Background & Purpose

• United States (US) healthcare facilities produce 6,600 tons of waste daily (Lee et al., 2012)
• From 2010-2018, the US healthcare industry contributed to a 6% increase in total greenhouse gas emissions (Eckelman et al., 2020).
• ~40-70% of healthcare waste is generated within the OR (Yeoh et al., 2020)
• Anesthesia care contributes to 25% of intraoperative material wastes (Yeoh et al., 2020)
• Purpose: Educate the intraoperative team on environmentally sustainable practices and to increase the amount of recycled waste.

Methods

• Project Design: Quality Improvement (QI)
• Setting: Large urban community teaching hospital
• Participants: Anesthesiologists, CRNAs, Anesthesia techs, SRNAs, OR RNs, Surgical techs, and EVS
• Measures: 1.) Staff knowledge and 2.) waste volume vs recycled volume in pounds.
• 2-week pre-intervention baseline trash assessment
• Knowledge Assessment Tool (Pre-Education)
• Educational PowerPoint presentation
• Knowledge Assessment Tool (Post-Education)
• 4-week pilot recycling program with education reinforcements such as a QR code (see below) that links to our website, Team Recycle.

Results

• Measure 1 Results: The mean number of correctly answered questions pre-education was 60.3% and post-education was 72.6% (p-value <0.0181).
• Measure 2 Results: A total of 1,369.09lbs of waste and 253.22lbs of recyclable material was collected during 4-weeks.
• Mean amount of unsorted waste = 23.61lbs/day
• Mean amount of recyclable material = 4.29lbs/day

Summary & Conclusion

• 15.6% decrease in volume of waste placed in the unsorted trash.
• 100% increase in recycling weight after the completion of the 4-week pilot program.
• It cannot be assumed with complete certainty that the reduction of waste generation directly correlates to the intraoperative recycling pilot program.
• The increase in the amount of material placed in the recycling receptacles demonstrates that our educational intervention was successfully translated into practice and was sustained over a 4-week period.

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