



Zyter Delivers Remote ICU Patient Monitoring and Secure Collaboration Solution for International Military Healthcare System

>The Challenge

Facing on-going budget restrictions and a shortage of skilled nurses at all facilities around the world, an international military healthcare system searched for a technology-based solution to increase operating efficiencies while also maintaining the highest quality of care. After researching a number of solutions, the healthcare system was intrigued about the possibilities of adopting a mobile remote patient monitoring (RPM) solution and secure collaboration platform that could be used by intensive care unit (ICU) physicians and nurses at all of the system's medical centers around the world.

Before any RPM solution could be deployed, it had to undergo a rigorous evaluation process to ensure it was able to meet stringent security requirements as well as comply with HIPAA and other global healthcare regulations. On a technical level, the RPM solution also had to have the flexibility to eventually integrate with the medical system's electronic health record (EHR) system.

Zyter's Digital Health Platform was recommended by an alliance partner and after receiving approval, all of the core features and components of the platform were implemented to support remote patient monitoring and secure collaboration with ICU physicians and nurses worldwide.

At a Glance

Client

An international military healthcare system with 900 clinicians and health administrators.

Challenge

Provide a remote ICU patient monitoring system and communication platform that meets stringent security requirements and is HIPAA compliant.

Approach

The Zyter Digital Health Platform enables ICU staff to securely and remotely monitor ICU devices and communicate in real-time via audio, video, and text with ICU teams worldwide.

Results

- Supports real-time, secure clinician collaboration worldwide
- Faster response to patient issues
- Enables more efficient use of staff resources
- Increased quality of patient care and improved patient outcomes

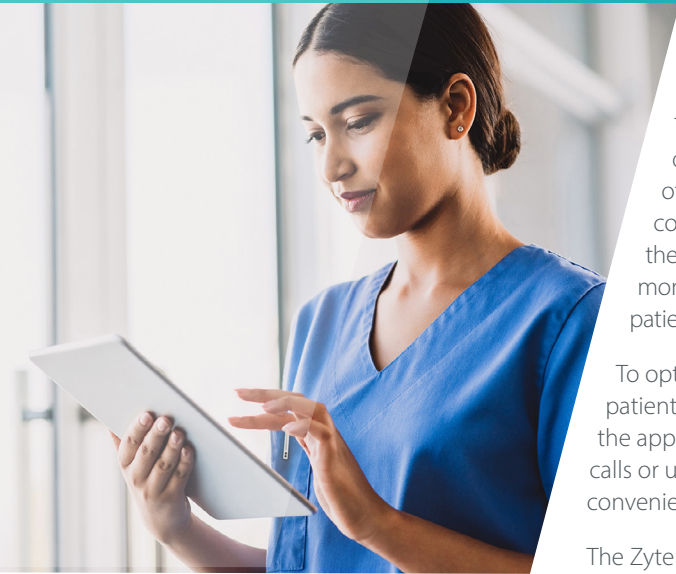
Product Spotlight: Zyter Remote Patient Monitoring

Zyter offers continuous and proactive RPM as part of a comprehensive, integrated suite of tools.

- Leverage a wide range of easy-to-wear, FDA-approved devices for advanced monitoring and self-care
- Reliably track patient habits for early intervention and in support of population health
- Device readings support proactive disease
- Activity checklists and surveys encourage patient participation, enhancing care team interactions and enabling self-care
- Supports BYOD or device-specific protocols

>The Approach

Zyter brought the power of the desktop and the flexibility of a mobile solution together for over 900 clinicians and health administrators across the client's entire global healthcare system. Both the secure mobile app and web-based desktop application enable ICU staff at the main medical center to monitor patients at any of the healthcare system's ICUs worldwide and communicate securely with local staff.



The secure communication and collaboration component of the Zyter platform is delivered in a smart, intuitive iOS or Android digital application with the highest level of security. Providing a real-time collaborative experience between clinicians across the continuum of care, the Zyter solution ensures that ICU staff can quickly connect with the right clinician to resolve patient issues quickly. Combined with the remote patient monitoring component, Zyter delivers a comprehensive way for ICU staff to improve patient care.

To optimize the patient experience, Zyter developed a robust mobile app. In addition to patient registration and post visit surveys, patients can use the Get Care Now feature within the app to request a consult with a doctor. Providers initiate the consult via messages, phone calls or using the virtual video visit capabilities within the app, providing patients with a convenient and efficient way to access and receive care.

The Zyter solution runs locally on the medical center's servers in full compliance with security protocols and HIPAA regulations. It also seamlessly integrates with the medical center's ICU product, which supports all of the equipment that monitors a patient's vitals signs.

>The Results

More than two years after implementation, the Zyter Digital Healthcare Platform continues to transform the way that ICU physicians and nurses care for critical patients, resulting in enhanced patient safety, improved outcomes and more efficient operations.

Using the Zyter solution on a daily basis, nurses at the main medical center can monitor ICU patients at other bases around the world and immediately collaborate with the on-duty nurses at that specific ICU when a device alerts any change in the patient's vital signs. As a result, ICU staff can respond faster to the patient's issue to provide a higher quality of care and bring about a better patient outcome. All of the patient-connected devices in the ICU can send alerts to the Zyter solution, including blood pressure, oxygen levels, heart rate, glucose monitoring and more, enabling a higher level of comprehensive care for critical patients.

The international military healthcare system has also been able to address its budget and nursing resources challenges as now fewer on-site nurses are needed to monitor more patients around the world. In addition, physicians have more time to devote to critical patients that need specialist care. Remote monitoring has also helped patients become more engaged in their own care and increased collaboration with physicians, helping drive better outcomes.

In the near future, this client will further expand the value of the Zyter platform with integration to the medical center's EHR system to provide secure, context-aware collaboration. This capability will enable clinicians to securely access and share a patient's health history, medication list, test results and more from the hospital's EHR system during a chat or video call. As result, ICU physicians and nurses will be able to further speed and enhance the quality of care for their patients.



For More Information

To learn more about Zyter's healthcare solutions or to arrange a product demonstration, please contact +1 (301) 355 7760, sales@zyter.com or visit www.zyter.com.

>About Zyter

Zyter delivers a wide range of digital health products for providers, payers and patients that span telehealth, home health, remote patient monitoring, care management, as well as the insurance claims lifecycle. Zyter's products improve clinical operations and patient outcomes while reducing healthcare costs by enhancing interoperability, communication and collaboration. The company's cloud-based, 5G-ready platform also supports IoT/smart technology and thermal imaging solutions. In 2020, the company won more than 50 awards for its products including Best Health Care and Medical Innovation as well as Company Innovation of the Year. Founded in 2017, the privately-held company is based in Rockville, Md. For more information, please visit www.zyter.com.



Zyter Telehealth Solution for COVID-19 Critical Care Unit Deployed at Civilian Hospital in Guam

>The Challenge

With the emergence of the COVID-19 pandemic in early 2020, the U.S. Department of Defense (DoD) evaluated ways to support emergency critical care units in its network of military hospitals, as well as in civilian facilities. The U.S. Naval Hospital located in the U.S. territory of Guam is part of the island's emergency response healthcare network and collaborates with Guam's civilian hospital on emergent cases. In late summer, Guam's 110-bed civilian hospital became overwhelmed with a surge in the number of critically ill COVID-19 patients. All critical care unit beds were full, and the hospital's small staff of well-trained medical professionals needed additional resources to provide the specialized care required for these patients. Clinicians at the U.S. Naval Hospital stepped up to help, but it became evident that even more critical care physicians and nurses were needed.

In collaboration with the government of Guam, the U.S. Naval Hospital requested assistance from the Federal Emergency Management Agency (FEMA) to support an emergency critical care unit at Guam's civilian facility. FEMA presented the DoD with a request for a telemedicine solution instead of physically bringing in additional critical care staff in light of the restrictions on travel and close personal contact due to COVID-19.

The U.S. military already had decades of experience bringing mobile hospitals to remote battlefields. However, the situation in Guam convinced the DoD that this experience, along with new advances in telemedicine, could play a vital role in the future of emergency critical care in the U.S. because the risk of COVID-19 has changed the modalities of care. Therefore, the DoD deployed its National Emergency Tele-Critical Care Network (NETCCN) to Guam with the future objective of using telemedicine and electronic health record (EHR) integration to extend high quality emergency critical care to every American during COVID-19 outbreaks, as well as all types of natural or man-made disasters.

>The Approach

The DoD determined that a single company alone could not cover the emergent medical needs of the entire U.S. and its territories. So consortiums of leading companies were formed with expertise in telehealth, telecommunications, cloud services, information services, and business consulting services to collaboratively and quickly deploy emergency critical care units in the field wherever they were needed – in cities and rural areas alike.

The DoD received 78 proposals, reviewed and vetted the respondents, and chose nine consortiums or teams to participate in the first phase of a three-phase launch of NETCCN. Providing the Guam civilian hospital with a telemedicine solution for emergency critical care was one of the first civilian deployments of the NETCCN initiative. Already vetted by the DoD for a successful deployment of a secure telehealth and remote patient monitoring solution at Naval Medical Center San Diego (NMCS), Zyter was selected to provide a telehealth solution in Guam as a partner in a NETCCN consortium headed by Deloitte Consulting, LLP, along with: Amazon Web Services (AWS) GovCloud, Verizon, Decisio Health, Elsevier, Qventus,

At a Glance

Client

A consortium led by Deloitte Consulting LLP on behalf of the U.S. Department of Defense.

Challenge

The DoD sought to provide emergency critical care assistance to a civilian hospital on Guam overwhelmed with an increase in COVID-19.

Approach

As a part of a NETCCN consortium, Zyter deployed its healthcare platform for secure collaboration and communication, telehealth, and remote patient monitoring.

Results

The Guam hospital has improved COVID-19 patient care thanks to easy, seamless collaboration with physicians and care teams at Naval Medical Center San Diego (NMCS).



and T6 Health Systems. The Deloitte consortium is using a Rapid Application Development (RAD) methodology, a form of agile software development, which meets the NETCCN's requirements for a stepwise approach to rapid development and release of a secure, reliable, and scalable telemedicine solution.

As part of the NETCCN consortium, Zyter deployed its comprehensive, secure collaboration and communication platform for telehealth, video physician visits, electronic health record (EHR) integration, and remote patient monitoring (RPM) in Guam. The solution went live on October 1, 2020, and enabled physicians, nurses, and care teams 6,000 miles away at NMCSD to collaborate with Guam's physicians and care teams, conduct virtual patient visits, and remotely monitor the condition of COVID-19 patients and others in the Guam hospital. Capabilities and features of Zyter's solution include:

- **Secure, Context-Aware Collaboration** – With the secure communication and collaboration capabilities of the Zyter platform, physicians at the Guam hospital can collaborate with care teams at the San Diego Naval hospital using a real-time, context-aware communication platform with the highest level of security. Zyter's comprehensive telehealth solution enables secure accessibility and sharing of the patient's health record from the hospital's EHR system during a chat or video call. As a result, clinicians at the Guam hospital can resolve issues faster and improve the quality of care for COVID-19 and other critically ill patients.
- **Remote Patient Monitoring** – Patient care and safety are further enhanced with Zyter's remote patient monitoring (RPM) solution, which consists of devices that collect and integrate physiologic data from all of the different medical devices that are connected to the patient in the hospital bed. All of these patient-connected devices can send intelligent alerts to the Zyter platform, including any spikes or emergent changes in blood pressure, oxygen levels, heart rate, glucose monitoring and more. Nurses at the NMCSD can remotely monitor COVID-19 and other patients at the Guam hospital and immediately collaborate with Guam's nurses when a device alerts on a change in vital signs, enabling a higher level of comprehensive care and improved outcomes for critically ill patients.
- **Secure Patient-Facing Mobile App** – Zyter's telehealth solution for Guam also provides a patient-facing mobile application that enables secure virtual physician visits. Patients in Guam can use the app to request virtual appointments with physicians at NMCSD. Patients log in on the home screen and click on the "Care" tab to make a request for a virtual telehealth appointment with a physician. They select their health issue from a list of several types of symptoms on a drop-down menu, including COVID-19 related symptoms.
- **Secure Video Physician Visits** – Based on the item the patient chooses on the Zyter app, the request for care will be routed to an available physician to set up a secure video visit using the Zyter platform. Because the platform is integrated with the Guam hospital's EHR system, the physician can log in and quickly access the patient's health record and have a complete view of the patient's previous diagnosis, medications, test results, vital signs data, and more during the virtual appointment.



>The Results

Today, the U.S. Naval Hospital and the Guam civilian hospital are well prepared with the additional medical resources they need to handle any spikes in COVID-19 cases as well as day-to-day critical patient care – all provided virtually through the Zyter telehealth platform.

By providing telehealth technology to the NETCCN consortium, Zyter has transformed the way emergency critical care is provided at the Guam hospital. For example, even with a small clinical staff, care teams in Guam can create virtual wards of critical patients, such as COVID-19 patients using Zyter and securely collaborate on care with their counterparts at the Naval hospital in San Diego. Now, when a critically ill patient needs the immediate care of a specialist not available in Guam, a specialist in San Diego can remotely “visit” Guam’s virtual ward through the Zyter solution. This is only one example of the way Zyter’s telehealth solutions are shaping the future of emergency critical care.

By implementing Zyter’s telehealth solution the Guam hospital has benefitted in the following ways:

- More efficient management of critically ill COVID-19 patients
- Improved quality of critical care during COVID-19 surges
- Enables secure, contextual collaboration with remote care teams
- Faster responsiveness to emergent patient issues
- Improved patient outcomes

In addition to Guam, the U.S. Army Medical Research and Development Command’s (USAMRDC) Telemedicine and Advanced Technology Research Center (TATRC) deployed four NETCCN teams in response to COVID-19 surges in South Dakota, Minnesota, Puerto Rico, and Texas in early November 2020. According to the TATRC, the NETCCN telehealth platform is now being used by more than 200 local and remote physicians to provide remote critical care and patient monitoring to nearly 100 patients. TATRC also reports that clinicians have collaborated on patient care in over 2,400 live videos and messages on the NETCCN platform.

As part of the Deloitte Consulting LLP consortium for NETCCN, Zyter is on the front lines of the pandemic to bring virtual critical care wards to any hospital, healthcare facility, or field hospital that needs additional critical care resources for COVID-19 patients.



For More Information

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