

## Introduction

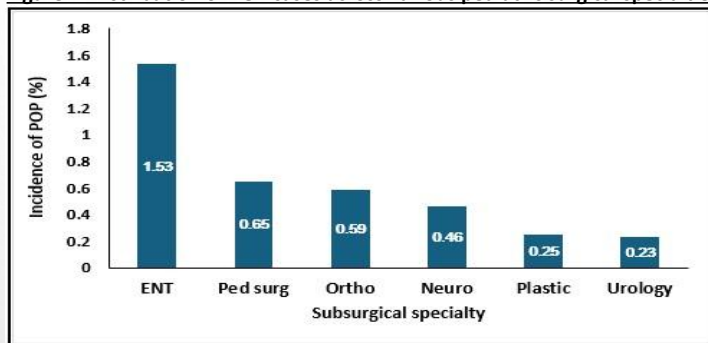
- Postoperative pneumonia (POP) is a serious complication with postoperative morbidity and increased cost of surgical care<sup>1</sup>
- Recent adult data indicates the incidence of POP varies across surgical specialties and is highest among cardiothoracic surgical patients<sup>2</sup>
- First essential step in tackling the issue of pediatric POP is to define its frequency and variation among different surgical sub-populations.
- Aim of this study was to assess current trends in both the overall and specialty-specific distribution of POP in children who underwent inpatient non-cardiac surgeries in the U.S.

## Methods

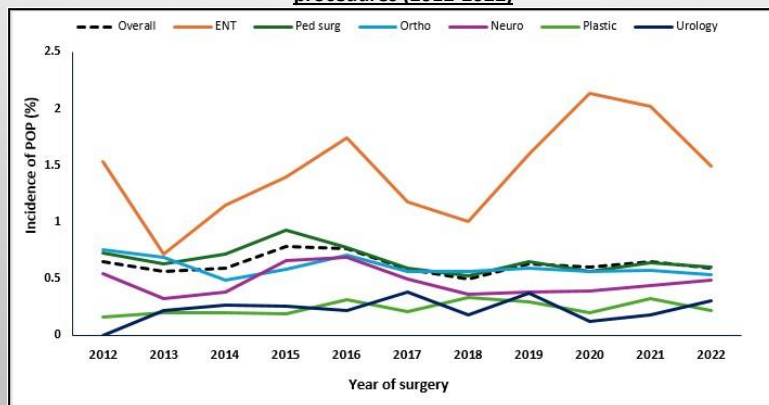
- National Surgical Quality Improvement Program-Pediatric (NSQIP-P) to identify all children who underwent inpatient operations and the total number of patients who developed POP between 2012 and 2022.
- Calculated the POP rates across various surgical specialties (ENT, Neurology, Orthopedics, General, Urology and Plastic surgeries).

## Results

**Figure 1. Distribution of POP cases across various pediatric surgical specialties**



**Figure 2. Annual trends in the incidence of POP among children who underwent inpatient surgical procedures (2012-2022)**



## Summary of findings

- 673,547 children who underwent inpatient surgery between 2012 and 2022 and 4191 (0.6%) developed POP.
- Annual overall incidence of POP remained stable, 0.65% in 2012 to 0.59% in 2022.
- Incidence of POP was highest following ENT procedures (1.53%) and lowest after urologic (0.23%) and plastic surgery procedures (0.25%), ( $p < 0.001$ ) (Figure 1).
- Annually, the incidence remained highest in children undergoing ENT procedures (Figure 2).

## Conclusion

- Pediatric POP is most prevalent following otolaryngology, general surgery, and orthopedic procedures.
- Children undergoing procedures within these surgery sub-specialties could potentially benefit from targeted preventive efforts to reduce POP rates.

## References

1. Kazaure HS, et al. Long-term Results of a Postoperative Pneumonia Prevention Program for the Inpatient Surgical Ward. JAMA Surg. 2014;149(9):914-918.
2. Chughtai M, et al. The Incidence of Postoperative Pneumonia in Various Surgical Subspecialties: A Dual Database Analysis. Surg Technol Int. 2017 Jul 25;30:45-51.