2. http://ihi.org/IHI/Programs/StrategicInitiatives/TransformingCareAtTheBedside.htm
The earlier, the better

Helping to identify the right patient at the right time

The IntelliVue Guardian Solution is designed to aid identification of subtle signs of deterioration in patients. In the general floor as well waiting areas in the Emergency Department, directing caregiver attention to early signs of potential adverse events that can result in costly resuscitation efforts or treatment in the ICU. The system can be customized to your institution’s early warning scoring and escalation protocols, facilitating early intervention to help improve patient care, financial outcomes, and clinician workflow.

**IntelliVue Guardian Solution**

IntelliVue Guardian Solution allows caregivers to automatically acquire vital signs, automate early warning scoring (EWS) calculations, aid in identifying early signs of deterioration, and can inform responsible clinicians for early, effective intervention.

**IntelliVue Guardian Software**

The core of the solution.

**Spot check patient monitors**

Multi-patient, spot-check with clinical decision support.

**IntelliVue Cableless Measurements**

Measure vital signs without restricting patient mobility.
Clinical realities on the general floor

Up to 17% of patients in the medical surgical areas of the hospital will face an unexpected complication1. But which of your patients belong to that 17%?

High throughput and reduced staffing in the general floor and the waiting area of the Emergency Department can make it very difficult to predict which patients to watch more closely. Up to 40% of unexpected deaths in hospitals occur on the general floor2.

The warning signs are there
Clinical instability is present and measurable prior to patient decline. In fact, warning signs of physiological decline typically appear six to eight hours prior to an event. If these signs are not recognized and acted upon, further deterioration can occur. Research suggests that 70% (45/64) of patients show evidence of respiratory deterioration within eight hours of cardiac arrest3. In two-thirds of cases (99/150), patients show abnormal signs and symptoms within six hours of arrest, while an MD is notified only 25% of the time (25/99)4.
Early intervention puts time on your side
The IntelliVue Guardian Solution gives caregivers on general floors and in emergency departments the tools to anticipate and address signs of deterioration quickly, aiding appropriate action for the appropriate patient at the appropriate time. The solution automates IntelliVue Guardian EWS, and provides automated scoring of deterioration with Philips spot-check monitors and IntelliVue Cableless Measurements.

Awareness when it counts
Patient decline can be spotted through the use of EWS and proper notification to clinicians. EWS more reliably identifies patients at risk than individual vital signs alone, so caregivers can trigger an appropriate and early response from the medical emergency Rapid Response Team – directly from the monitor. The use of these teams is gaining popularity due to their success in reducing unexpected ICU transfers.4

Reassurance measurements
The system aids in identifying significant deviations in a patient’s vital signs readings, and automatically verifies the accuracy of the data by repeating the measurements at customized intervals. If early signs of deterioration have been detected, the IntelliVue Guardian Software can inform the responsible caregiver via the hospital’s notification system, delivering the notification to the mobile device of choice (digital pager, smartphone, tablet, etc).

Tailored care to follow your protocol – a possible scenario

Turn vital signs into vital action

12:00 AM
EWS 2 – No action needed
Patient vital signs taken with the IntelliVue MP5SC, which shows an EWS score of 2, displayed on the monitor with a recommendation (per hospital protocol) on the ‘action list’ to contact the nurse in charge. EWS score captured by IntelliVue Guardian Software.

2:00 AM
EWS 4 – Caregiver notified/action taken according to protocol
With an EWS score of 4, the ‘customized action list’ calls for the nurse in charge to be contacted and vital signs taken more frequently, at intervals identified in the hospital protocol. EWS score is captured by IntelliVue Guardian Software, which uses IntelliSpace Event Management to notify the nurse in charge, who receives a notification via mobile device and responds to the notification.

After acknowledging the notification at the monitor, and assessing the patient, the nurse in charge recommends more vigilant monitoring with the IntelliVue Cableless SpO₂ and Cableless Respiration measurement pods.
**6:00 AM**

**EWS 5 – Further action to prevent deterioration**

IntelliVue Cableless Measurements periodically measure and transmit patient vital signs to IntelliVue Guardian Software, which aids in identifying early signs of deterioration, and sends a deterioration warning via IntelliSpace Event Management, notifying the caregiver. An attended spot-check is performed and EWS is updated, showing an increase to 5.

**6:22 AM**

**EWS 5 – Further action to prevent deterioration**

The “action list” instructs the caregiver to notify the Rapid Response Team. The caregiver does this without leaving the bedside, by pressing the “Call RRT” button on the MPSSC. This sends a message to the RRT via IntelliSpace Event Management.

**6:42 AM**

**EWS 5 – RRT Arrives**

The RRT arrives 20 minutes later. They log their arrival time by pressing “RRT Arrived” button on the MPSSC. After evaluating the patient, the RRT takes additional action – such as prescribing medication – to prevent the patient from further deterioration and a potential unexpected ICU readmission or transfer.

**8:00 AM**

**EWS 4 – Patient more stable, transfer to ICU unnecessary**

The caregiver takes patient vital signs, which show the EWS score has moved from 5 to 4, and instructs the caregiver that vitals and EWS should continue to be taken every 2 hours. Patient is more stable now, and an unexpected and costly transfer to ICU has been avoided.
Your system, your way

Facilitates communication
IntelliVue Guardian Solution enhances workflow on the general floor through automated messaging to caregivers using the hospital-paging infrastructure. IntelliSpace Event Management can manage notifications and deliver them to the care team’s mobile devices of choice to improve communication and response at the right point of need – regardless of caregiver location.

Smooths workflows, reduces errors
The IntelliVue Guardian Solution reduces many of the manual tasks of documentation and calculation, possibly leading to reduced human error and saving clinician time. For example, the IntelliVue Guardian Solution supports caregivers logging in at the patient monitor, to let them complete their charting to the electronic medical record from the bedside. Or the IntelliVue Guardian Solution can intercept ADT information, to help automate the admission of patients.

Documentation and compliance review
IntelliVue Guardian Solution may help improve – as well as document – compliance with established patient safety standards by making it easy for caregivers to follow instructions to notify a physician or a rapid response team, as required by the hospital protocol.

Helps standardize care and meet the Joint Commission goals
Deploying an EWS can help standardize care across your institution’s facilities. Depending on how it is deployed, the IntelliVue Guardian Solution also helps you meet Joint Commission goals and standards of care:

- Improve recognition and response to changes in a patient’s condition
- Improve accuracy of patient identification
- Improve effectiveness of communication among caregivers

Highly configurable
The IntelliVue Guardian Solution features a highly configurable EWS scoring engine that is adaptable to commonly used early warning score calculations, and can be customized to support variations of EWS protocols preferred by your hospital. Deploy the solution on your institution’s hardware or virtualized environment using your LAN/WLAN infrastructure to easily manage:

Support as you fine tune your workflow
Philips clinical specialists will conduct an assessment of your current workflow and practices related to gathering data and identifying the trend of clinical deterioration. Philips will work with your clinical team to identify process changes that will have positive impact on the activation of your Rapid Response Teams, make recommendations, and develop customized configurations based on your specific EWS protocols. Philips clinical experts will plan, validate, and test the solution to facilitate a successful workflow transition.
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