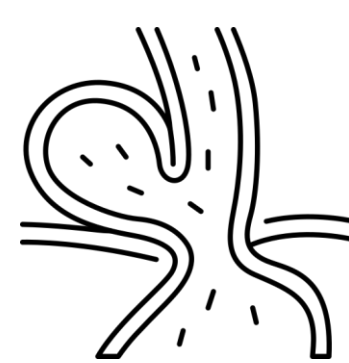


Influence Of Surgeon Practice Type On Recurrence After Paraesophageal Hernia Repair: A Retrospective Cohort Study

Introduction

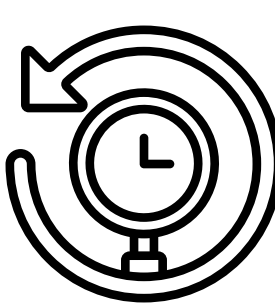


Background: PEH repair outcomes are typically linked to patient factors or specific operative techniques.¹⁻⁴

The Gap: The impact of "Practice Type" (Academic vs. Community) is poorly understood.

Objective: To evaluate short- and long-term outcomes of PEH repair based on academic vs community surgeon status.

Study Design and Methods



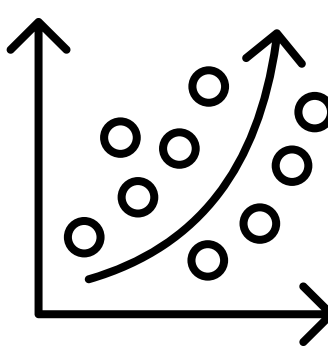
Study Design: Retrospective cohort study of adults undergoing PEH repair (2016–2021) stratified by **Academic** vs. **Community** surgeon status.

Data Captured: Patient demographics, comorbidities, surgeon volume, and specific operative techniques (e.g., mesh, fundoplication, gastropexy).

- **Exclusion:** Surgeons averaging 1 case/year to minimize outlier bias.

Primary Outcomes:

- **Short-term:** 30-day morbidity and readmission.
- **Long-term:** Radiographic or symptomatic hernia recurrence, reoperation rate.



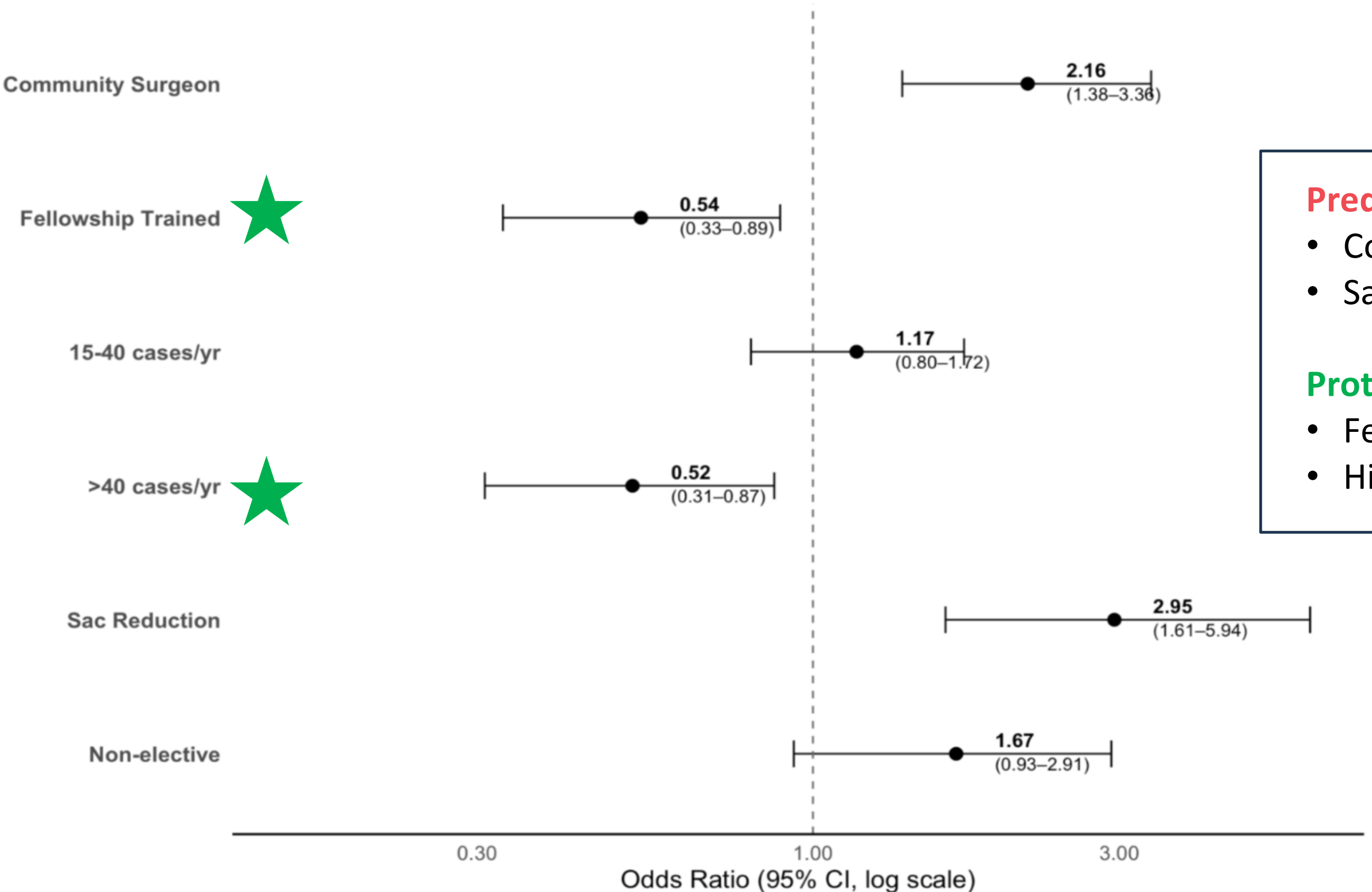
Statistical Analysis: Multivariable stepwise logistic regression to identify independent predictors of recurrence, adjusting for patient and operative factors.

Results

N = 1,042 PEH Repairs

- Academic: 941
- Community: 101
- 30 surgeons (24 academic, 6 community)
- **Community Patients vs Academic Patients Demographics, Short-Term, and Long-Term Outcomes:**
 - Older (62.6 vs 58.6 , $p<0.05$).
 - More pulmonary and cardiovascular comorbidities ($p<0.001$).
 - Similar 30-day morbidity and readmission rates.
 - **Higher recurrence rates after community repair (41% vs 21%, $p<0.001$).**
 - Reoperation rates were similar between the groups (5% vs 9%, $p=0.138$).
- **Operative Strategies:**
 - Community surgeons:
 - More frequent fundoplication (61% vs 40%) and gastropexy (42% vs 17%) (both $p<0.001$).
 - Lower annual volume (>40 cases: 0% vs 27%, $p<0.001$).
 - Mesh use, Collis gastropasty, bougie use, and sac reduction were similar.

Forest Plot of Final Stepwise Model



Predictive of recurrence:

- Community surgeon status (OR 2.16)
- Sac reduction (OR 2.95)

Protective against recurrence:

- Fellowship training (OR 0.54)
- High case volume (OR 0.52)

Conclusions

- **Community repairs were associated with higher recurrence rates; however, community surgeons also treated an older and more medically complex patient population.**

- **Key Finding:** Surgeon practice type, fellowship training, and volume are critical determinants of long-term PEH repair durability.



Volume vs. Training: High case volume (>40/year) and fellowship training were the strongest protective factors against recurrence.

- **Safety Profile:** PEH repair is performed safely across both academic and community settings with no significant difference in 30-day morbidity.

- **Future Work:** Prospective studies are needed to validate the impact of standardized training on community-based outcomes.

Clinical Implications

Clinical Goal: To improve outcomes as community PEH volume grows, we must prioritize:

- Standardized operative techniques.
- Rigorous postoperative surveillance.
- Enhanced fellowship-level training for community-bound surgeons.
- Live or delayed teleconferencing/tele-coaching.
- Consider centralization of care for this disease process.

