

Outpatient
thyroidectomy is not
associated with an
increased mortality risk.

Less than one in five
patients undergo
outpatient thyroidectomy
in Ontario, despite a well-
established safety profile.

#P137: A Population-Based Analysis of Outpatient Thyroidectomy: Safe and Under-Utilized

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OBJECTIVE:

- Performance of thyroidectomy on an outpatient basis has gained popularity, though many jurisdictions have not shifted their practice despite a strong safety profile. We sought to assess the **uptake and safety of outpatient** thyroidectomy in Ontario.

METHODS:

- This was a population based retrospective cohort of adult patients undergoing hemithyroidectomy or total thyroidectomy between **1993-2017** in Ontario, Canada.
- Outpatient surgery was defined as discharge home on the **same day of surgery**.
- Outcomes of interest include 30-day all cause death, hematoma, emergency department use and readmission.
- To adjust for confounding, propensity scores were calculated. Logistic regression models with inverse probability of treatment weighting (IPTW) were then used to estimate the exposure-outcome relationship.
- A separate analysis was performed using surgeon use of outpatient thyroidectomy as an instrumental variable.

RESULTS:

- The final cohort consisted of 81,199 patients: **8,442 underwent same day surgery (10.4%)** and 72,757 (89.6%) were admitted (Fig 1).

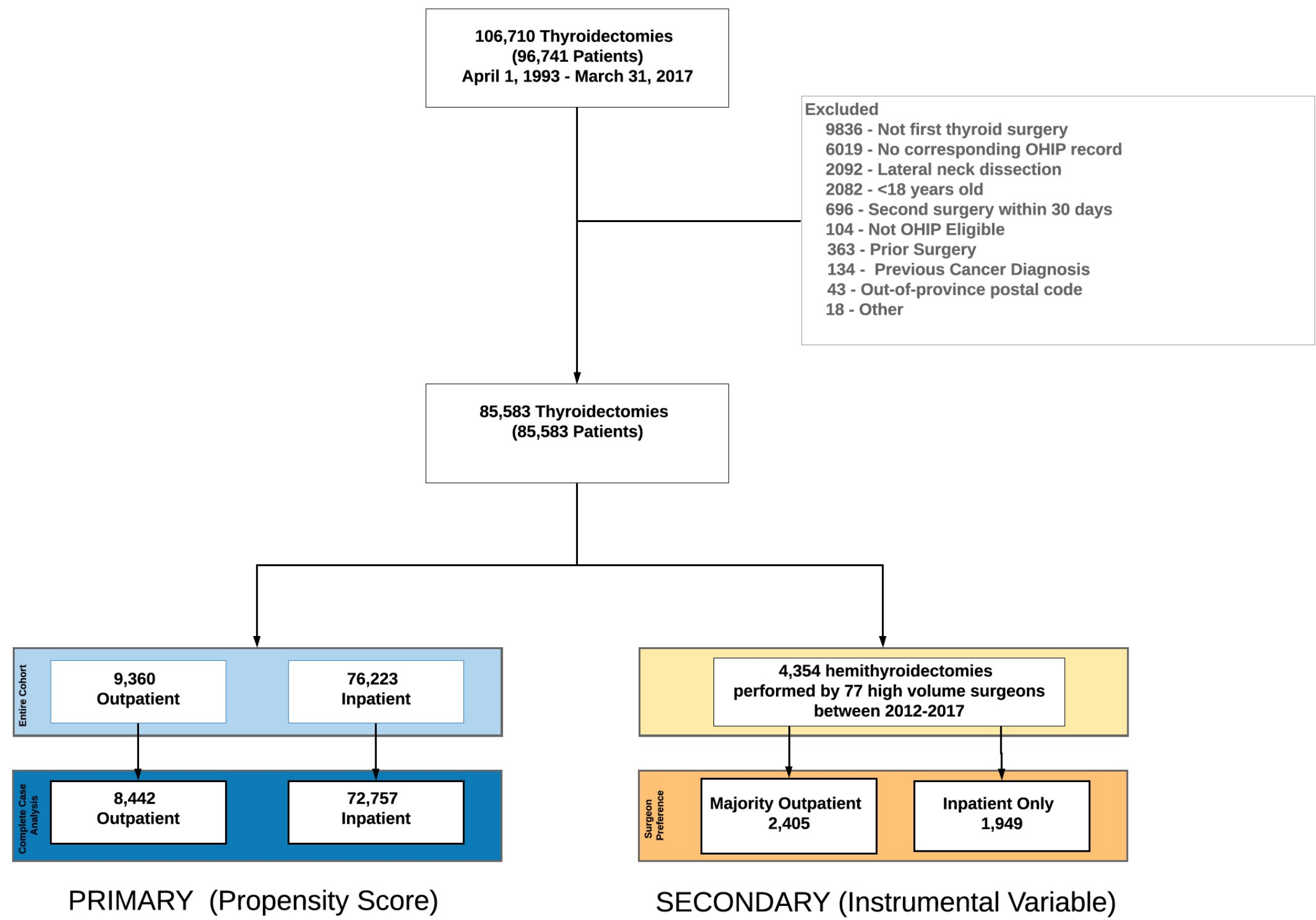


Figure 1: Flow chart of study cohort creation.

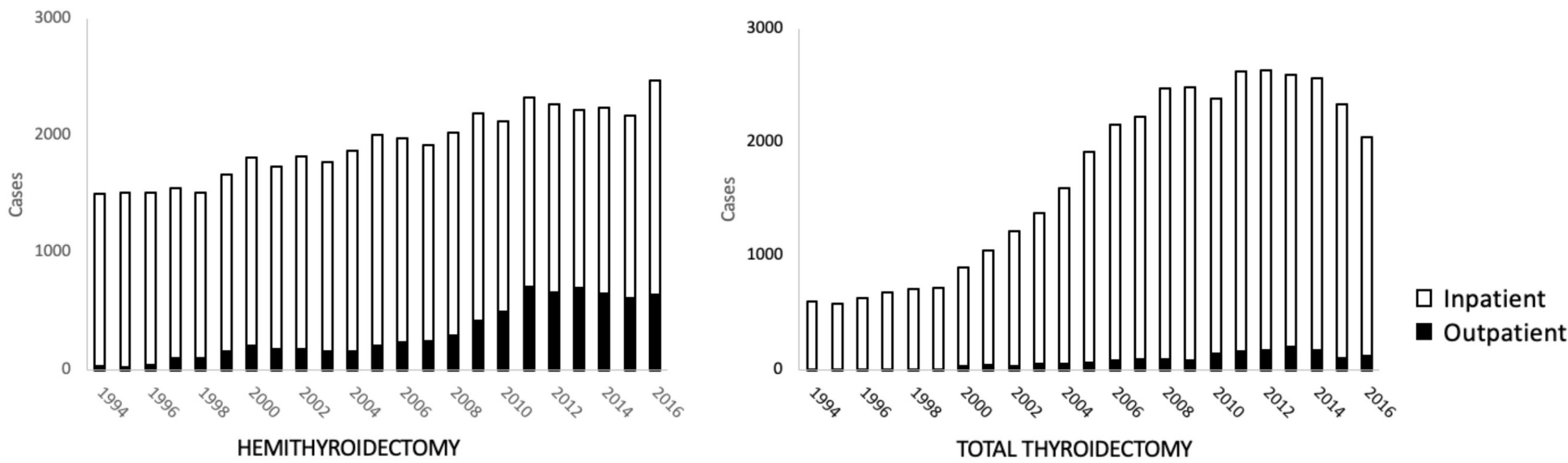


Figure 2: Trends in outpatient thyroidectomies in Ontario from 1994-2016. Hemithyroidectomy cases are displayed on the left, total thyroidectomy cases on the right.

- The proportion of patients undergoing outpatient thyroidectomy increased overtime (Fig 2), rising to 26% in 2017 for hemithyroidectomies.
- Factors associated with **higher odds of outpatient thyroidectomy included: younger age, less material deprivation, less comorbidities, and higher surgeon volume**.
- The absolute number of 30-day all cause mortality (≤ 5 , $<0.1\%$) and hematomas (64, 0.8%) in the outpatient cohort was low.
- After IPTW adjustment, patients with **outpatient management had lower odds of neck hematoma (OR 0.73 [95CI% 0.58-0.93])**, but **higher odds of emergency department use (OR 1.67 [95%CI 1.56-1.79])**.
- In the instrumental variable analysis, outpatient management was associated with significantly higher odds of emergency department use (OR 1.84 95%CI [1.46 – 2.32]), but not hematoma or readmission

Table: Thirty-day postoperative outcomes associated with thyroidectomy

	Unadjusted		Standardized Mean Differences	Adjusted	
	Outpatient (n=9,429)	Inpatient (n=76,850)		OR*	95%CI
Hematoma					
Hemi thyroidectomy	64 (0.8%)	924 (1.3%)	0.05	0.73	0.58 - 0.93
Total thyroidectomy	49 (0.7%)	413 (1.1%)	0.04		
Death					
Hemi thyroidectomy	15 (0.9%)	511 (1.4%)	0.05	***	-
Total thyroidectomy	≤ 5	64 (0.1%)			
Hemi thyroidectomy	≤ 5	31 (0.1%)			
Total thyroidectomy	≤ 5	33 (0.1%)			
Readmission					
Hemi thyroidectomy	170 (2.0%)	1,697 (2.3%)	0.02	1.38	1.20 - 1.58
Total thyroidectomy	86 (1.3%)	478 (1.3%)	0		
Hemi thyroidectomy	84 (5.1%)	1,219 (3.4%)	0.08		
ED Visit**					
Hemi thyroidectomy	982 (12.6%)	5,952(10.4%)	0.07	1.67	1.56 - 1.79
Total thyroidectomy	667 (10.8%)	2,351 (8.8%)	0.07		
Hemi thyroidectomy	315 (19.8%)	3,601 (11.7%)	0.22		