Assessing the effectiveness of placing posters outside operating rooms to improve ergonomic practices and physical discomfort
Paola Barrios MD, Emily Cerlet MD, Andrew Hu MBChB, Monica Rho MD and Swati Kulkarn MD
1. Department of General Surgery, Northwestern Memorial Hospital, Chicago, IL; 2. Department of Physical Medicine and Rehabilitation, Northwestern Memorial Hospital, Chicago, IL; 3. Division of Musculoskeletal Medicine, Shirley Ryan Ability Lab, Chicago, IL

Introduction

Poor ergonomics in the operating room may lead to:

- Muscle fatigue
- Musculoskeletal injury
- Burn out

Previous data shows that...

- 68%-87% of surgeons report generalized work-related pain
- 51% report sleep disturbances due to pain
- 26.7% surgeons with musculoskeletal complaints required work leave
- 41% feel pain interfere with relationships
- 47% are concerned that these conditions will shorten their career
- Students are less likely to enter surgical careers due to musculoskeletal ergonomics concerns

Purpose

- Investigate the role of reminder posters in improving ergonomic practices in the operating room

Hypothesis

- Strategically placing posters that remind surgeons to adjust the OR table height and take microbreaks would increase the use of these strategies and decrease physical pain

Methods and Materials

A poster was developed by a psychiatrist expert on surgeon work-related injuries displaying:

- Strategies to improve posture while operating
- Exercises to relieve back and neck pain
- Encourage microbreaks

The poster was placed at the entrance of every operating room at a single academic center

Results

- The poster was placed at the entrance of every operating room at a single academic center
- An anonymous pre- and post- poster survey was administered to attending surgeons

Conclusions

- Posters outside operating rooms does not appear to be effective in increasing ergonomic practices during an operation
- Real-time feedback, additional training and incorporation of an ergonomic checklist as part of the “time out” are dynamic interventions that could potentially improve operative ergonomics, fatigue and burn out

References