

Investigating factors associated with post-mastectomy emergency department visits:

A population-based analysis

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Background

- In 2016, a multi-pronged pathway was implemented in 13 hospitals across the province of Alberta, Canada to improve the mastectomy perioperative care experience.
- The rate of postoperative ED visits remained high at 22-27% despite focused interventions at the patient and provider level to enhance perioperative support.**
- In this study we investigated potential factors associated with high postoperative ED visits following mastectomies in Alberta, Canada.

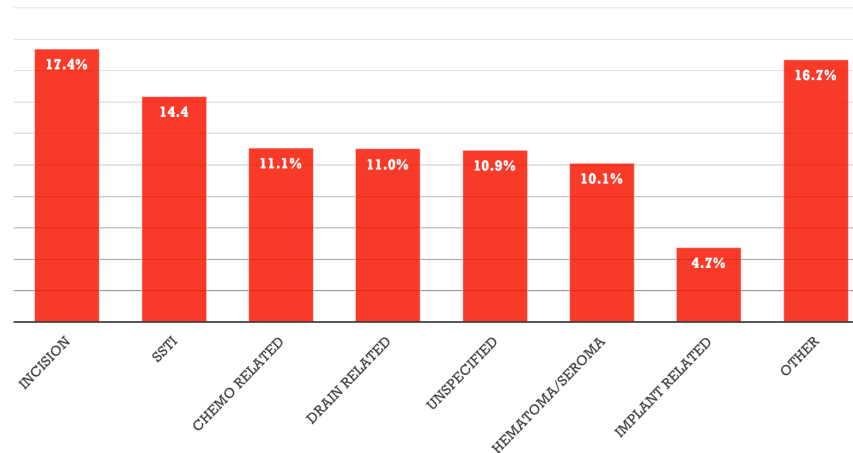
Methods

- Data was collected using the Discharge Abstract Database and the National Ambulatory Care Reporting System database.
- Eligible patients included all women over 18 years old who underwent a mastectomy in the province of Alberta between 2004 and 2018
- Primary outcome of interest was unplanned ED visit within 30 days of mastectomy
- Univariate and multivariate analyses were used to identify independent predictors of postoperative ED visits

Results

Demographics of Patients who Underwent Mastectomy 2004-2020				
Variables	Category	Total (N=19974)	Overnight (N=17440)	Same day (N=2534)
Age	Mean (STD)	59.8 (14.4)	60.1 (14.3)	57.4 (14.6)
CCI score	0	11603 (58.1 %)	10029 (57.5 %)	1574 (62.1 %)
	1	4873 (24.4 %)	4299 (24.7 %)	574 (22.7 %)
	2+	3498 (17.5 %)	3112 (17.8 %)	386 (15.2 %)
Readmission within 30 days from surgery		915 (4.6 %)	827 (4.7 %)	88 (3.5 %)
	Unplanned ED visit	4590 (23 %)	4095 (23.5 %)	495 (19.5 %)
Rural vs. urban living	rural	4673 (23.4 %)	4166 (23.9 %)	507 (20 %)
	urban	15130 (75.7 %)	13119 (75.2 %)	2011 (79.4 %)

Postoperative ED Visit Reason



Multivariable Analysis of Unplanned ED Visits

Variable	Odds Ratio (95% Confidence Limit)	P value
Pre vs. Post Mastectomy Pathway	0.98 (0.88 to 1.08)	0.6417
Age	1 (0.99 to 1)	0.0005
Overnight admission vs same-day surgery	0.8 (0.7 to 0.92)	0.0015
Reconstruction	0.78 (0.67 to 0.9)	0.0005
Cerebrovascular Disease	1.32 (1.12 to 1.54)	0.0008
Chronic Pulmonary Disease	1.29 (1.18 to 1.4)	<.0001
Connective Tissue Disease	1.2 (1.01 to 1.44)	0.0424
Peptic Ulcer Disease	1.4 (1.15 to 1.71)	0.0007
Diabetes	1.18 (1.05 to 1.32)	0.0057
Depression	1.31 (1.13 to 1.51)	0.0004
Living rurally	0.42 (0.37 to 0.47)	<.0001

Conclusion

- Post-operative ED visits remain high despite initiating a province-wide surgical pathway in 2016 which emphasizes patient education and improved perioperative care and supports.
- Same day surgery shows reduced postoperative ED visits, suggesting improved recovery compared to overnight admissions.
- ED visits are associated with geographic location, specific comorbidities, and post-operative overnight admissions.