

# HUSH - Helping Understand Sleep Heals “Quiet ICU” AACN CSI Project

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# HUSH - Helping Understand Sleep Heals “Quiet ICU” AACN CSI Project

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## Who We Are

- 5 Campuses
- 1 Children’s Hospital
- 140+ Physician Practices
- 17 Community Clinics
- 12 Health Centers
- 10 ExpressCARE Locations
- 80 Testing and Imaging Locations
- 13,100 Employees
- 1,340 Physicians
- 582 Advanced Practice Clinicians
- 3,700 Registered Nurses
- 60,585 Admissions
- 208,700 ED visits
- 1,161 Acute Care Beds
- Magnet Designated Hospital Since 2002



### ICU Muhlenberg



- 20 beds
- Medical/Surgical/Cardiac/Vascular ICU and Universal Open Heart Unit
- Provide care for a diverse population



- 16 month nursing excellence and leadership training program
- Program is designed to help leverage the staff nurse’s expertise to help enhance patient care and decrease hospital expenses
- Helps hospitals with implementation tools and grant funding
- Grooms nurse leaders to be change agents
- Goal of program is improved patient and fiscal outcomes
- Our project was part of the Philadelphia track

Our Project and Tools are available on the Innovation database at AACN.org

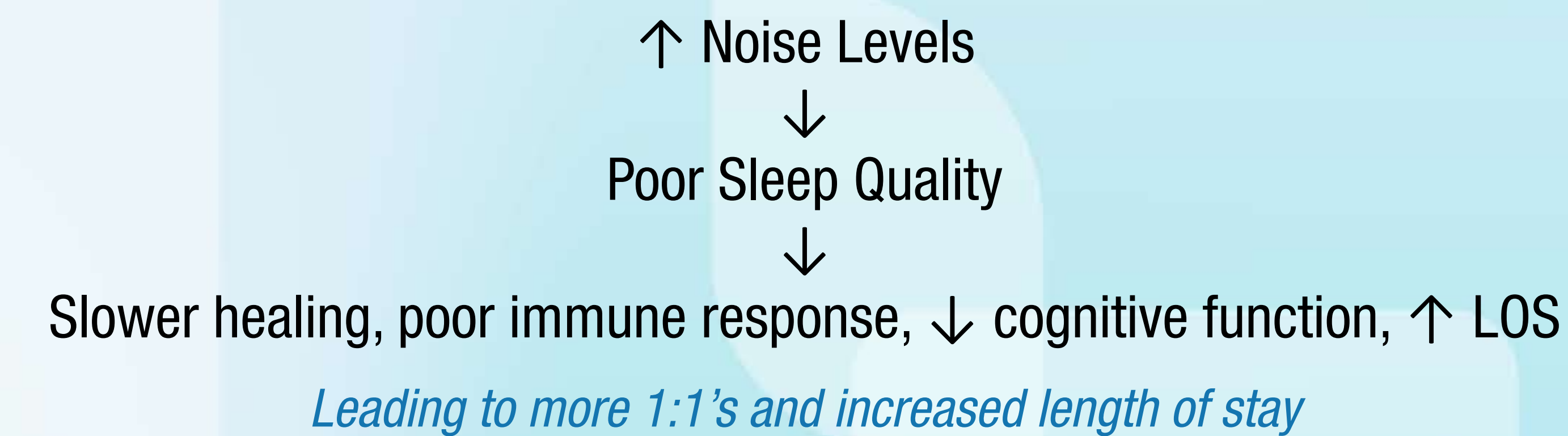
## Background

- 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”

## Project Purpose

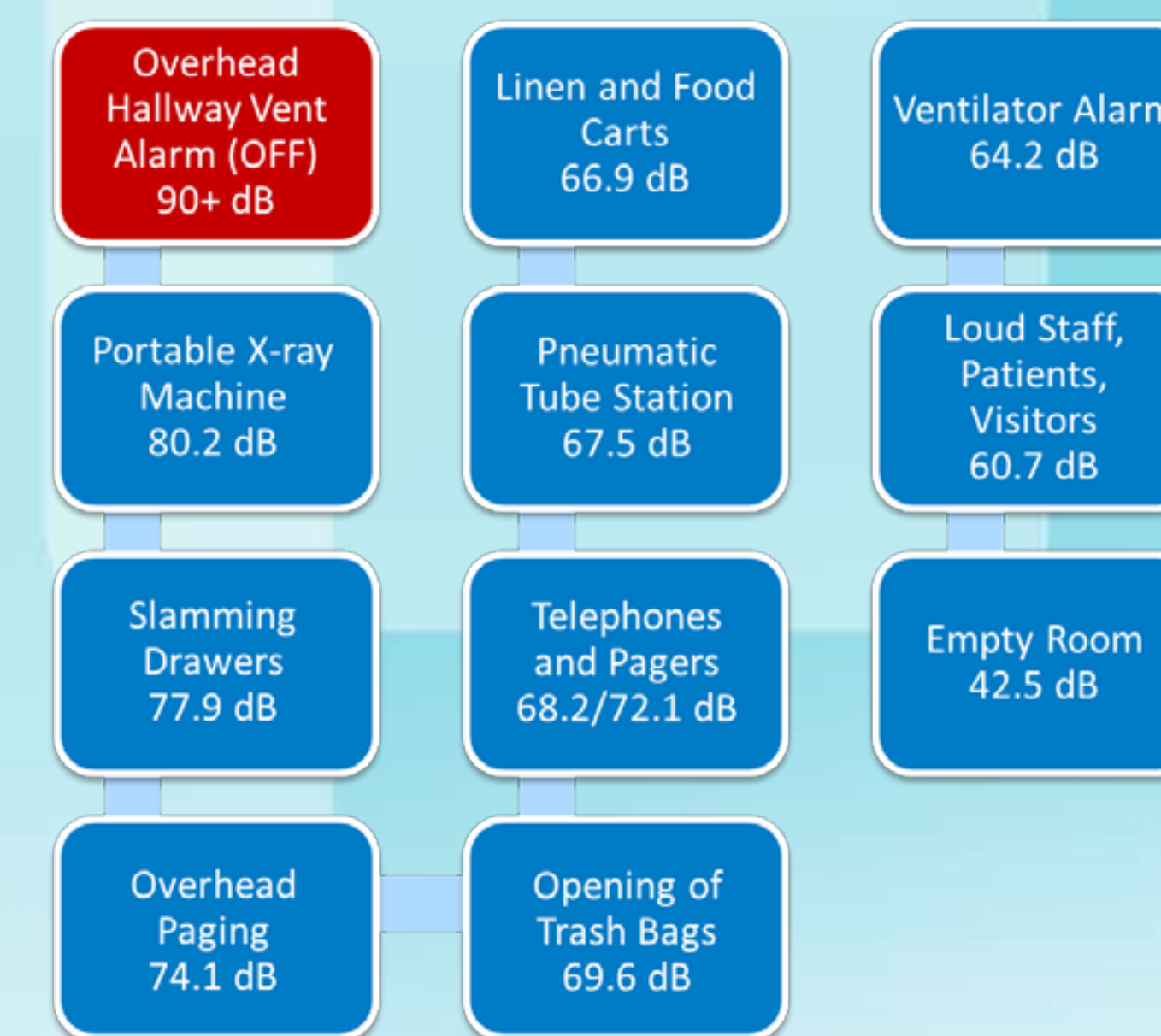


## Why We Care



### What Contributes to Our Noise

Random samplings of everyday daytime noise in our unit....



## 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
- Staff education on noise, alarm fatigue, sleep and survey scores
- Purchase of sound machines and introduction of sleep saks

## 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 makes 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



Sleep Sak

## Measurement and Evaluation

- HCAHPS and Press Ganey Scores
  - Quiet at Night
- 18 Question Staff Survey-Pre and Post
  - Addressing noise levels, satisfaction, distraction, patient’s rest, and staff impact
  - Surveyed RN’s, RRT’s and Technical Partners
- Manual Alarm Counts
  - We measured 11 various alarms
  - Amount of time that they alarmed
  - If the alarm was true or false
- Decibel Meter Readings
  - EPA recommends 45 dB during day and 35 dB at night
  - These numbers haven’t changed since 1974
- Richards Campbell Sleep Questionnaire
  - A validated survey instrument for measuring sleep quality in ICU patients
  - Measures patient- nurse interrater reliability

## Results and Learnings

- The project is officially over but we continue to focus on the quiet initiatives and our HCAHPS scores have continued to improve
- Press Ganey Scores have been consistently in the high 90’s
- 84% of staff feel their patients get at least 2 hours of uninterrupted rest
- Only 3% of staff are rarely satisfied with the noise level
- More than 2/3 of staff now feel they have an impact on the noise level
- False alarms decreased by 69%-due to better alarm parameter setting
- The amount of EKG alarms has been decreased by 79%-use of new algorithms
- Our unit is loudest from 10am to Noon (average 53.3 dB)
- Our unit is quietest from 2am to 4 am (average 45.6 dB)
- The Richards Campbell Sleep Questionnaire let us know that our patients sleep better than we thought and that nursing rated the unit a little quieter than the patients
- Unit Length of Stay was decreased by 0.74 days-this of course cannot be solely contributed to our project-our unit has many initiatives in place to decrease LOS and there are many factors that impact LOS-including sleep and rest

## 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
- Multiple presentations of our project outside our Hospital Network

Continue to Stress....  
for Success



## Maintaining and Sustaining

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

## Potential Fiscal Savings

### CMS Reimbursement

- LVHN in jeopardy of losing \$1.5 million in 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 and a new employee has to be trained- HAPPY RN’s save the facility money

### Length of Stay

- Length of stay in ICUM has ↓ 0.74 days
- Potential 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 for the unit with ↓ LOS potentially results in millions of dollars

### Patient Safety and Loyalty

- Unable to place a dollar value on this

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