result, they immediately zero in on attending to the patient’s needs.”

What’s more, nurses can directly click on critical EKG wave forms on their smartphones to find out exactly what is going on with a patient, rather than have to go back to the central monitoring station.

“HipLink streamlines the nursing workflow,” said Moran. “The phones are programmed to pick up a pulse oximeter reading, which measures an oxygen level for the patient, as well as an apnea reading, which can indicate if they are not breathing at all,” Moran said. “They can see the wave forms right on their phones as well. Now they can quickly and easily determine if the patient is in distress and requires immediate attention.”

“HipLink presented by AT&T has helped tremendously with patient safety,” added Khanna. “Our nurses are getting alarms in a timely manner and are able to respond in a timely manner.”

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### Foundational Solutions

Grace operates as a “hospital within a hospital” at each of its four locations. With its clinicians and other staff members geographically dispersed around the Cleveland area, there is a need to safely and securely share information between locations. The Hospital recognized there were administrative and operational efficiencies to be gained by enhancing the ability to act as one unified organization.

Working with AT&T, Grace updated its antiquated and congested network and moved to a more cost-effective virtual private network that ties together all of the locations. The new IP-based network provides class of service capabilities which allow for the layering of applications and the prioritization of traffic. AT&T Network-Based Firewall service, a fully managed cloud-based offer, replaced an older premises-based firewall solution, which had been required at each location. The service helps to enforce consistent security policies that are critical when dealing with patient information.

Now clinicians and other staff can seamlessly share information across the organization. This includes billing, admitting processes and pharmacy services, all of which are provided from a central location. The network also facilitates the connection to an outside vendor that handles all of Grace's billing and collection activities.

### Keeping the Focus on the Patient

Creating an environment that met the communication needs of Grace Hospital was a complex undertaking. AT&T was able to provide Grace a variety of cost-effective solutions, ultimately creating a platform that meets these challenges head-on.

"We are always striving to improve the quality and safety of the care that we provide for our patients," said Moran. "That sits at the core of what we do here at Grace Hospital."

With the new solutions in place, the hospital has improved the ability for its caregivers to focus their attention on the most important task at hand: successfully treating medically complex patients.

**For more information contact an AT&T Representative or visit [www.att.com/healthcare](http://www.att.com/healthcare)**

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01/07/15 AB-3039

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