- Everyone in nursing understands the value of ST (anterior, inferior, chest and limb lead placement). ST Map gives the clinician a simple view that connects the dots… something they've been doing/calculating in their heads for years.
- Quick view on the screen allows the clinician to more quickly assess severity.

Clinical example; Chest pain in the ER
Hospital emergency rooms routinely see large numbers of cardiac patients. Rapid interpretation of the clinical situation is critical, as treatment decisions must often be made quickly.

Monitoring needs to be accurate and easy. As the patient enters the ED, the clinician can quickly start monitoring ECG, SpO$_2$, RR, and NBP. In order to fully assess what may be happening with the cardiac status, the IntelliVue monitor offers the clinician:
- EASI 12-lead
- ST analysis in 12 leads
- ST Map

All of this can be viewed on one screen
1. Patient enters ED and is connected to IntelliVue patient monitor
2. EASI, NBP, ST and SpO$_2$ monitored (default screen above)
3. Patient develops ST changes as evidenced by clear view of ST Map
4. Diagnostic 12-lead ECG obtained and reviewed
5. Appropriate treatment initiated

Advanced Event Surveillance (AES)
What is it?
- Tracks, trends (up to 4 parameters), and can be set up to alert on specific criteria for:
  – Emergence from anesthesia
  – Transition out of critical care unit

Benefits
- Clinician can track how a patient is doing to:
  – Continue with course of treatment
  – Try another treatment/therapy

Clinical example; Cardiac catheter patient recovery
Many hospitals have busy cardiac cath labs. Some have a dedicated patient recovery area; others use a step-down unit or an ICU bed. These patients need to be watched for any sign of re-occlusion in the vessel. ST analysis is key. Here's how ST Map and AES can be used together.

The clinician can set AES around the specific channels of ST where change might be expected if the vessel becomes occluded again. AES can issue an alert (various levels/types of alert notifications can be set up) as well as store the event for review and analysis.

ST Map will provide ongoing visuals of ST changes, while AES alerts and stores any event. Remember, "Time is muscle!"

Clinical decision support on IntelliVue patient monitors

What are your monitors telling you?

PHILIPS

How can IntelliVue clinical decision support applications be used in everyday situations?

• Clinicians are busier than ever taking care of patients, collecting information, and making decisions. Clinical decision support tools can save clinicians time by making the information from the patient monitor more meaningful, easier to understand, and simpler to use in making decisions.
• The monitor can do some thinking for clinicians that it could not do before.

Why do our clinical decision support tools make a difference?

• They give clinicians an opportunity to change course and possibly avert a crisis when they know significant changes are occurring.
  – Enhanced vigilance in the background
  – Support for recognized protocols

What is clinical decision support?

Tools that provide earlier, faster awareness of full patient status to help clinicians treat patients more effectively, which may contribute to improved outcomes and enhanced financial performance.

Quick. Easy. Readily Available.

• Education tool
• Support for less experienced nurses
• Time-saving tool
• Intuitive visual presentation
• Quick snapshot vs. reams of data
• Clinical enhancement tool
• Early recognition of subtle changes
• More meaningful info
• Heads up indicator

Benefits of IntelliVue Clinical Decision Support Application Tools

Philips is meeting customers' clinical decision needs between the patient and the EMR.
• Contributing to earlier treatment decisions
• Visual presentation of data can reveal changes in patient status more clearly, sooner
• Contributing to improved patient safety
• Faster intervention can lead to better outcomes

Horizon Display
What is it?

• A graphic that consolidates what is otherwise just a lot of numbers into a coherent story of the patient's condition — past, present, and future direction

Benefits

• Easy to identify changes in patient status, even at a distance, with trend indicators
• Quick assessment of a patient's status after an intervention
• Data become useful information so clinician can treat patients sooner and more effectively

Clinical Example: Ventilator Weaning

• Ventilated patients require close clinical supervision and care.
• The cost of managing these patients is high and may require an ICU bed, expensive meds, and lab work.
• Weaning patients from a ventilator can be difficult and dangerous.
• Patients who are weaning can get into trouble quickly.
• Recognizing the early signs can enhance care and prevent extra ventilator days.

Classic signs of a patient's inability to handle a wean include:
• Increase in heart rate
• Increase in respiratory rate
• Decrease in end tidal CO_2
• Change in blood pressure (up or down)

The IntelliVue monitor using the Horizon Display can visually alert the clinicians to changes in the patient's ability to tolerate the weaning process.

ST Map
What is it?

• Graphical multi-axis display of ST segments derived from limb and chest leads
• Current values, trends, and baseline reference displayed

Benefits

• Rapid recognition of patterns of ST changes for an ED/chest pain unit, recovery room… anywhere!
• A non-invasive approach to continuous ST monitoring
• Easy to use and intuitive: Option of using 12-lead cables, EASI or a standard 5-lead.

Selling tips:

• When you ask the nurses, "Why don't you use ST segment information?" they usually say, "We don't know what the numbers mean." This is the reason for showing ST Map. (C. Kelliher — Pre-Sales CS, NE Region)
• Always provide a new customer with the ST Map configuration screen, even if they don't use EASI. Good for 5-lead.
• Location of ST changes are important for rep to know even if you don't memorize. The ICU nurses will get it once you show them the visual map. Important message to convey: "Look, we're giving you a visual of what you already know and use. It's easier, quicker." — informed intuition
• Inexperienced staff have a clear display that prompts them seek expert advice sooner.
• ST Map is applicable for both sub-acute and acute settings.

• The center of the graph is where the patient should be (no circle).
• The lines deviating from the center show EXACTLY where the problems are. (green highlighted area and yellow circle).
• Here the ST change is in the inferior leads.

Show ST Map screen and explain at a high level:
• Ability to set limits similar to alarms
• Using narrow & wide, clinician now has a single decision point with 1 button stroke setting for ST Map