

Helping Understand Sleep Heals-ICU Alarm Counts and Richard-Campbell Sleep Questionnaire

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Published In/Presented At

Boyle, K., (2014, July, 25) *Helping Understand Sleep Heals-ICU Alarm Counts and Sleep Surveys*. Poster presented at LVHN Research Scholar Program Poster Session, Lehigh Valley Health Network, Allentown, PA.

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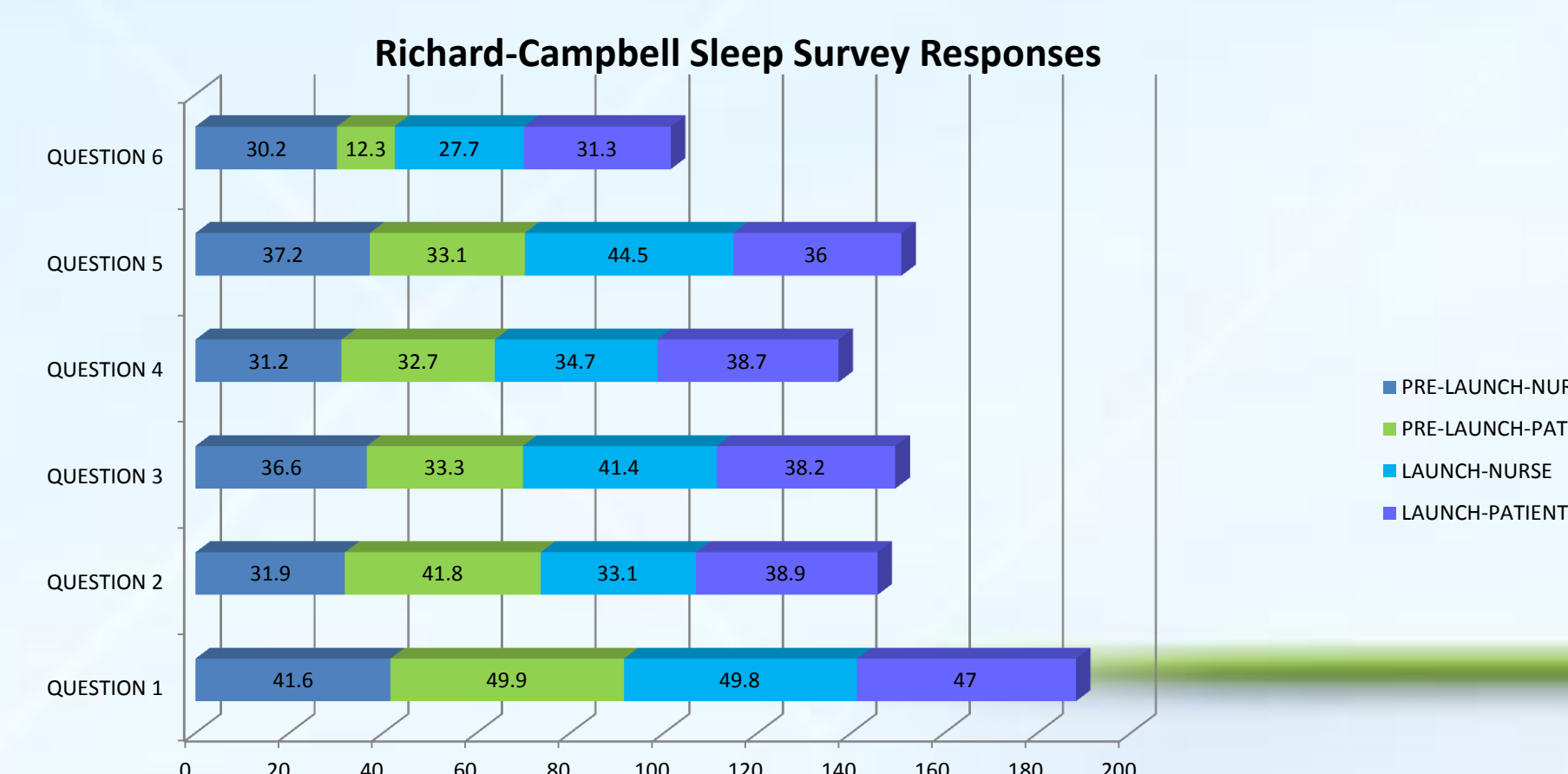
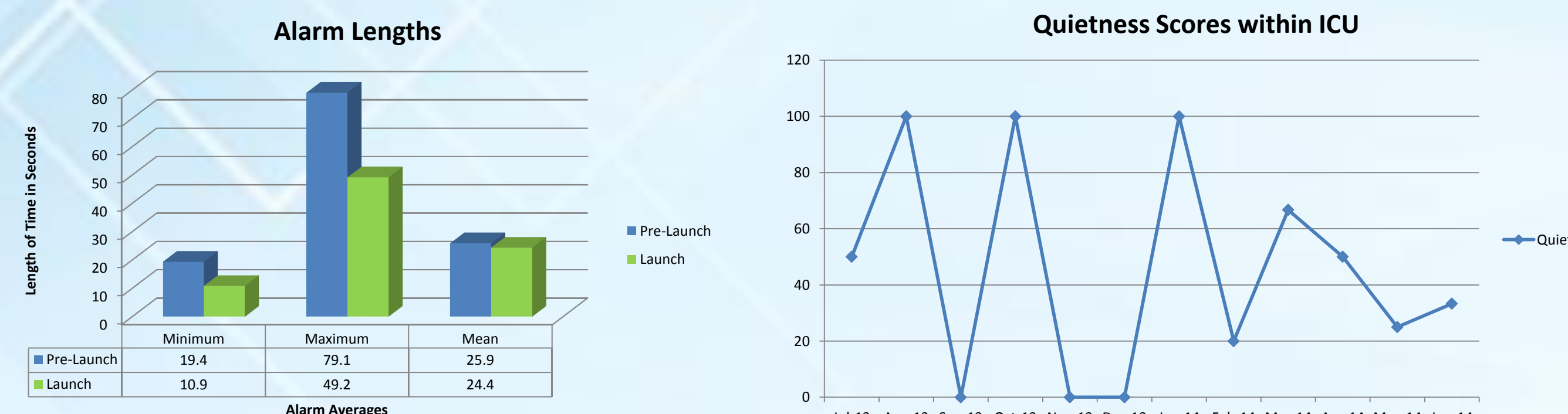
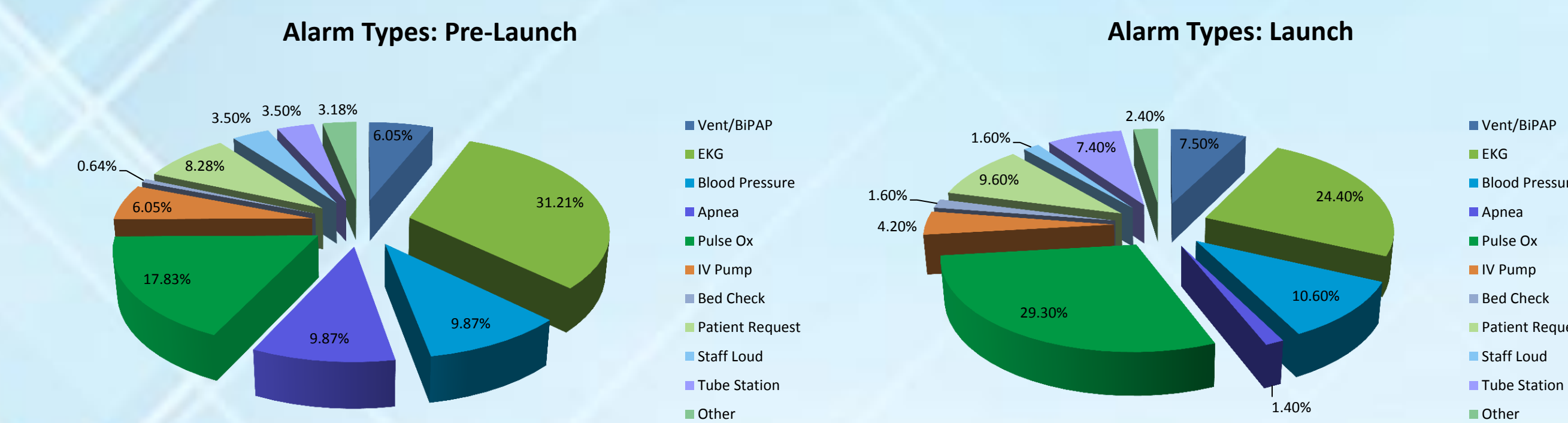
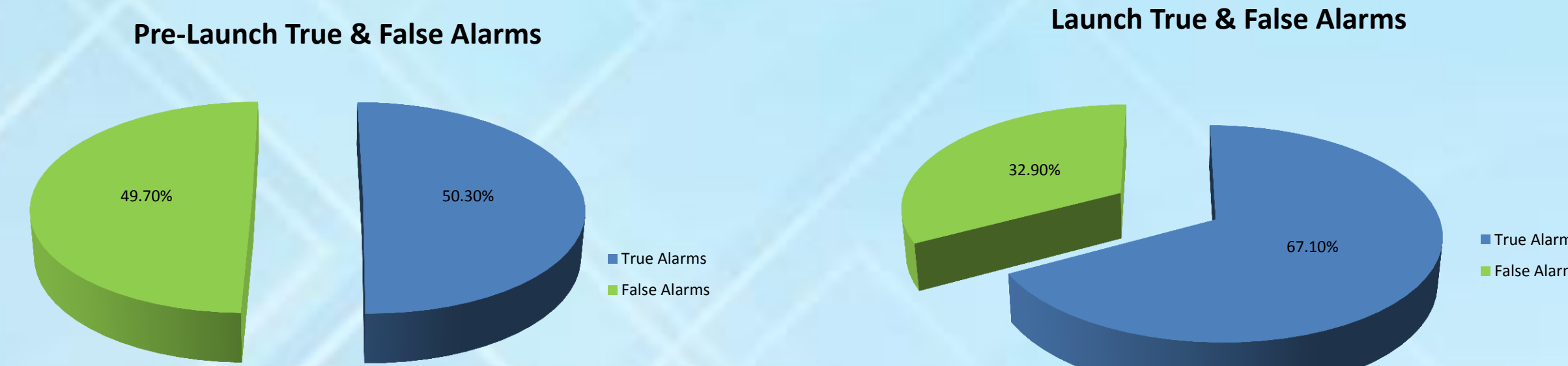
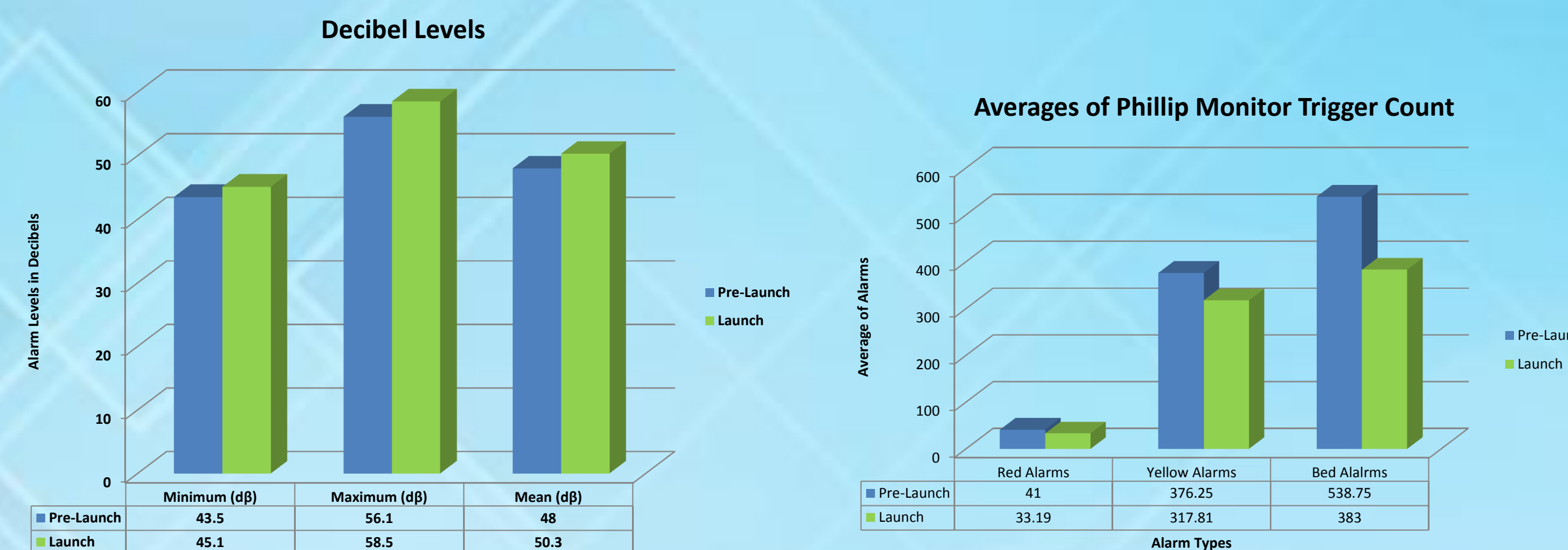
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Background

- The United States Environmental Protection Agency (EPA), the guidelines for background noise are 45 decibels (dB) during the day and 35 dB at night in patient rooms.
- Research has shown that hospital noise levels exceed this recommended guideline of the EPA, making sleep difficult in an already hectic environment.
- Poor sleep quality leads to:
 - Slower healing
 - Poor immune response
 - Decreased cognitive function
 - Increased length of hospital stay
- Sleep deprivation has been linked to:
 - A rise in patient falls
 - Increased patient confusion
 - The increased use of medication
 - The increased use of restraints and 1:1s
- It can take as little as 24 to 48 hours for the body to begin reacting negatively to a lack of sleep in patients.
- The purpose of the current study was to decrease the level of noise and the number of controllable alarms to help aid in increased patient and staff satisfaction.



H.U.S.H. Results



Interventions

- Quiet Time is observed everyday in the ICU from 1am-4am and 2pm-4pm.
- During Quiet Time:
 - Lights are dimmed
 - Television volumes should be turned down
 - Head sets and ear buds may be used
 - Staff will interact quietly and remind anyone entering the unit that "quiet time" is in progress
 - Staff will limit nursing activities during these times and not enter the patient room unless necessary
 - Patient's door will be closed. . .if able to safely
 - When therapeutic interventions are necessary they will be performed as quietly as possible
- Removal of hallway ventilator alarms that averaged 86 to 90 plus decibels



Goals & Evaluation Methods

- Goals:
 - Overall decrease in controllable false alarms by 50%
 - Improvement of HCAPHS
 - Safer decibel levels
 - Increased patient sleep quality
- The tools for measurement and evaluation of the project include:
 - HCAPHS
 - Manual Alarm Counts
 - Decibel Meter Readings
 - Phillips Monitor Alarm Trigger Printouts
 - Richard-Campbell sleep study

Conclusion

- Most of the data collected had no significant difference, but there were some exceptions.
- Percentage of false alarms, the maximum of alarm lengths, and the patient scoring of noise on the Richard-Campbell sleep study did show slight improvements.
- From the data that was collected, one can see why noise levels in the hospitals are a main concern especially in regards to sleep and the EPA guidelines.
- The correction of high noise levels can possibly lead to better sleep at night. This trickle-down effect can lead to a shorter stay in hospitals, and eventually decreasing the hospital cost.

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