

HUSH - Helping Understand Sleep Heals (Presentation)

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HUSH

“Quiet ICU”

American Association of Critical Care Nurses
CSI Project Grant

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A PASSION FOR BETTER MEDICINE.™



What is CSI?

Clinical Scene Investigator Academy

- 16-month nursing excellence and leadership training program
- Designed to leverage the staff nurse's expertise to enhance patient care and decrease hospital expenses
- Helps hospitals with implementation tools and funding to groom nurse leaders who implement change initiatives
- Goal - improved patient and fiscal outcomes

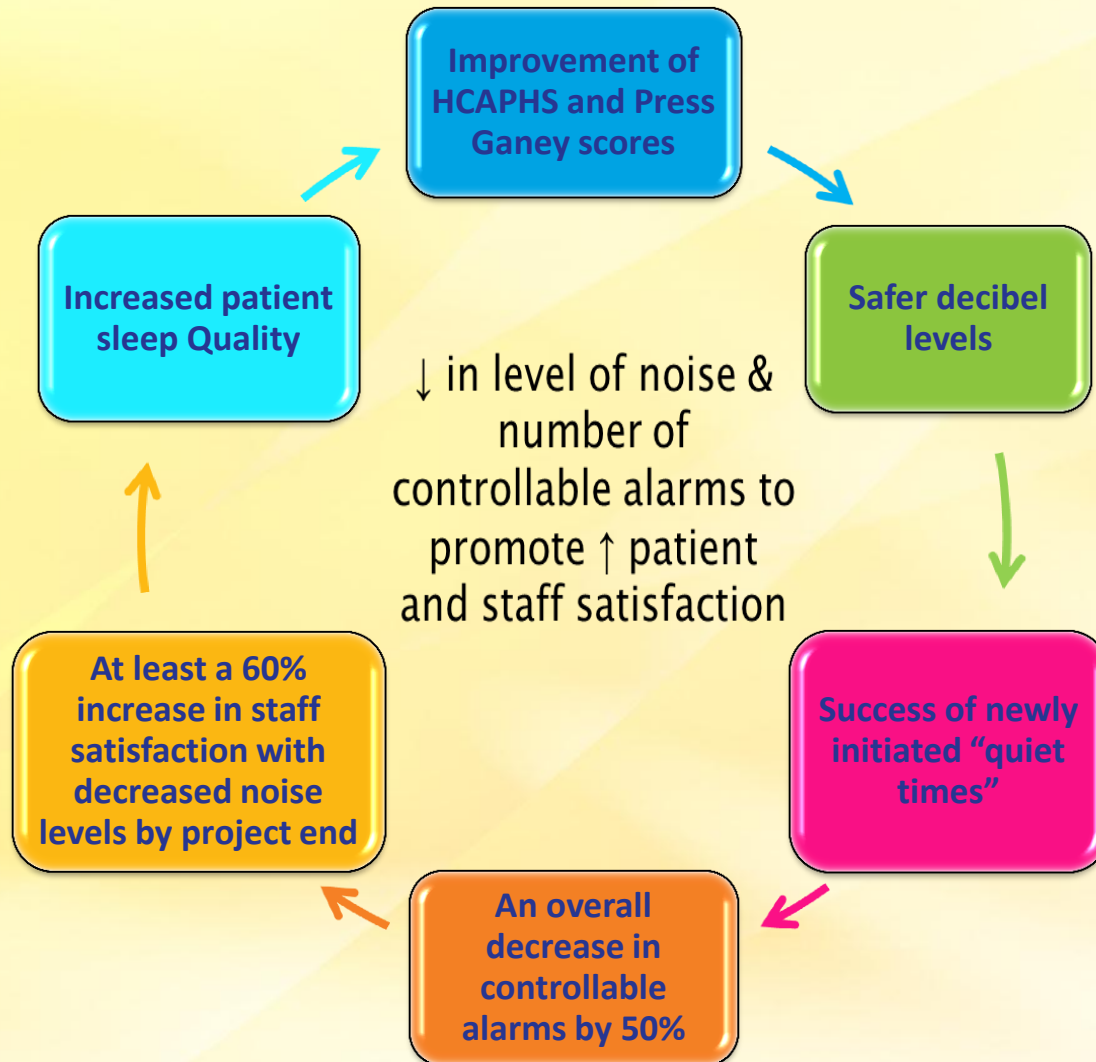
Our CSI Project

- **H** – Helping
- **U** – Understand
- **S** – Sleep
- **H** – Heals



HUSH

Project Purpose



Why We Care

↑ Noise Levels



Poor Sleep Quality



Slower healing, poor immune response,
↓cognitive function, ↑LOS

Background

Primary health effect of noise is disturbed sleep and rest

As much as 57% of ICU patient arousals and awakenings are due to noise

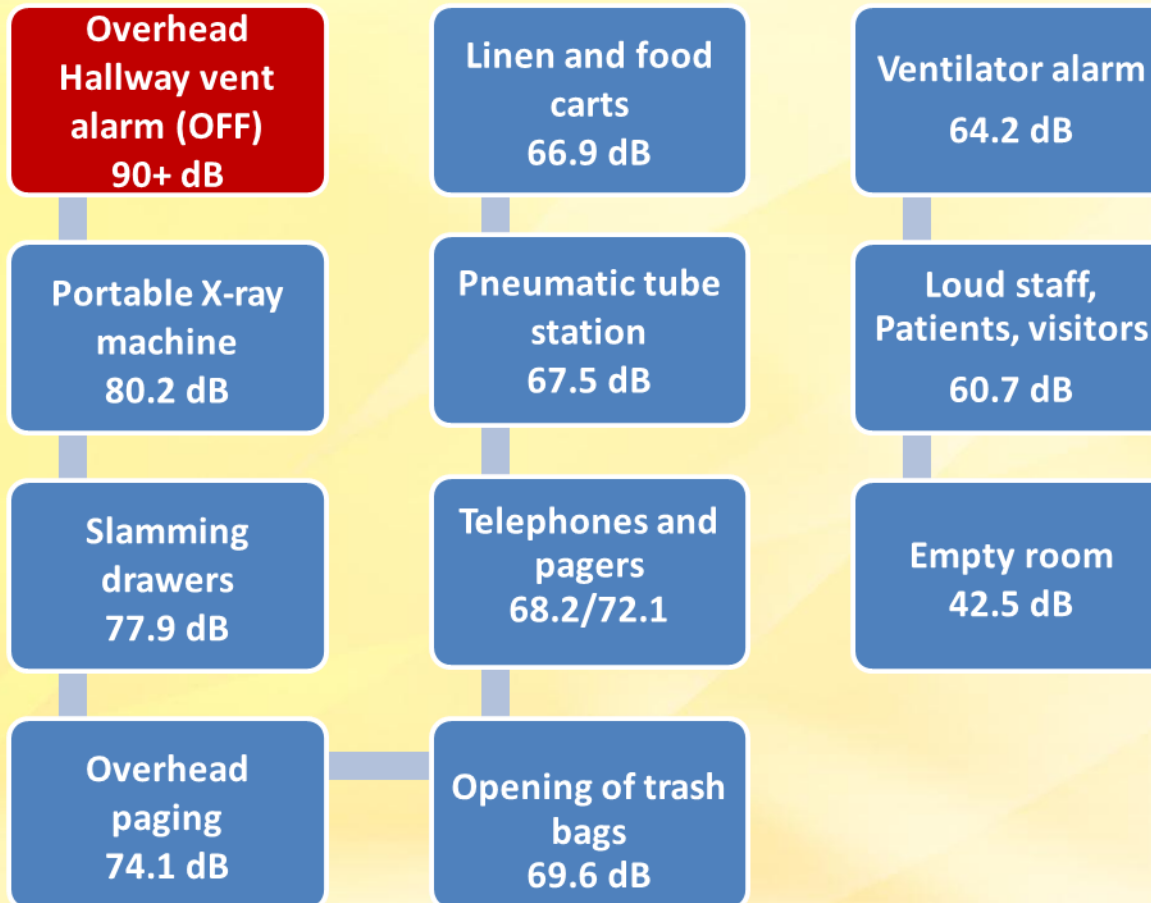
It can take as little as 24 to 48 hours for the body to react negatively to lack of sleep

Some ICU patients are disturbed every 20 minutes while trying to sleep

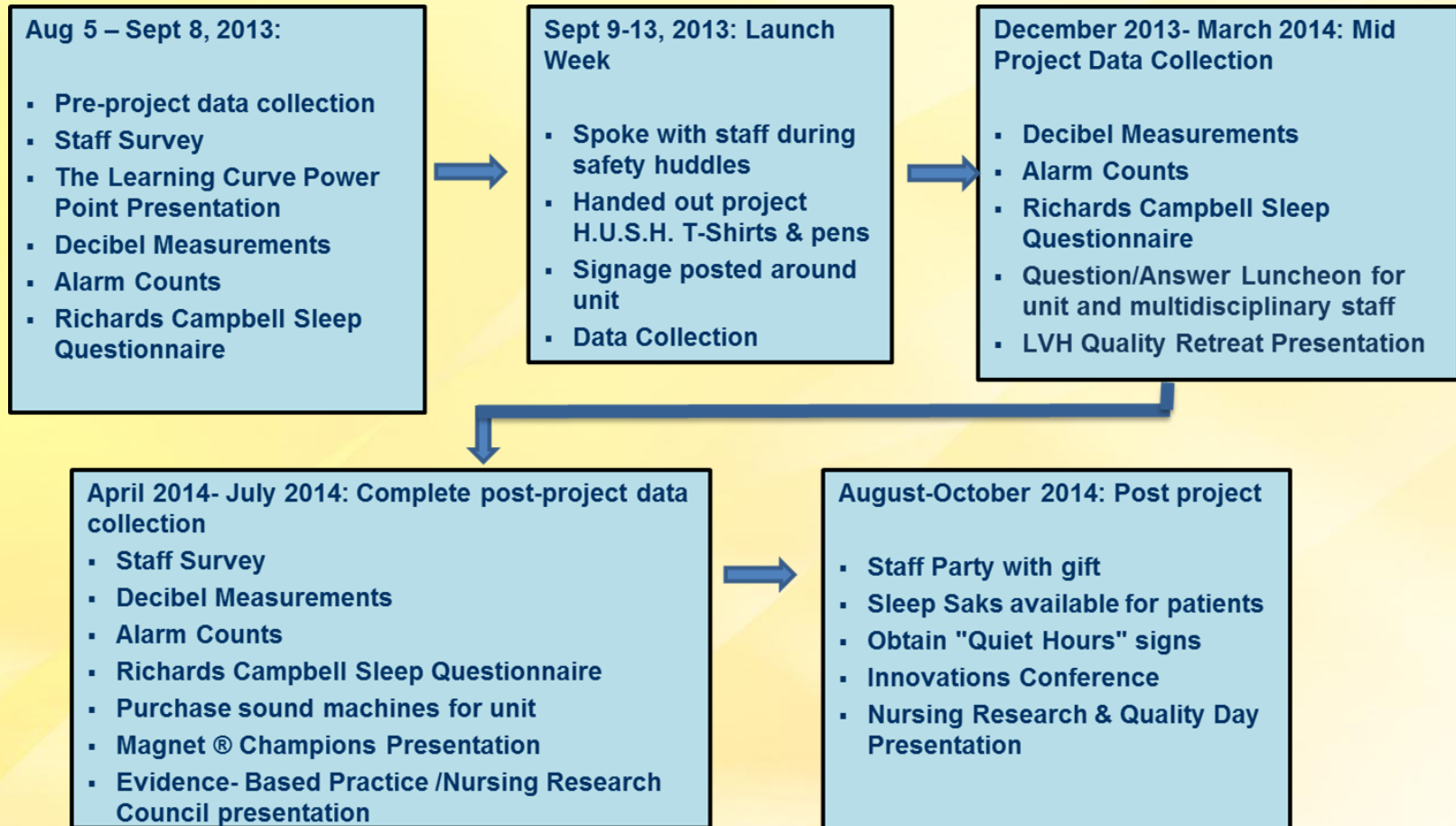
Sleep deprivation has been linked to:
patient falls, use of restraints, confusion, and medication

Florence Nightingale's Environmental Theory describes noise as:
"that which damages the patient"

What Contributes to Our Noise?



Activities and Key Dates



Key Challenges to Our Project

- Difficulty compiling data with respect to time constraints
- Underwhelming interdisciplinary support
- Lack of reporting of CAM scores at the beginning of the project
- Ability of the group to meet
- Staff turnover
- Staff compliance

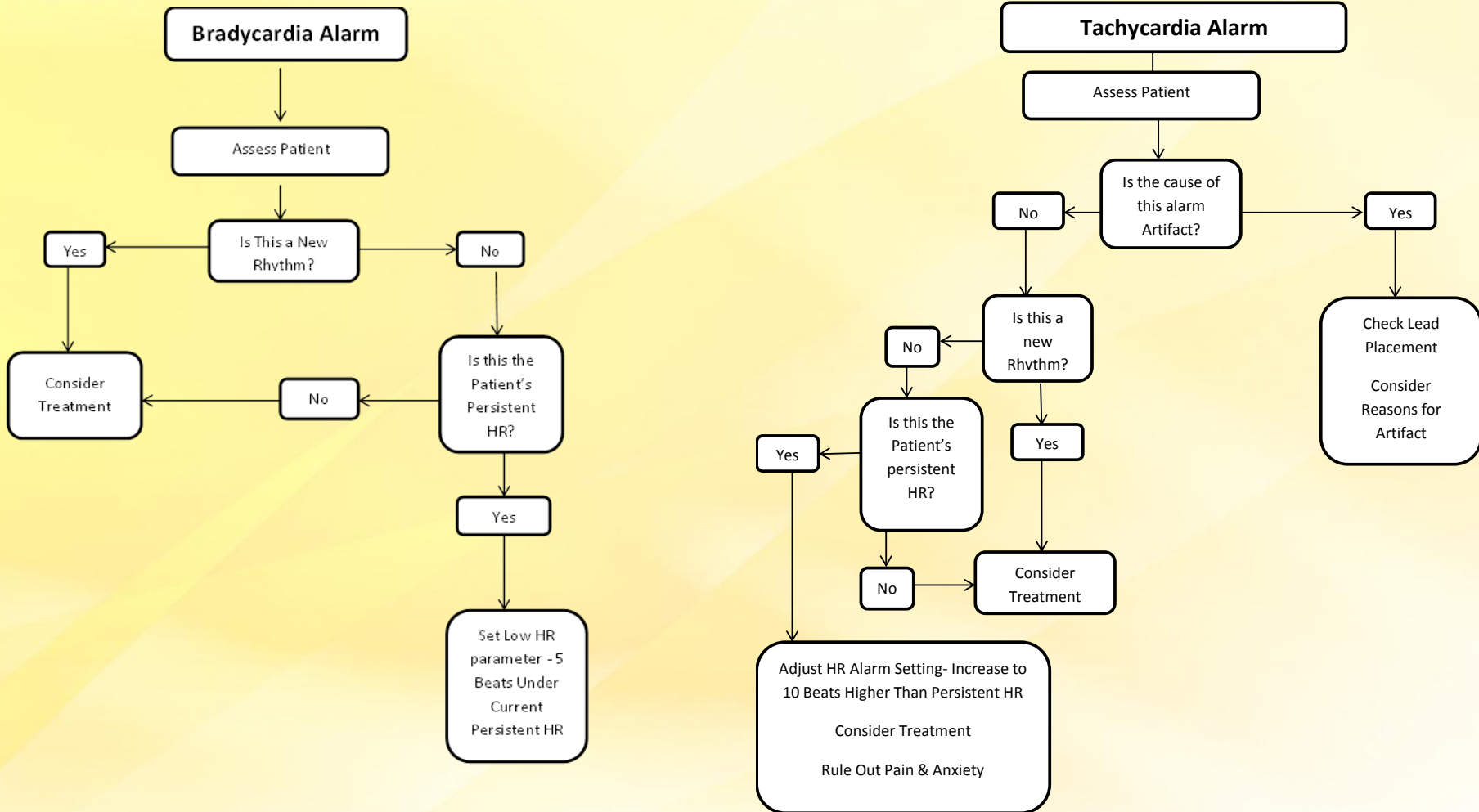
Make it Happen

- Collaboration between ICU staff members and the multidisciplinary team
- Initiation of new set “quiet times:” 1am-4am and 2pm-4pm
- Use of better alarm parameters and adjustments
- Newly developed algorithms for better alarm management
- Better staff understanding of scores and survey questions

➤ RECENTLY ADDED
Increased signage
Sleep saks



Cardiac Monitor Algorithms



During “Quiet Time”

- Unit lights dimmed
- Blinds closed
- Telephone and television volumes decreased
- Headsets and earbuds provided
- Staff interact quietly and remind anyone entering the unit that “quiet time” is in progress
- Staff make every effort to limit nursing activities and not enter patient room unless necessary
- Patient doors closed if safe to do so
- Necessary therapeutic interventions performed as quietly as possible

Measurement and Evaluation Tools

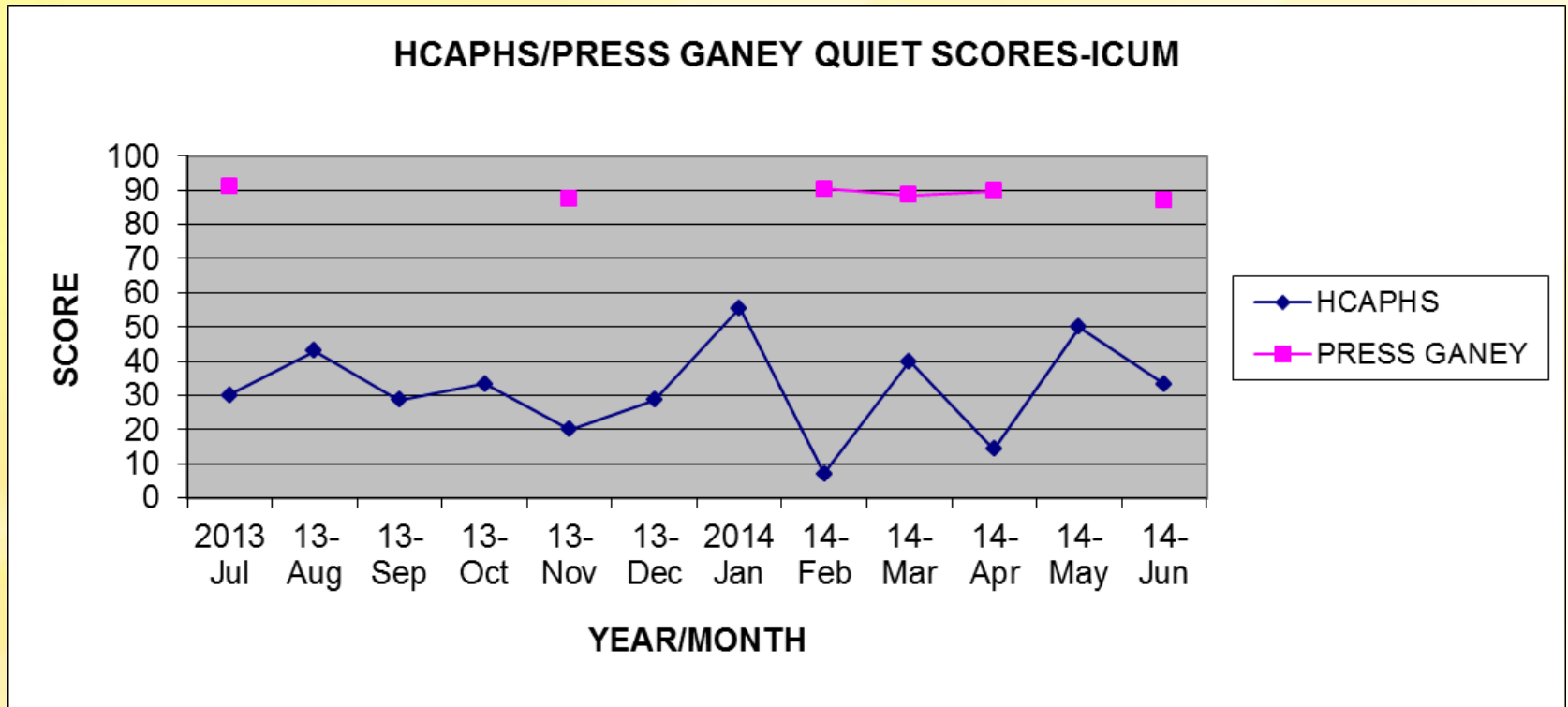
- HCAHPS scores
- Press Ganey Scores
- Staff survey
- Manual alarm counts
- Decibel meter readings
- Phillips monitor alarm trigger printouts
- Richards Campbell sleep study



HCAPHS/Press Ganey

HCAPHS/Quietness target: 54.17

Press Ganey: No score if n < 7



Staff Survey-Pre Project

Rate your impact on the noise level

- **58%** felt that they had no impact on the noise level

Satisfaction with noise on the unit

- **34%** of staff are rarely satisfied with the noise level

How often do you think patients get > 2 hours uninterrupted rest

- **39%** of staff feel that their patients get 2 hours of uninterrupted rest

How often are you distracted by alarms during your shift

- **53%** of staff are always or often distracted by alarms

Staff Survey-Project end

Rate your impact on the noise level

- **32%** felt that they had no impact on the noise level

Satisfaction with noise on the unit

- **3%** of staff are rarely satisfied with the noise level

How often do you think patients get > 2 hours uninterrupted rest

- **84%** of staff feel that their patients get 2 hours of uninterrupted rest

How often are you distracted by alarms during your shift

- **32%** of staff are always or often distracted by alarms

Manual Alarm Count Sheet

Date _____ Unit Census _____ unit section _____ # beds observer is counting alarms for _____ TIME of DAY _____
 PAGE _____

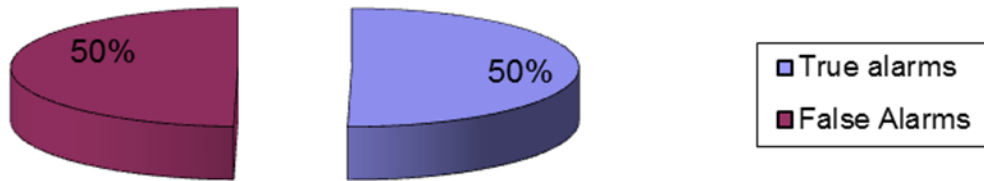
ALARM COUNT (PRE)

TIME/ALARM	VENT /BIPAP	EKG	All BP	SaO2	Apnea	IV Pump	Bed Alarm	Pt Request	Loud STAFF	TUBE	OTHER
TIME ON											
TIME STOP											
FALSE Y/N											
Seconds/minutes											
TIME/ALARM	VENT /BIPAP	EKG	All BP	SaO2	Apnea	IV Pump	Bed Alarm	Pt Request	Loud STAFF	TUBE	OTHER
TIME ON											
TIME STOP											
FALSE Y/N											
Seconds/minutes											
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TIME ON											
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TIME ON											
TIME STOP											
FALSE Y/N											
Seconds/minutes											

Decibel Reader: (at least every 15 minutes during count)

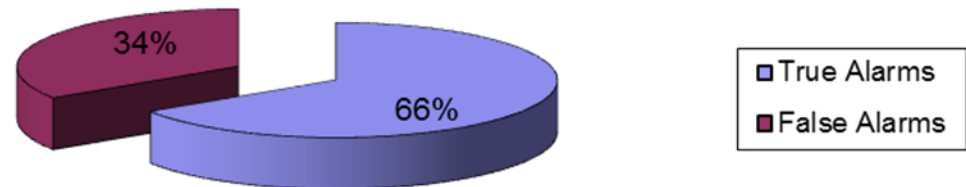
What we have Learned

Pre-launch

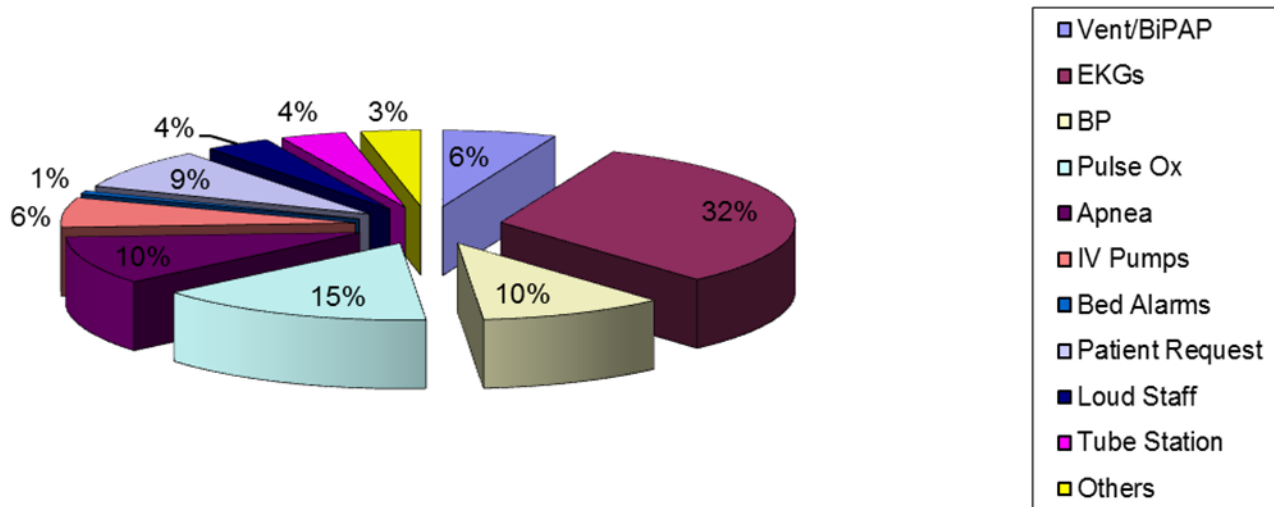


False alarms have been decreased by 69%

Launch

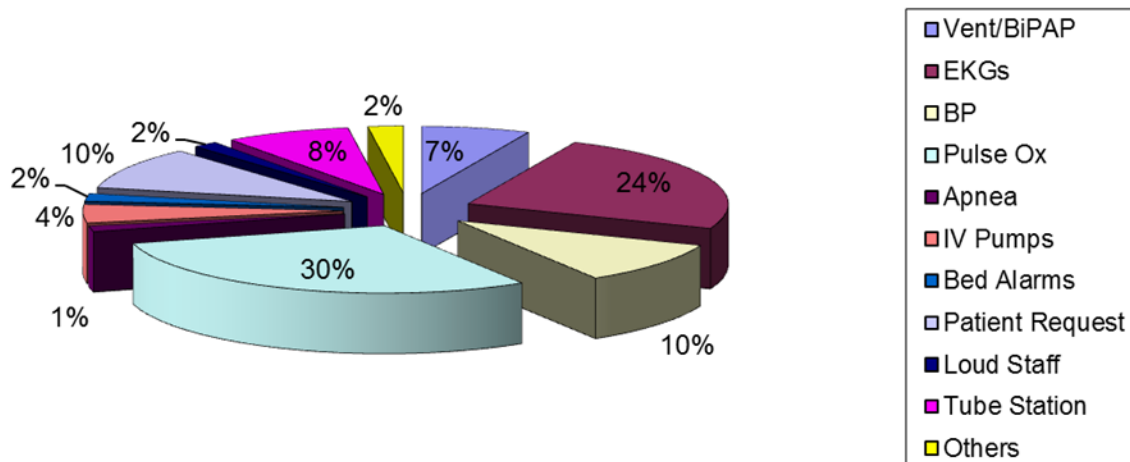


Pre-Launch Alarm Types

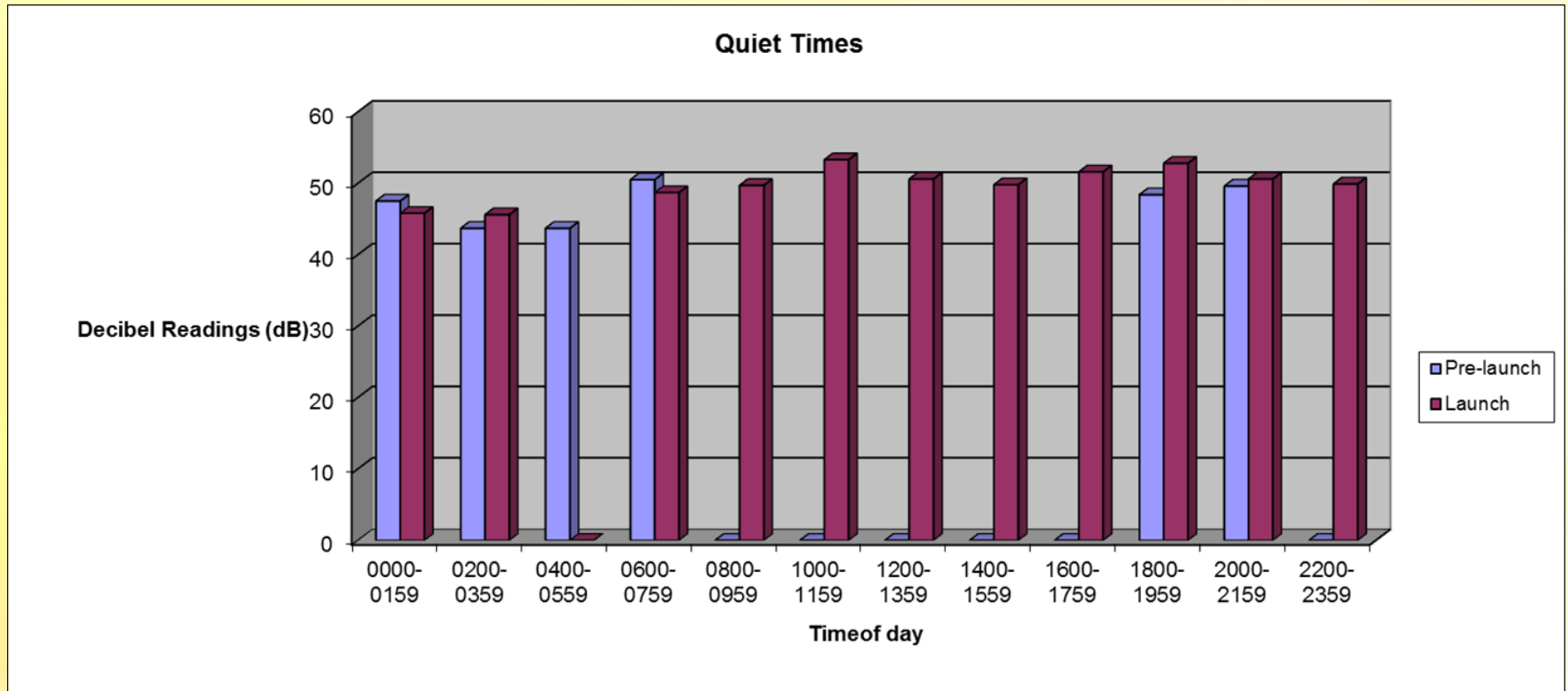


We have ↓ our EKG alarms by 75%
 But in turn we have ↑ our Pulse ox alarms by 50%

Launch Alarm Types



Loudest/Quietest

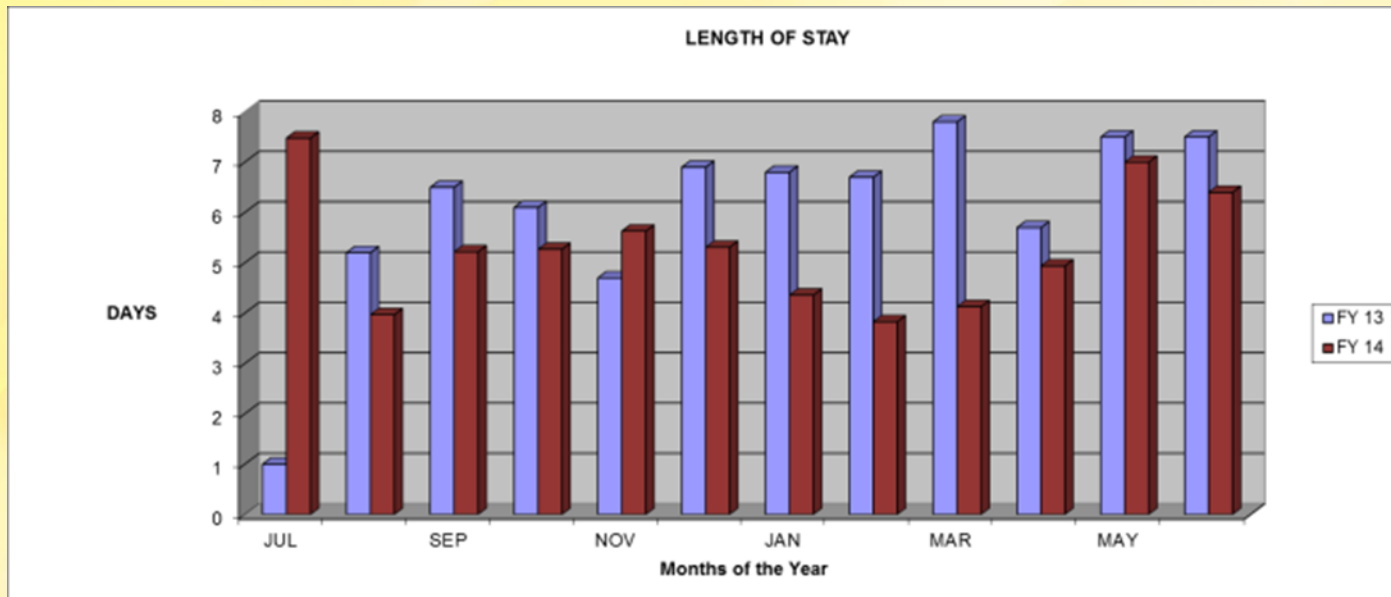


Loudest- 10am-12pm (avg. dB 53.3)

Quietest- 2am-4am (avg. dB 45.6)

Length of Stay

Length of Stay was decreased by an average of 0.74 days from July 2013-June 2014



Richards Campbell Sleep Questionnaire

Richards Campbell Sleep Questionnaire (RCSQ)

Code Number _____ Date _____

Each of these questions is answered by placing an "X" on the answer line. Place your "X" **anywhere** on the line that you feel **best** describes your sleep last night. The following are examples of the type of questions you are to answer.

EXAMPLE A

Right now I feel:

Very Sleepy **X** _____ *Not sleepy at all*

If you were very sleepy, you would place an "X" as is shown at the beginning of the line next to the words "**Very Sleepy.**"

EXAMPLE B

Right now I feel:

Very Sleepy _____ **X** _____ *Not sleepy at all*

If you were somewhat sleepy, you would place an "X" near the center of the line. Mark the answer line near the center to indicate the answer "**Somewhat Sleepy.**"

EXAMPLE C

Right now I feel:

Very Sleepy _____ **X** *Not sleepy at all*

If you were not sleepy at all, you would place an "X" at the end of the line next to the words "**Not Sleepy At All.**"

Please turn to next page

What the RCSQ scores tell us

- Nursing rated patients sleep deeper than patients by 8%
- Patients fell asleep faster than nursing thought by 6%
- Nursing felt patients were awake longer than they were by 6%
- Nursing felt that patients got back to sleep faster by 3.7%
- Patients rated their night's sleep better than nursing by 13%
- RCSQ score was higher for nursing than patients by 3.5%

***** Patients slept better than we thought**

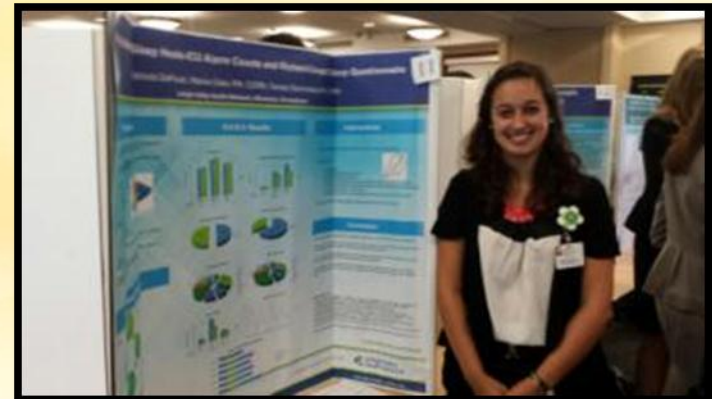
Question 6: Very Quiet 0 -- 100 Very Noisy

- Nursing rates the noise level at night: 37
- Patients rate the noise level at night: 41

Nursing rates the unit slightly quieter at night than the patients do.

Unintended Successes

- Patients are thankful for “nap time”
- During Quiet Time, nursing is able to catch up on documentation, chart review, orders and other tasks
- Visibility of decibel meter may have influenced awareness
- Future collaboration with hospital wide Night Shift Nurse Council working on decreasing noise
- Opportunity to work with summer Research Scholar
- Multiple Presentations of our project outside our Hospital Network



Continue to Stress... for Success



Maintaining & Sustaining

- Include interventions within unit orientation
- Reinforce quiet times to family, staff and interprofessional colleagues
- Designate unit champions
- Hardwire expectations into daily practice

Potential Fi\$cal \$avings

CMS Reimbursement

- LVHN in jeopardy of losing **1.5 million dollars** if HCAHPS scores do not reach set benchmarks
- Muhlenberg responsible for 20% (\$300,000)
 - ICUM responsible for 4% (\$12,000)

Job Retention for RNs

- **Nursing turnover** can cost a hospital approximately **\$88,000** per nurse, when an RN leaves their position

Length of Stay

- Length of Stay in ICUM has decreased by 0.74 days
 - The reduction in LOS cannot be solely attributed to the CSI project, as there are many factors that impact LOS, including sleep
- Savings of \$2,590 per patient (based on average cost of \$3,500 per ICU day)
- July 2013-July 2014 census was 1,948
 - Projected annual savings of **5,045,320**.

Patient Safety and Loyalty

- Unable to place \$ on this



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Questions?

