Walking into the 5,500 square foot eHealth Center at Westchester Medical Center Health Network (WMCHealth) feels like walking into the future of healthcare. Equipped with 20 eICU telehealth workstations, the eHealth Center allows specialized ICU physicians and critical care nurses to support the care being provided at the bedside of ICU patients spread throughout the Hudson Valley. The workstations are equipped with vital-sign monitoring, predictive analytics, data visualization, and two-way audiovisual connection, allowing the remote specialists to provide an extra level of care and interact directly with bedside providers and patients.

The eHealth Center represents a new vision for how hospitals can deliver care, where doctors are no longer restricted by time or distance. Hospital command centers have been gaining traction in recent years, as health systems begin to co-locate resources in order to better manage patient flow and logistics. Taking a cue from the aerospace and aviation industries, these command centers are wired with monitors that display predictive analytics and monitor a patient’s movements in the hospital.

Tele-ICUs, such as Philips eICU, take the command center concept a step further. Through advanced clinical decision support providing proactive alerting, workflow change management, and integrated audiovisual technology, the eICU is a proven solution to help reduce potential medical complications leading to more stable patients across the continuum. Instead of only checking a patient’s vital signs periodically, there is a continuous live-stream of data flowing from bedside monitors to the eICU, where Philips’ advanced algorithms help identify and prioritize patients for early intervention. The synergistic benefits of technology coupled with care transformation help health systems realize the financial and operational outcomes in target areas of capacity and throughput through improved patient length of stay.

WMCHealth’s eHealth Center was a key first step in bringing the benefits of enterprise telehealth to the entire system. It addressed one of the system’s highest cost areas (the ICU) by standardizing practices, improving quality of care, and increasing access. It is a stunning example of how hospitals can blend technology and design to improve patient care, and with an eye for the future, it was designed for growth and expansion into new clinical areas beyond the ICU.

**Designing a Telehealth Center**

In preparation for designing and building the eHealth Center, Philips Design met with WMCHealth to understand their needs and vision for the project. WMCHealth had already spent over a year working with Philips to prepare for implementation of the eICU program, so many of the basic design elements and telehealth center components were already
within the existing infrastructure, with little opportunity to change the basic structure of the space. The high profile location was a somewhat limiting factor and required updating adjacent corridors while maintaining access to other areas of the hospital. The ceilings and lighting layout were particularly difficult. With ceilings under eight feet high – and impossible to raise – the design team not only had to redesign the workstations in order to fit into the space, but also determine how to make the space feel as bright and spacious as possible.

They also had to pay special attention to the acoustics of the telehealth center and reduce noise from mechanical systems, since any background noise could interfere with communication with patients and bedside staff. In addition, the swinging privacy screens of the Herman Miller workstation solution both to give the patients a sense of privacy and to reduce any background distractions. Finally, the design team had to coordinate security requirements and design the telehealth center so that it could accommodate guests while maintaining HIPAA compliance.

The Future of Healthcare
WMCH’s eHealth Center is a prime example of how to blend technology and design in order to deliver the best possible care to patients. It is not the detached, windowless bunker so often associated with command centers. Rather it is a bright and airy extension of the hospital, fully connected with the rest of the health system and an integral part of its overall eHealth strategy.

ICUs are one of the highest cost areas in healthcare, and therefore ICU efficiency is increasingly vital as health systems seek new cost-effective ways to manage their growing populations in this era of value-based care. The benefits of implementing a centralized telehealth center such as Philips eICU are well documented. A growing body of research has demonstrated how eICU programs reduce length of stay, lower mortality, and improve contribution margins. They allow trained critical care specialists to help manage the care of critically ill patients who might be thousands of miles and several times zones away, providing a consistent high level care regardless of patient location.

By starting with an eICU, WMCH addressed its most cost-intensive area and made optimal use of its critical care resources. Importantly, the eHealth Center was designed with growth in mind to bring the benefits of telehealth throughout the health system.

Challenges
In designing such a space, there are inevitably challenges. At WMCH, the design team had to work within the existing infrastructure, with little opportunity to change the basic structure of the space. The high profile location was a somewhat limiting factor and required updating adjacent corridors while maintaining access to other areas of the hospital. The ceilings and lighting layout were particularly difficult. With ceilings under eight feet high – and impossible to raise – the design team not only had to redesign the workstations in order to fit into the space, but also determine how to make the space feel as bright and spacious as possible.

They also had to pay special attention to the acoustics of the telehealth center and reduce noise from mechanical systems, since any background noise could interfere with communication with patients and bedside staff. In addition, the swinging privacy screens of the Herman Miller workstation solution both to give the patients a sense of privacy and to reduce any background distractions. Finally, the design team had to coordinate security requirements and design the telehealth center so that it could accommodate guests while maintaining HIPAA compliance.

The Future of Healthcare
WMCH’s eHealth Center is a prime example of how to blend technology and design in order to deliver the best possible care to patients. It is not the detached, windowless bunker so often associated with command centers. Rather it is a bright and airy extension of the hospital, fully connected with the rest of the health system and an integral part of its overall eHealth strategy.

ICUs are one of the highest cost areas in healthcare, and therefore ICU efficiency is increasingly vital as health systems seek new cost-effective ways to manage their growing populations in this era of value-based care. The benefits of implementing a centralized telehealth center such as Philips eICU are well documented. A growing body of research has demonstrated how eICU programs reduce length of stay, lower mortality, and improve contribution margins. They allow trained critical care specialists to help manage the care of critically ill patients who might be thousands of miles and several times zones away, providing a consistent high level care regardless of patient location.

By starting with an eICU, WMCH addressed its most cost-intensive area and made optimal use of its critical care resources. Importantly, the eHealth Center was designed with growth in mind to bring the benefits of telehealth throughout the health system.