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Probe

News for biomedical
and clinical engineers

EXPLORING MEDICAL TECHNOLOGY

Evolving clinical technology calls for new skill set

Clinical education for biomedics focuses on effective system use

“This training from Philips will enable our clinical engineering staff to assure a clinician that a clinical decision support application on the patient monitor is working correctly.”

Craig Bakuzonis, Clinical
Engineering Director, Shands
HealthCare, Gainesville, Florida

Today's medical technology is continually evolving as hospitals use more clinical decision support (CDS) applications and incorporate multiple sources of measurement data into their clinical network information systems.

Biomedical and clinical engineers are seeing a corresponding need to increase their clinical understanding. This knowledge allows the engineers to understand the clinical aspects of CDS applications which empowers them to maximize

system support for the clinical staff caring for patients.

To respond to this need for clinical education, Philips has implemented a new clinically focused biomedical education program.

“We saw a need to bridge the gap between the biomedics and the nurses,” says Duanne Young-Kershaw, Philips clinical specialist. “It's valuable for biomedics to learn what the RNs have been taught during our clinical applications classes.”

“Sometimes the biomedics get calls to help nurses who haven't yet had the classes themselves. The biomedics' ability to understand what the clinicians are experiencing helps them to help the nurses,” adds Young-Kershaw.

On-site course taught by clinical specialists

The new on-site clinical applications course is designed to expand biomedics' understanding of clinical applications and ability to troubleshoot clinical devices on the IntelliVue clinical network.

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Taught by clinical specialists at the hospital site, the course contains a review of the practical applications of the IntelliVue support tool license to help biomed managers manage their hospital's IntelliVue monitor configurations.

In order to obtain the support tool license, biomed managers first take a course at the Philips Education Center in Cleveland. After the course, Young-Kershaw typically spends time with biomed managers to teach them about the monitor configurations.

"We want them to understand how the monitors have been customized so they can manipulate them if needed and clone other monitors," he explains.

Shands HealthCare in Gainesville, Florida will soon bring the on-site course to its engineering staff. "Our clinical engineers will be trained in the clinical decision support application uses," said Craig Bakuzonis, director of clinical engineering.

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Customized to your needs

Philips customizes its clinical education course content to meet the hospital's specific needs and number of staff. The more complex the technology, the more calls a biomed department gets from the clinical staff and the more beneficial the course content.

Bakuzonis adds, "On a day-to-day basis, when we are called on for support, our clinical knowledge will help us continue to be part of the solution.

"The goal for our biomed managers is to be able to say with confidence there are a series of events that have led a patient monitor to notify the clinician, and the notification is related to accurate data for a given patient on the monitor," says Bakuzonis.

Reviewing clinical decision support tools

Included in the course are explanations of ProtocolWatch and Horizon Trends, two CDS applications.

The clinical education covers the essentials of these applications to allow biomedical engineers to quickly and effectively support the clinicians.

Benefits for biomed managers

- Improved clinical knowledge allowing faster troubleshooting and less equipment downtime
- Improved credibility and customer satisfaction with clinicians
- Differentiation from IT due to knowledge of clinical issues
- Improved ability to solve problems remotely over the phone from the biomed shop or on-call from home

With a mortality rate of 28-50 percent, severe sepsis or septic shock is the leading cause of death in non-cardiac ICUs.* ProtocolWatch incorporates the Surviving Sepsis Campaign guidelines into the bedside monitor allowing clinicians to detect and treat sepsis more quickly.

Horizon Trends can display the past 30 minutes to 12 hours of measurement data as a line graph related to a baseline. It and other screen trends can help clinicians rapidly identify significant changes in patient status, again saving crucial time and speeding interventions.

Engineering support can include helping clinicians use the patient monitoring and cardiac care systems effectively, determine whether a monitor needs repair or identify a configuration issue which when resolved could speed workflow and enhance patient management.

The Philips clinical education course is available in two formats: Train-the-Trainer; a comprehensive overview for one to three staff members, and an Essentials version, which is a concise review for larger audiences. The course can include application content, troubleshooting, general care and maintenance, and IntelliVue support tool practical application.

Saves time and travel costs

The on-site course can save engineering staff time and costs associated with traveling to an off-site course.

"Philips brings the clinical training to my engineers at our site," says Bakuzonis. "We'll understand the elements of the patient monitor that we've never seen before and get a better understanding of the support tools. We're very happy that Philips can provide this training."



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*Sepsis and the Role of Activated Protein C, J Tazbit, CriticalCareNurse, Vol24, No6, Dec 2004