What system, structural, and technological changes are necessary to capture real-time, critical data of early deterioration in adult postoperative inpatients, to prevent failure to rescue?

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Audience Questions

Speakers:

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  Anesthesiology and Critical Care Medicine and Surgery  
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1. **How long after surgery did you set the enhanced monitoring for? 12/hrs/24hrs/36hs or did it include a risk stratification ie age >60, surgery greater than 2hrs...etc.?**

   All patients were monitored for a minimum of 48 hours because we can’t predict who will deteriorate. Any patient could refuse of course and we recommended that the patient stay monitored for their whole stay.

2. **What wireless device is being used? Did you develop your own algorithm or purchase a commercially sold algorithm?**

   For this pilot we used Sotera ViSi®, that is wireless. We developed our own algorithm for alarm escalation and built in alarm delays, based on what was learned in the previous pilot using Masimo Radius 7® that was a tethered unit.

3. **Can you please clarify if the continuous monitoring was for all patients on opioids or PCA’s only?**

   We continuously monitored all patients regardless of their opioid status.

4. **How did you measure your alarms/pt/day?**

   a. During daily data collection, we noted every alarm recorded in the trended data from the RFD monitor (time, alarm type and alarm measurement) for each patient
   b. Then we compared this data to the emr to see if documentation confirmed or refuted the alarm
   c. Alarms were then separated into the appropriate category and calculated into # of alarms per patient per day
   d. Next step is to convert to the # of alarms per 1000 patient days
5. How did your patients react to the monitoring?

Overwhelmingly positive

a. Comfort - “It’s easy to wear and I can move and sleep with it”

b. Technology – “Very neat technology”;
   “The alarms provided the best value and added safety features”.

c. Patient perception - “I really like the idea of a machine watching my vital signs…I believe Hopkins is heading in the right direction, in being proactive in preventing severe conditions occurring in patients. Thank you for allowing me to be a part of this test/survey.”
   “I feel safer knowing I am being monitored continuously.”
   “I would like [it] to sync with my fitbit.”

Examples of negatives:

a. Comfort: “Bunched wires kept getting caught in the gown straps”
   “Bulky on wrist, wire would catch on the bedrail.”

b. Technology – “Still woke me up for temperature”

c. Patient perception – no negative comments