It’s Not How You Work, it’s Who You Work With: Surgical Team Networks as a Basis for Quality Improvement

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Introduction

• Poor communication is the most common cause of sentinel events in healthcare.¹
• Poor communication contributes to poor operational efficiency in the perioperative setting at Tulane.
• There is little research on the impact of team dynamics among surgical teams
• Understanding team dynamics among surgical teams has the potential to improve perioperative care.

Aim

The goal of the project investigate whether anesthesiologist-surgeon teams that worked together more often, had reduced perioperative wait times for their patients

Methods

• Records were obtained from Tulane Medical Center which included
  • Anesthesiologist name
  • Surgeon name
  • Phase hold times
  • Procedure type
  • Anesthesia Type
• Anesthesiologist-Surgeon teams were created based on procedure record data and analyzed using Social Network Analysis (SNA) software.

Results

• Anesthesiologists and surgeons who worked together more often, tended to have a decreased mean hold time, though we were unable to test for statistical significance

Summary

• Nodes are sized based on the number of connections, where larger nodes indicate more connections
• Edge color ranges from blue to red with blue indicating less-frequent co-working and red indicating more frequent co-working
• Our dataset only included one month of data and co-working between anesthesiologists and surgeons ranged from 1-4 cases during this time period

Conclusions

• Our first step will be to expand out dataset and test for statistically significant differences among frequent anesthesiologist-surgeon teams.
• We will also include more precise outcome measures as well as include nursing staff data
• Lastly, we would like to expand this network approach to other areas of the hospital – specifically hand-offs, which have received much attention as an area in need of improvement.

Special Thanks

• Elise Legrand and Frank Rosinia for their mentorship and support
• Seth Christian for granting me access to this data
• IHI and NOHI for the opportunity to share our story

References