

OPERATING ROOM NOISE: WHAT'S CRITICAL ABOUT IT?

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BACKGROUND

- Research indicates noise negatively affects individuals and patient safety
- Operating room (OR) can be one of the noisiest clinical areas due to complex multi-information sharing among a multidisciplinary team simultaneously working with various rich technology devices
- Research shows trauma OR averages 85 dB nearly twice Environmental Protection Agency's (EPA) 45 dB safe range
- Orthopedic & Neurosurgery noise > other specialties' noise
- Currently, increased noise level, staff unaware of noise producing behaviors and unsafe effect of noise, concerned staff, noise unmonitored, unregulated, no policy to address issue

PURPOSE

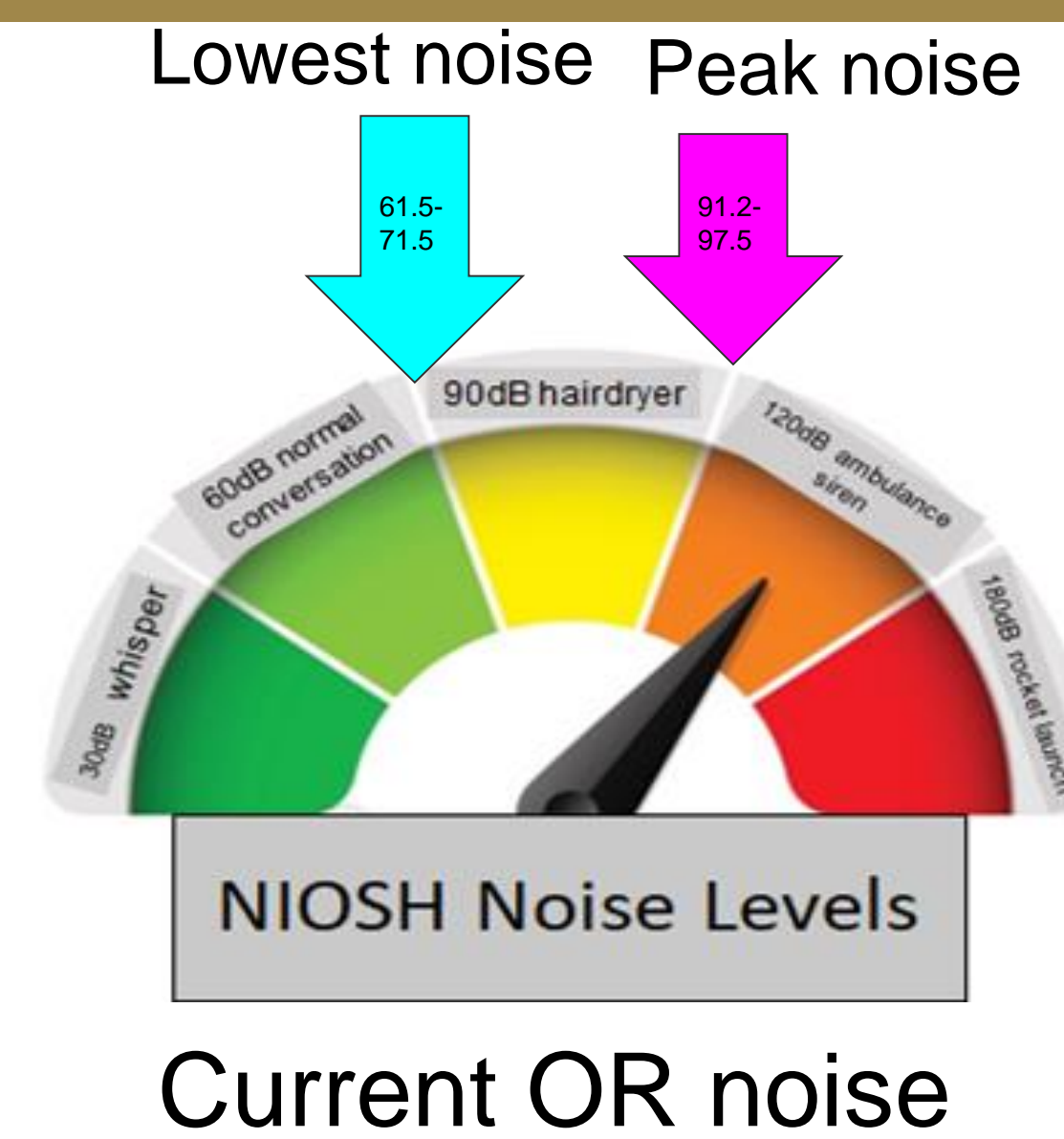
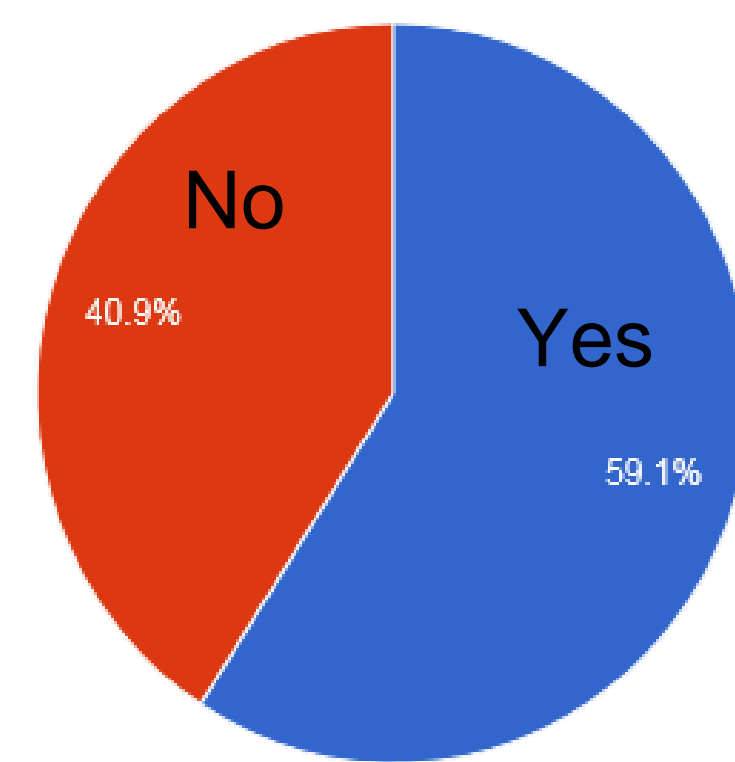
To investigate the effects of noise and the effectiveness of noise reduction strategies to individual and patient safety

METHODS

- Participated in Evidence-based Practice fellowship
- Reviewed literature on OR noise & interventions
- Synthesized literature & presented to leadership, & multidisciplinary perioperative quality & practice committee to obtain project support
- Proposed practice protocol "Noise Reduction during Critical times of Surgery"
- Assessed OR practices & staff noise perception using IRB approved pre-education REDCap survey
- Measured noise level using National Institute Occupational Safety & Health (NIOSH) sound level meter pre-education

RESULTS

Do you perceive that the OR is noisy?

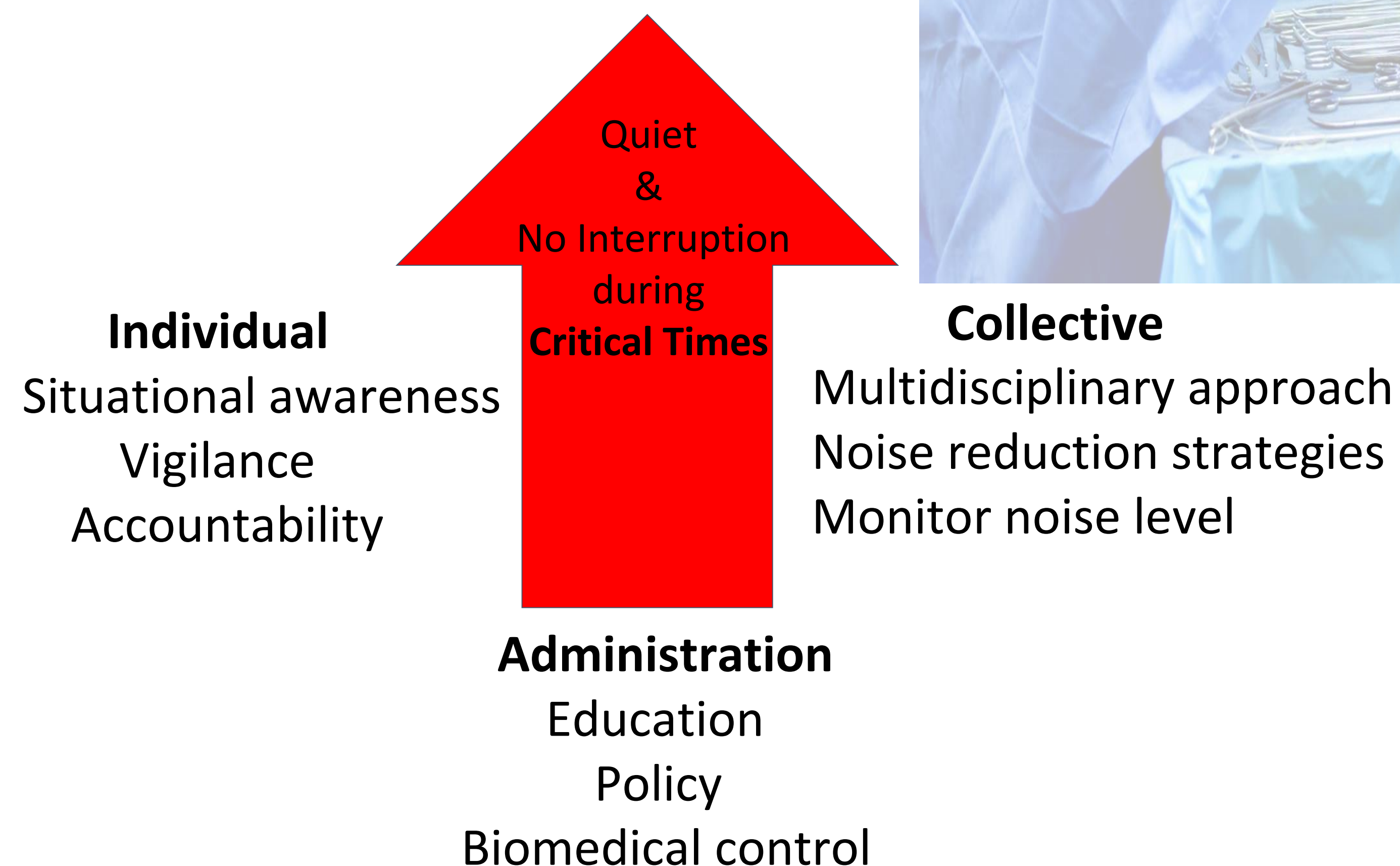


FIGURES ON AFFECTS OF NOISE

On the Individual



Weapons Against Noise Distraction



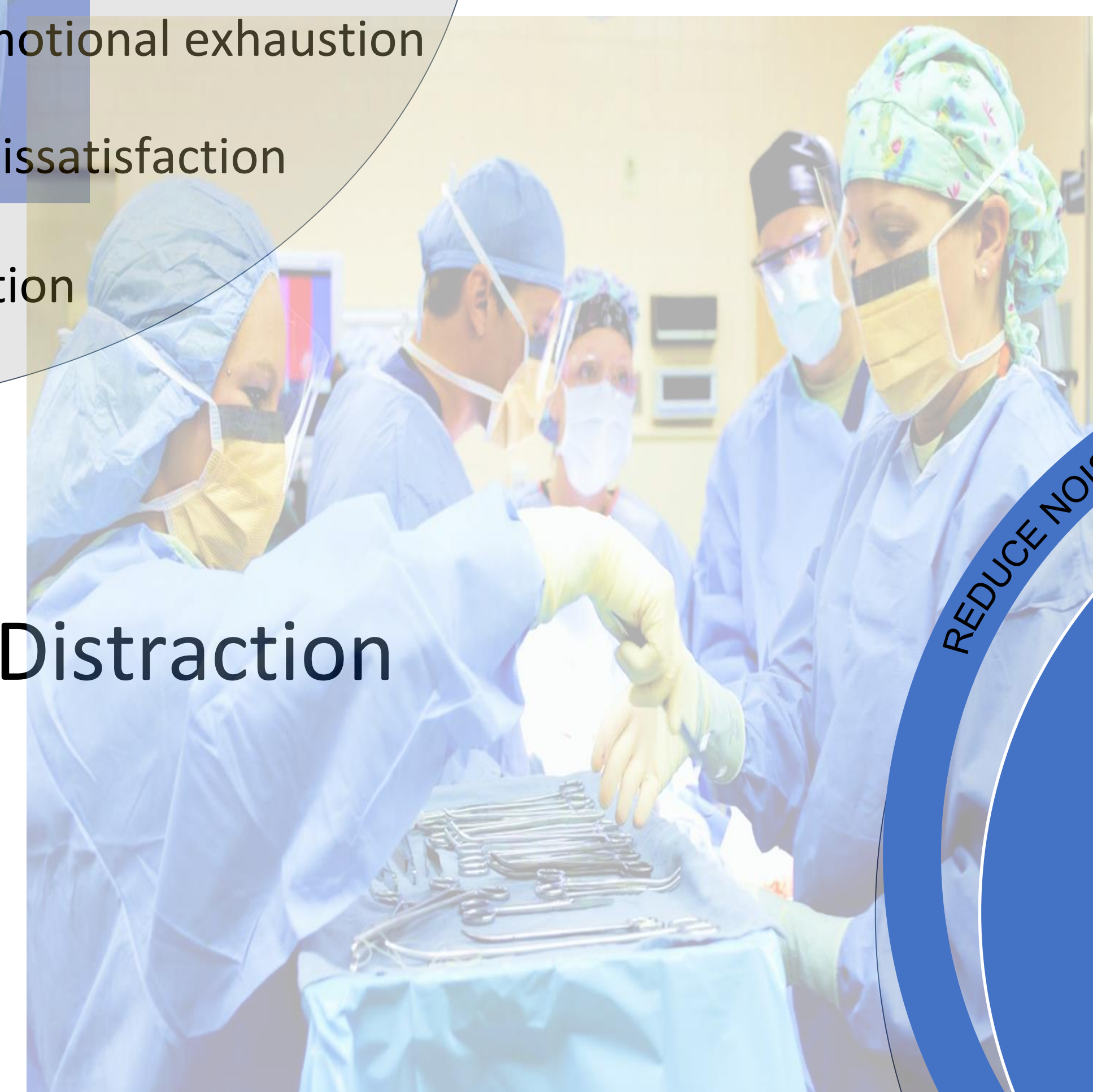
CONCLUSIONS

- Literature indicates decreasing OR noise during critical times improves patient safety
- Noise has physical & psychological affect on people
- Noise can lead to adverse events compromising patient care and safety
- Multidisciplinary approach decreases noise
- Noise reduction education slated for June 2018
- Post education survey and measurement of noise slated for July 2018

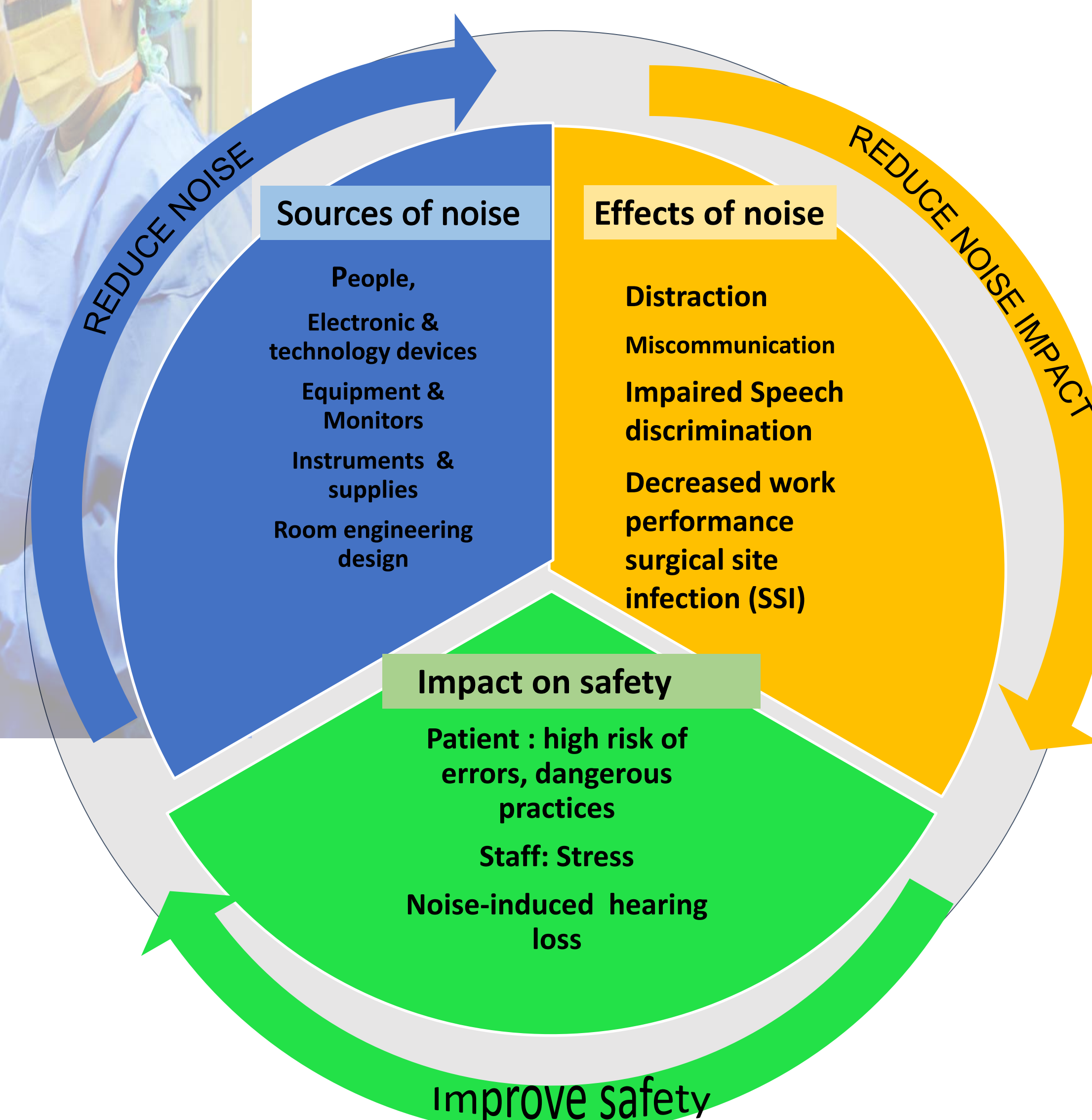
IMPLICATION

- Evidence-based practice increases quality of patient care
- Nurse-driven practice initiatives empower staff to seek answers to clinical questions

On Patient Safety



Impact of Noise Distraction



REFERENCES

Available upon request