Tracheostomy Incidence and Complications: A National Database Analysis PRESENTER: William Strober, MD BACKGROUND ~85,000 tracheostomies are performed per year in the United States Complications range from minor to catastrophic Understanding risk factors is critical METHODS Identify adult patients who underwent tracheostomies Exclude records with missing data

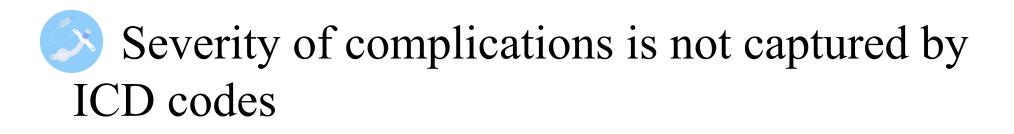
Identify records with at least one tracheostomy-related complication within 90 days of the tracheostomy Statistical analysis

Tracheostomy-associated complications Malfunction of tracheostomy stoma Hemorrhage from tracheostomy stoma Infection of tracheostomy stoma Tracheo-esophageal fistula following tracheostomy Unspecified / other tracheostomy complication

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LIMITATIONS

Data is reliant on appropriate coding of procedures and diagnoses



- Unavailability of some key variables
- Race
- Mortality

CONCLUSIONS

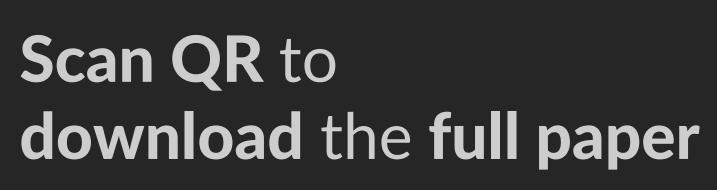
Complication rate increased over time

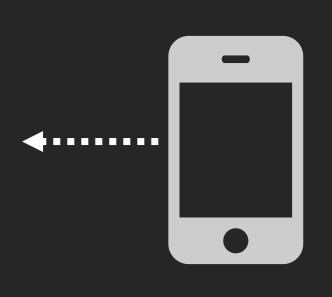
Region, physician specialty, insurance plan, and comorbidity burden are associated with the risk of developing a tracheostomy-associated complication

This information could guide quality improvement initiatives, help tailor patient and family counseling on tracheostomy risks, and inform the design of future studies investigating tracheostomy outcomes

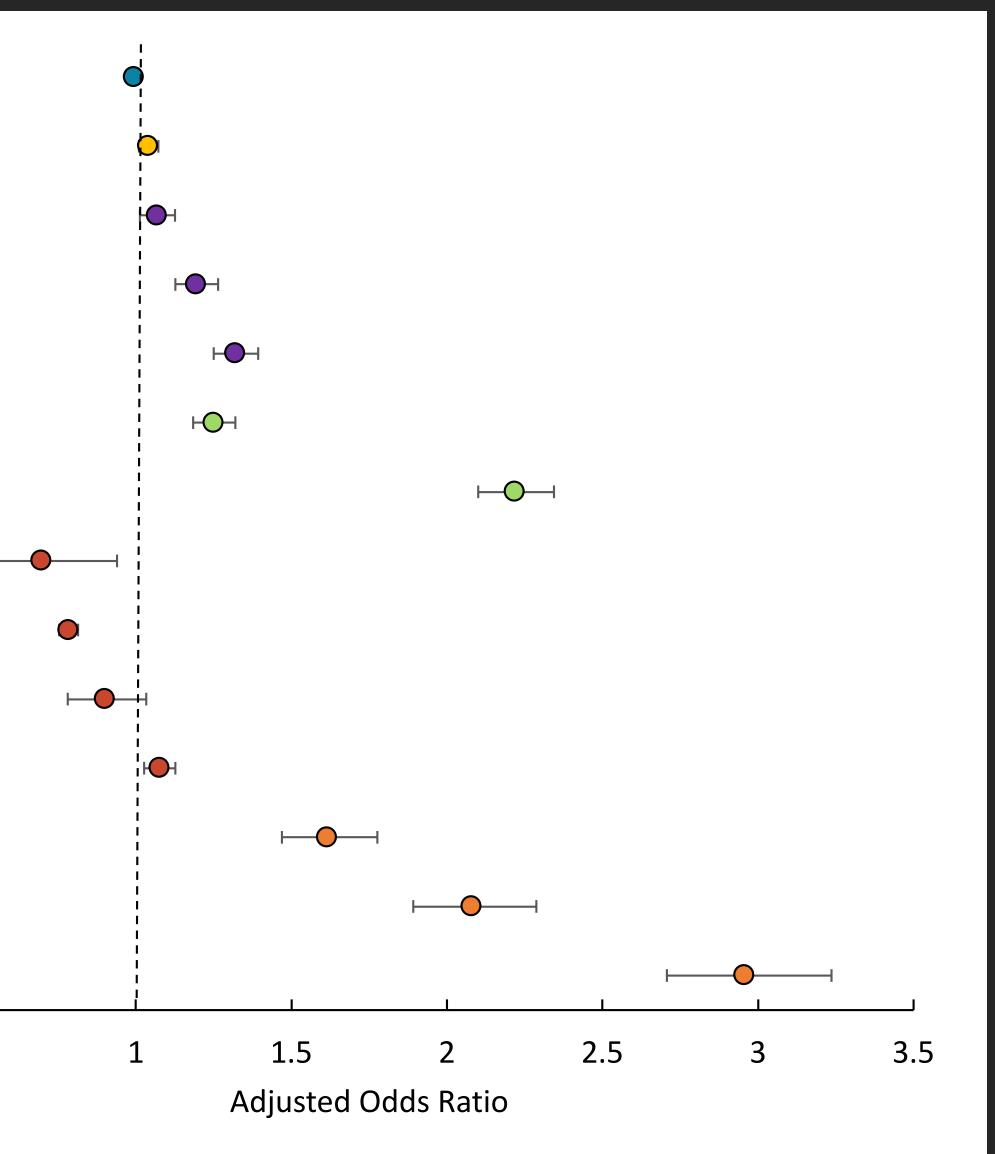
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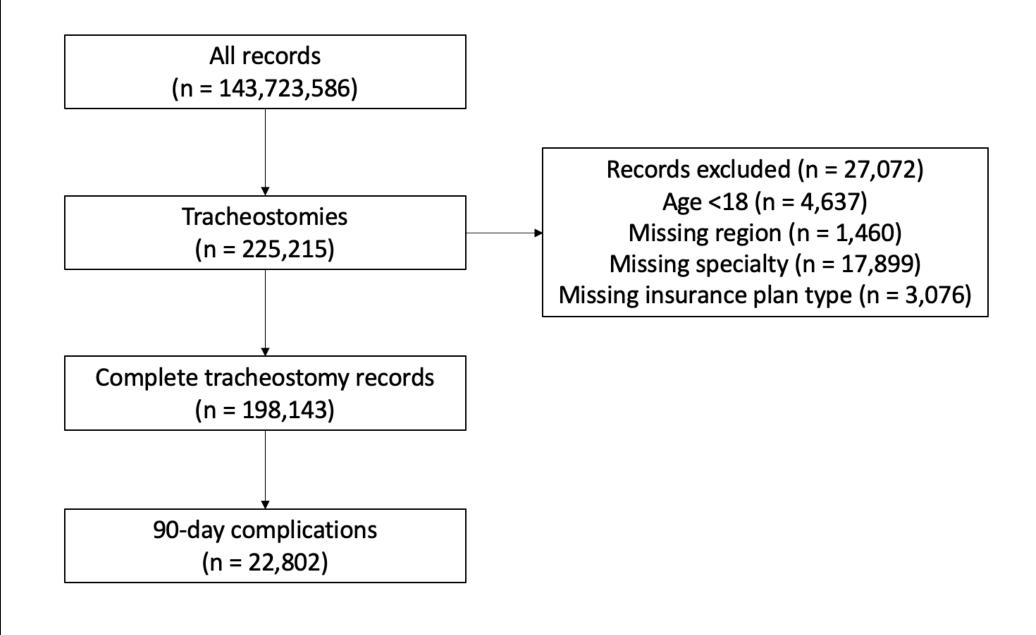
F	Age (years) male) – Male South Northeast Midwest	Gender (ref fei Region (ref West)
-	gical (non-ENT) ENT	Provider specialty Sur (ref non-surgical)
-	Cash Medicare Government	Plan type (ref commercial)
-	Medicaid ECI: 2-4 ECI: 5-6 ECI: 7+	Elixhauser Comorbidity Index (ref ECI: 0-1)
) 0.5	(

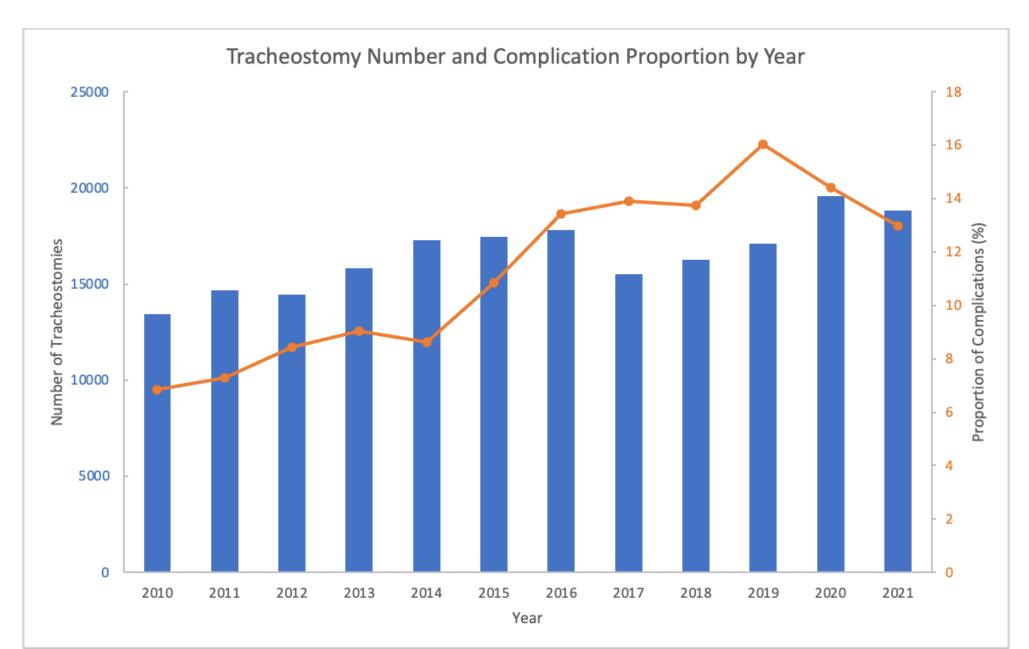












	Tracheostomy (n)	Complications (%)	
Variable	(n = 198143)	(n = 22802)	OR (95% CI)
Age (median, range)	62 (18-83)	61 (18-83)	1.00 (1.00-1.00)
Gender			
Female	83852	9616 (11.5)	ref
Male	114291	13186 (11.5)	1.00 (0.97-1.03)
Region			
West	24155	2224 (9.2)	ref
South	81800	8356 (10.2)	1.12 (1.07-1.18)
Northeast	38474	4743 (12.3)	1.35 (1.28-1.43)
Midwest	53714	7479 (13.9)	1.51 (1.43-1.60)
Specialty			
Nonsurgical	26265	2154 (8.2)	ref
Surgical (non-otolaryngology)	110506	10772 (9.7)	1.27 (1.20-1.34)
Otolaryngology	61372	9876 (16.1)	2.24 (2.12-2.36)
Payer type			
Commercial	124756	15198 (12.2)	ref
Cash	582	49 (8.4)	0.67 (0.49-0.91)
Medicare	47492	4295 (9.0)	0.75 (0.72-0.78)
Government	2409	269 (11.2)	0.87 (0.75-0.99)
Medicaid	22904	2991 (13.1)	1.04 (1.00-1.09)
Elixhauser Comorbidity Index			
0-1	11356	534 (4.7)	ref
2-4	35740	2568 (7.2)	1.58 (1.44-1.74)
5-6	30338	2573 (8.5)	1.98 (1.80-2.18)
7+	108792	11393 (10.5)	2.67 (2.45-2.92)

Complication type	Number of events (%)
Unspecified / other tracheostomy complication	11014 (5.6)
Malfunction of tracheostomy stoma	6423 (3.2)
Hemorrhage from tracheostomy stoma	3273 (1.6)
Infection of tracheostomy stoma	1712 (0.9)
Tracheo-esophageal fistula following tracheostomy	380 (0.2)

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