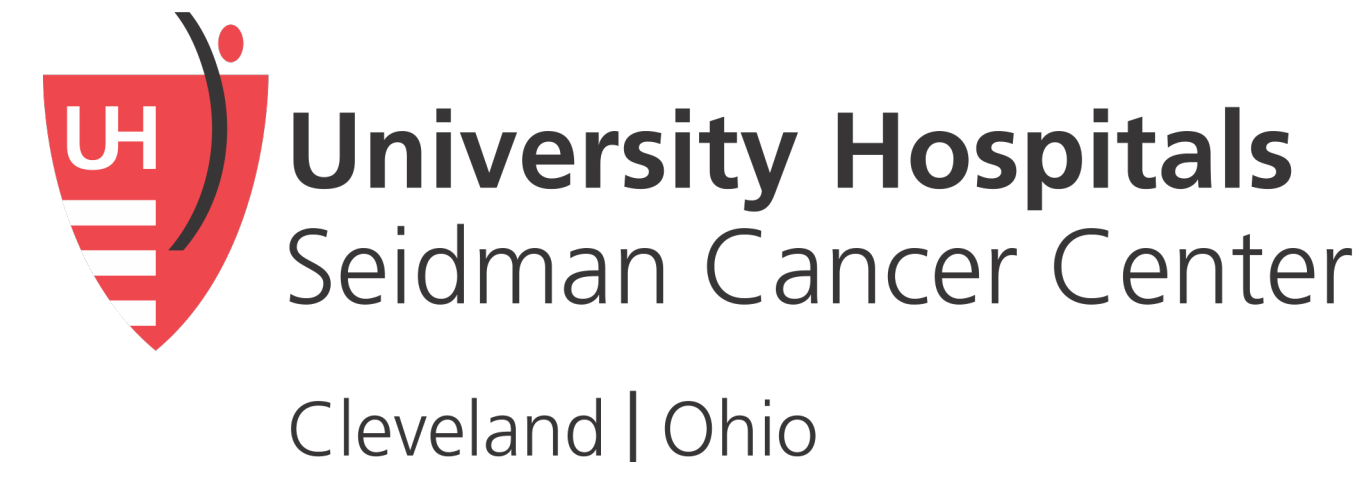


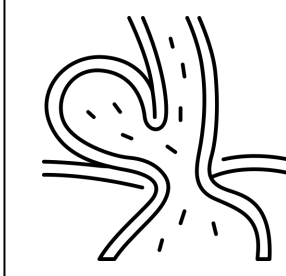
# Evolving Practice Patterns in Paraesophageal Hernia Repair: Trends Over Time and Predictors of Recurrence



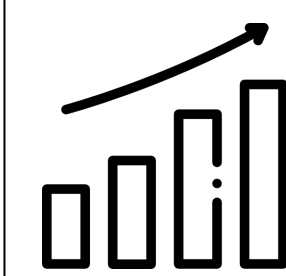
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## BACKGROUND



Patient mix, approaches, and techniques are evolving in paraesophageal hernia (PEH) repair practice<sup>1-3</sup>.



**Gap:** It is unclear how these practice changes relate to outcomes over time.



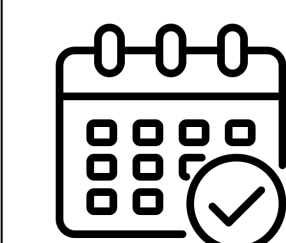
**Objective:** To evaluate temporal trends in PEH repair practice patterns/outcomes and identify predictors of recurrence.

## METHODS

**Study design:** Retrospective cohort, single tertiary referral center, 2016-2021

### Study population:

- Adults undergoing PEH repair
- Exclusions: surgeons averaging  $\leq 1$  PEH/year + incomplete operative/recurrence data

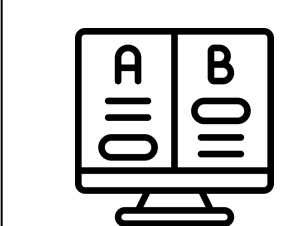


**Time period comparison:**  
2016-2018 vs 2019-2021

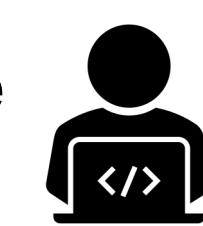
### Key variables:

- Surgeon factors:** academic vs community; fellowship training; annual volume
- Operative factors:** approach, mesh use, fundoplication, sac management

**Outcomes:** recurrence, reoperation, 30-day outcomes



Descriptive statistics



Multivariable logistic regression

## RESULTS

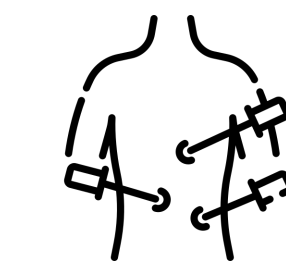
N = 1,042 → 415 in 2016-2018; 627 in 2019-2021

Practice patterns changed over time:

2016-2018:



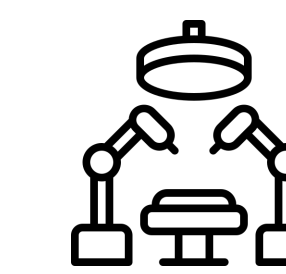
All performed by academic surgeons



98.8% laparoscopic approach



16.1% performed by community surgeons



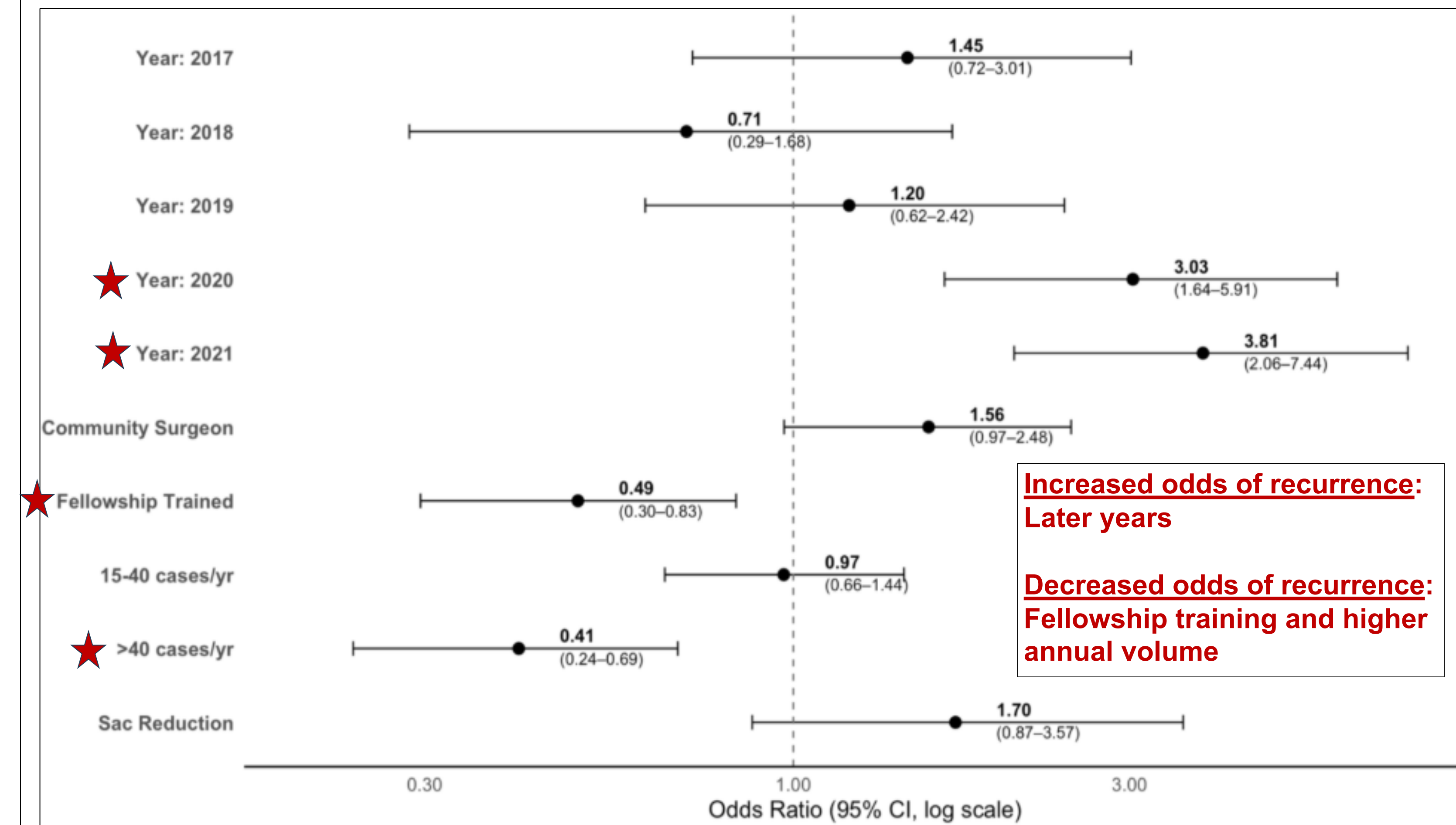
~10% robotic approach

2019-2021:

Increased use of mesh, fundoplication, hernia sac reduction/excision

30-day complication, morbidity, and readmission rates remain unchanged;  
Recurrence increased (12.3% to 27.6%), with more radiographic-only cases in 2019-2021 (6.5% vs. 1.0%) but reoperation rates remained unchanged.

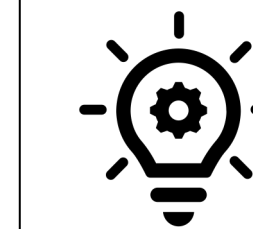
Figure 1. Predictors of recurrence



Increased odds of recurrence:  
Later years

Decreased odds of recurrence:  
Fellowship training and higher annual volume

## CONCLUSIONS



Increased recurrence rates despite evolution in techniques could be attributed to detection (i.e., more follow-up/imaging), changing surgeon mix, and/or COVID-era disruptions.



Reoperation rates = stable → many events were radiographic rather than clinically consequential.



Future work should clarify the drivers of recurrence and define clinically meaningful endpoints.

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