End-of-life Technology Breathes Life into New Video Integration and Innovation Opportunities

The Customer
Cone Health is an integrated not-for-profit network of healthcare providers with six hospital campuses in North Carolina. It employs over 12,000 employees, 1,300 physicians and 1,200 volunteers. Cone Health had the first TeleICU in the state of North Carolina. It has grown to monitoring 7 ICUs (130 beds) and 7 step-down units (30 beds) monitored by three eRNs and one eMD. Cone Health’s program has been operational for 12 years.

Facing end-of-life issues with current video technology, Cone Health’s choices unveiled new opportunities.

The Customer Challenge
This TeleICU project involved organizing many moving parts, both clinically and technically, in an accelerated schedule carefully orchestrated to avoid interfering with patient care. It required integrations that were uncharted, multi-dimensional and involved creating communication pathways between the Electronic Health Record (EHR) and the in-room video solution. Their mission was to be “The Network for Exceptional Care,” especially when it came to critical care patients!

Accelerated Installation With Zero Downtime
First, working with Cone Health, Yorktel needed to replace over 160 endpoints from two different vendors with Yorktel’s UnivagoHE 22” ICU system. The endpoints could not all be replaced simultaneously, and time was of the essence, so Yorktel advised a staged approach over a three-month implementation period. The new UnivagoHE 22” systems had to be installed in each individual patient room. This requirement alone presented one of the biggest timeline challenges of the project, as each room had to be empty and census was high. The winter months, due to flu season, naturally result in units being at full capacity. Time was of the essence for each install. Old equipment had to be removed, new equipment had to be installed, and each room had to be cleaned in a very short amount of time to avoid impacting patient flow. The new UnivagoHE units have a unique provisioning process using an RFID code to bring the unit on-line in less than a minute and ready for testing. This process greatly reduces the downtime and disruption to the unit’s activities and ensures patients are placed in their rooms without delay.

Seamless EHR Integration and Clinical Workflow
As the install was in process, Cone Health and Yorktel collaborated to build a simple integration to launch the camera from inside the patient’s record in the EHR using context aware linking. Cone Health then leveraged the EHR to define the predictive analytics for risk, stratifying patients for early identification and intervention. The final step was to create a clinical workflow utilizing their new tools and technology.
The Yorktel Solution
Yorktel’s overarching goal was to design an integrated solution that would expand Cone Health’s current functionality, enable new video communication opportunities and further elevate Cone Health’s ability to deliver exceptional care.

Ad Hoc In Call Participant Invitations
UnivagoHE’s two-way audio and video capability is one of its most powerful features. Universal endpoints and multipoint connections allow for a multitude of opportunities, one of which is ad hoc or on demand call initiation which plays a critical role in patient care, especially in the ICU setting. This spontaneity can play a critical role in patient care.

For example, while on a video call, staff can send out a secure, one-time text or email message, to invite additional participants to join a consult, care planning or patient education session. This functionality enables patient family visits and decision-making in even the most difficult times, such as when a patient seeks guidance from a chaplain, or a provider needs to have discussions with overseas military personnel’s family. Participants can join a live video call after receiving the initial text or email alert.

Universal Endpoints
UnivagoHE’s capabilities are not restricted to TeleICU — its applications are nearly limitless, particularly in Telehealth environments.

Staff can also observe multiple patients on a single screen. This degree of oversight levels the staff-to-patient ratio. Equally important is the ability for staff to visually assess patients while receiving alerts related to patient trends, easing the burden on staff who are overseeing many patients.

Enhanced Camera and Audio Controls
UnivagoHE’s unique features support functionality that goes above and beyond other Telehealth solutions. For example, a staff member at a workstation can use the full pan tilt zoom feature to remotely view a patient’s equipment, such as a ventilator, to ensure its settings are appropriate. Even in dim lighting, UnivagoHE’s infrared night vision allows staff to remotely read and assess the datapoints and settings to monitor the patient’s tidal volumes (to reduce lung injury) and intervene when necessary or validate IV pumps and medication concentrations.

UnivagoHE also provides point-to-pan and point-to-zoom for faster camera controls, and users can bookmark locations to automatically return the camera to predetermined positions.

UnivagoHE audio controls give a staff member at a workstation the ability to adjust audio on both sides of the communication. They can adjust their own speaker and microphone as well as the speaker and microphone in the patient room, overcoming any communication challenges with audio.

YORKTEL CASE STUDY
From the Field
“February was our real go live and it’s been going fabulous.”
DOLLY WALKUP RN, MSN, APPLICATION ANALYST AT CONE HEALTH

“Everything is there (on the dashboard) that you could possibly need. You can monitor when to change out the lines, everything.”
BEN CASSIDY RN3, BSN, CCRN, EDUCATOR, CLINICIAN IN THE ELINK DEPARTMENT AT CONE HEALTH

“It’s really … a second set of eyes for the nurses at the bedside so that we can make sure the patients getting the best appropriate care.”
BEN CASSIDY RN3, BSN, CCRN, EDUCATOR, CLINICIAN IN THE ELINK DEPARTMENT AT CONE HEALTH
Remote Endpoint Assessment and Reboot

Normally, when a system’s endpoint goes offline, a technician must go to the endpoint, troubleshoot it, and get it back online — all of which takes time while the system is partially hobbled by the offline endpoint. UnivagoHE offers the ability to monitor an endpoint real-time and if it is offline and reboot it remotely, without ever having to go to the endpoint itself. This greatly reduces the need for onsite technical support and generates huge timesavings, especially for systems with hundreds of endpoints.

Cone Health’s Outcomes and Future Plans

During the scheduled soft go-live, staff successfully used the new / old systems simultaneously until the conversion was complete. Dolly Walkup RN, MSN, Application Analyst at Cone Health, described the real go-live as, “it’s been going fabulous.”

Mobile Cart Applications — The team plans to expand usage of their UnivagoHE integration with Epic by installing six mobile carts for use in the ICU, Emergency Department (ED) and with the Rapid Response Team (RRT).

• In the ICU, during daily rounds, other remote multidisciplinary staff can join via video, to participate in daily patient care planning.
• In the ED, when an ICU patient arrives at night, a provider can use the mobile cart to visually assess the patient, write orders, and provide instructions or oversight as necessary at the time. Empowering providers to perform remote consults via video has the potential to save unnecessary patient transfers from one facility to another and minimize costs.
• Additionally, Cone Health also plans to expand their cart usage to incorporate tablets for their rapid response teams and critical care trucks when patient transport is necessary.

Wound Consults — Wound management is a specialized field and these types of clinicians are not always available at every hospital. Cone Health plans to utilize UnivagoHE for wound care consults via video, as physicians/nurses can round and intervene faster if they operate from a centralized location for one hospital or many hospitals.

Yorktel continues to work with Cone Health to innovate and perfect their solutions, gathering and implementing end-user feedback on how the new systems are performing. Cone Health is very pleased with the tremendous benefits its new TeleICU system is generating and plans to continue exploring how it can leverage UnivagoHE to expand into new and different Telehealth workflows.

UnivagoHE’s capabilities are not restricted to TeleICU - its applications are nearly limitless, particularly in Telehealth environments.

UnivagoHE Features At-a-Glance
• Direct launch from Epic
• Live 2-way audio video
• Point to point video calls
• Multipoint video calls
• Ad hoc text/e-mail invites
• Full pan-tilt-zoom control
• Infrared – night vision
• Endpoint proactive monitoring
• Endpoint remote management

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