

Background

- Excessive alarms in intensive care settings, particularly those that are not significant, results in alarm fatigue for healthcare providers and poses a risk to patient safety
- In 2013, The Joint Commission reported 80 deaths from alarm related events with alarm fatigue being the most common contributing factor
- Considering the risk for patient harm and critical delays in patient care, reducing alarm fatigue intensive care units can directly improve patient care and outcomes

Practice Change

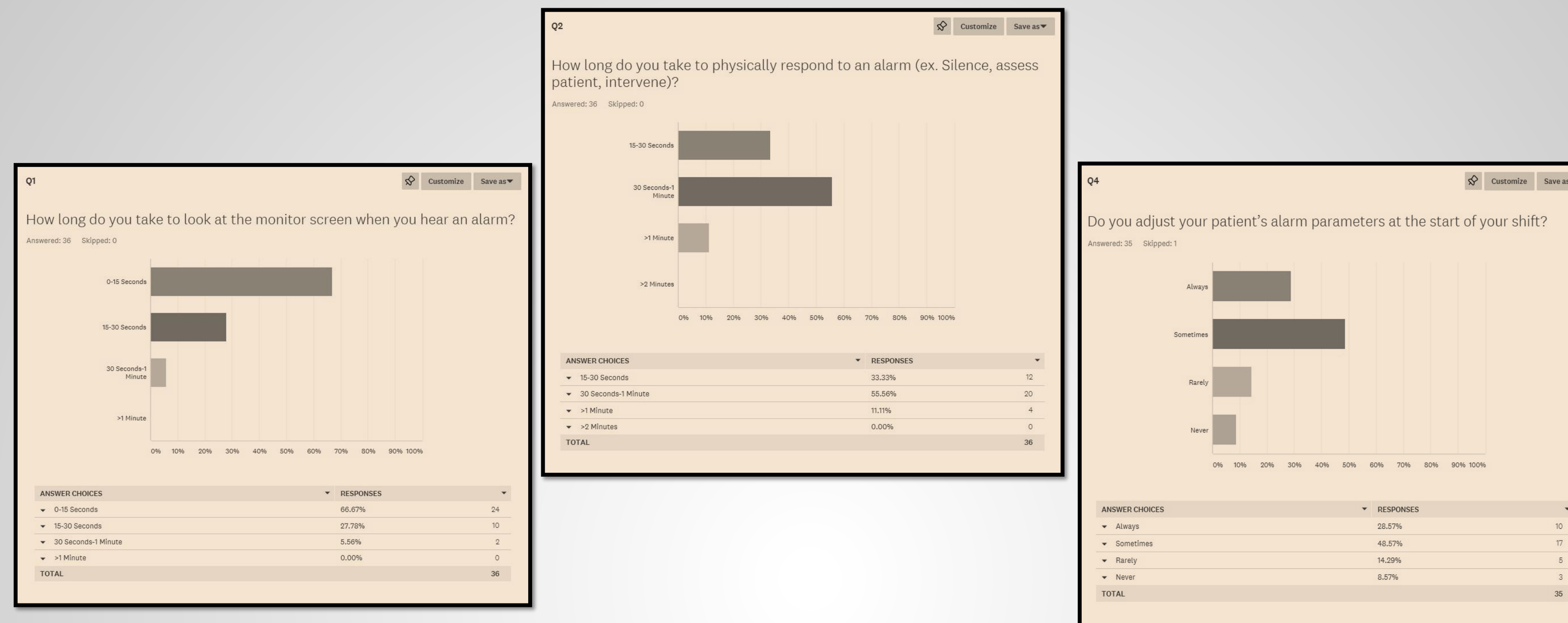
Increase registered nurse's (RNs') knowledge of integrating factors contributing to alarm fatigue and increase awareness and responsiveness of alarms in the ICU

Methods

- Pre alarm fatigue survey was distributed to ICU RNs
- Alarm fatigue was discussed during daily shift huddles and RNs were encouraged to modify alarms appropriately for each patient at the beginning of each shift
- Education and assistance was provided to staff as needed in order to improve alarm management
- Post alarm fatigue survey was distributed to ICU RNs

Measures and Results

Survey Results



Educational Pamphlet

Did You Know?

- Excessive alarms in intensive care settings, particularly those that are not significant, results in alarm fatigue for healthcare providers and poses a risk to patient safety (Jepsen et al., 2018).
- In 2013, The Joint Commission reported 80 deaths from alarm related events with alarm fatigue being the most common contributing factor. Considering the risk for patient harm and critical delays in patient care, reducing alarm fatigue intensive care units has the ability to directly improve patient care and outcomes.

If you have any questions about your monitor alarms, please reach out to your unit educator.

References

Jepsen, S., Sendelbach, S., Ruppel, H., & Funk, M. (2018). Managing alarms in acute care across the lifespan: Electrocardiography and pulse oximetry. *Critical Care Nurse*, 38 (2), 16-20. <https://doi.org/10.4037/ccn2018468>

Suba, S., Sandoval, C., Hemsey, J., Hu, X., & Pelter, M. (2019). Contribution of electrocardiographic accelerated ventricular rhythm alarms to alarm fatigue. *American Journal of Critical Care*, 28(3), 222-229. <https://doi.org/10.4037/ajcc2019314>

The Joint Commission (2013). *Sentinel event alert*, 50, 1-3. Retrieved from https://www.jointcommission.org/-/media/dep/alarms/sea_50_alarms_4_5_13_final.pdf?db=web&hash=5E82688C2EB0B3039476443B834CCF10

On's and Off's of Monitor Adjustments

- How to change your ECG, BP, SPO2 parameters—patient specific.
- How to view other patients.
- How to change alarm volume.

Main Menu

- View Other Patients
- Alarm Control
- Parameters

ECG

- ECG limits (HR/PVC)

BP

- SBP high limit
- SBP low limit
- DBP high limit
- DBP low limit
- MAP low limit

SpO2

- Low limit of Saturation
- Delay

Monitor Adjustments

From the Main Menu

- *To view other patients: toggle over to select bed to view-choose your other patient (off)-click view.
- *Alarm Control: toggle over to alarm control-choose alarm volume 10%-100%
- *Parameters: select and make patient specific.

From ECG on Main Screen

- *Toggle to ECG limits> HR limits adjust up/down
- *Toggle to ECG limits>PVC limits>increase/decrease

From BP on Main Screen

- *To view ECG limits: toggle over to ECG, select parameter to update

From SpO2 on Main Screen

- *To select limits for SpO2>select low limit of saturation
- *To self/change delay: select delay and choose the clinically relevant time (delay allows for a few seconds delay before alarming for low SpO2)

Did you know?

Press around the disc, not on the gel

Build in stress-loop if patient is active

Secure EKG cable by its clip to the gown

Keep EKG cable clear of other tubing

Prep chest/clip hair

Change electrode discs every 24 hours


Standby monitor when patient off unit

Check alarm limits at beginning of the shift

Customize alarm parameters-RV

Respond to all alarms immediately

Discharge the patient when complete, do NOT just turn it off



IF THE ECG ISN'T BROKEN THEN WE HAVE A PROBLEM

Summary/Discussion

- Next Steps:**
 - Create and implement a training pamphlet
 - Develop a plan to include this education into new hire orientation
 - Continue to provide education to RNs and CNAs working in the clinical setting
- Barriers of this Study:**
 - Lack of time or interest to complete a pre and post survey
 - Inability to directly implement changes
 - Measurement of success is subjective
 - Low number of responses compared to the number of surveys to distributed to staff
 - The results of this project only reflect the pre-education

Conclusion

- Most survey participants agree that alarm fatigue is a problem in our ICU and this needs to be addressed
- There is an opportunity surrounding alarms and educating staff how to maximize their efficacy in their nursing practice in order to decrease fatigue and improve patient satisfaction

References

Jepsen, S., Sendelbach, S., Ruppel, H., & Funk, M. (2018). Managing alarms in acute care across the lifespan: Electrocardiography and pulse oximetry. *Critical Care Nurse*, 38 (2), 16-20. <https://doi.org/10.4037/ccn2018468>

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