

INTRODUCTION

- Opioid dependence is a growing epidemic in our nation
- Physicians across specialties are seeking to minimize prescription of narcotic pain medications by adopting multimodal analgesic modalities
- Optimal pain control to facilitate rehabilitation promoting return to activities of daily living remains a priority

PURPOSE

- Evaluate the effectiveness of intraoperatively performing pectoral nerve blocks to reduce postoperative pain after mastectomy
- Demonstrate the efficiency of patient progression through care with optimal pain control



Hospital Cost Reduction and Improved Outcomes with Intraoperative Administration of Pectoral Nerve Blocks during Mastectomy

Virginia Tech Carilion | Department of Surgery | Roanoke, VA

METHODS

- Retrospective cohort study
- All mastectomies by single surgeon
- Tertiary hospital
- Patient cohorts
 - Before vs After pec block protocol
- Inclusion criteria
 - Females with breast cancer opting for mastectomy as surgical treatment
 - 18 to 74 years of age
- Primary outcomes
 - Postoperative morphine equivalents
 - Postoperative pain scale ratings
- Secondary outcomes
 - Postoperative supplemental oxygen
 - Ambulation
 - Oral intake
 - Nausea
 - Emesis
 - Orientation
 - Duration in PACU

| | n/a | n/a | \$944 |
|----------|-------------------|-------------------|--------------------|
| ner e | Bupiv + Epi | Extra OR Time | PACU Time |
| 96 | <mark>\$16</mark> | <mark>\$62</mark> | <mark>\$592</mark> |

| RESULTS | | | | |
|---|--|--|--|--|
| Demographics Pec block 47.7% Age 66 | (n=42 of 88) 5y (Q1 65y, Q3 70y) | | | |
| No block 52.3% Age 67 | (n=46 of 88) 'y (Q1 63y, Q3 68y) | | | |
| Morphine milligram equivalents in 23-hour postoperative period | | | | |
| Pec block 23.9 m | me 95%CI 17.5-32.5 | | | |
| No block 20.3 m | 1me 95%Cl 15.0-30.0 p=.258 | | | |
| Duration of PACU s Pec block 74 min No block 118 m | stay 95%Cl 69-79 min in 95%Cl 86-164 min p=.001 | | | |
| Requiring supplemental oxygen upon arriving to the floor | | | | |
| Pec block 19.0% | n=8 of 42 | | | |
| No block 60.9% | n=28 of 46 | | | |
| | p<.001 OR 6.3 | | | |
| Requiring supplemental oxygen at discharge | | | | |
| Pec block 0.0% | n=0 of 42 | | | |
| No block 17.4% | n=8 of 46 | | | |
| | p=.005 OR 18.8 | | | |
| Cost difference | | | | |
| Pec block \$688.96 | | | | |
| No block \$944.00 | | | | |
| Difference \$255 | .04 | | | |



ILION LINIC

CONCLUSIONS

- Intraoperative pectoral nerve blocks are an effective component of multimodal analgesic therapy for mastectomy.
 - Decreased postoperative duration in the PACU
 - Decreased supplemental oxygen requirement on the floor
 - Decreased supplemental oxygen requirement at discharge
- Dramatically shortened stay in the PACU translates into cost savings for the healthcare system and increased efficiency by facilitating operating suite throughput.
- Localized administration of analgesics minimized systemic effects of otherwise enteral or parenteral administration, which could have contributed to demonstrated improved postop respiratory performance.
- Data support the continued utilization of this intraoperative pectoral nerve block protocol. Further prospective long-term study is necessary to elucidate the possible contribution of confounding variability in other clinical practices across the timespan of these cohorts.

