

Northern Health

INTRODUCTION

- Despite advances in Crohn's disease (CD) therapy, it is unclear whether emergency presentations related to fibrostenotic and penetrating disease have declined.
- We examined temporal trends in complication prevalence among emergency CD admissions over 10 years at an Australian tertiary centre.

METHODS

- A retrospective study of emergency CD admissions between July 2014 and June 2024 was performed using an SQL-derived hospital administrative cost database.
- Admissions were limited to gastroenterology, surgical, and short-stay units.
- Complications were grouped using ICD-10-AM codes into four domains:
 - Structural (obstruction, abscess, fistula)
 - Nutritional/metabolic (malnutrition, anaemia, dehydration/electrolyte disturbance)
 - Acute systemic (sepsis, peritonitis, acute kidney injury, hypotension)
 - Extra-intestinal (arthropathy, dermatological, ocular, hepatobiliary)
- Temporal trends were analysed using logistic generalised estimating equation models, accounting for repeated admissions.

RESULTS

- There were 710 admissions among 447 patients (48.7% female, median age 41 years).
- The proportion with at least one complication rose from 58.1% (25/43) in 2014–15 to 70.9% (73/103) in 2023–24, demonstrating a rising burden of complex emergency presentations.
- Structural complications rose from 8 admissions in 2014–15 to 42 in 2023–24, a fivefold increase.
- Intestinal obstruction was the most prevalent structural diagnosis (n=146), making fibrostenotic disease the dominant structural driver of emergency admissions.
- Among penetrating complications, perianal disease predominated: 77% of abscesses were perianal (48/62) and 65% of fistulae were perianal (24/37), with intra-abdominal abscesses (n=14) and internal fistulae (n=13) less common.
- Nutritional and metabolic complications rose from 19 admissions in 2014–15 to 40 in 2023–24. Acute systemic complications fluctuated without a directional trend (range 1–14 annually; p=0.80), and extra-intestinal complications remained consistently low (figure 1).

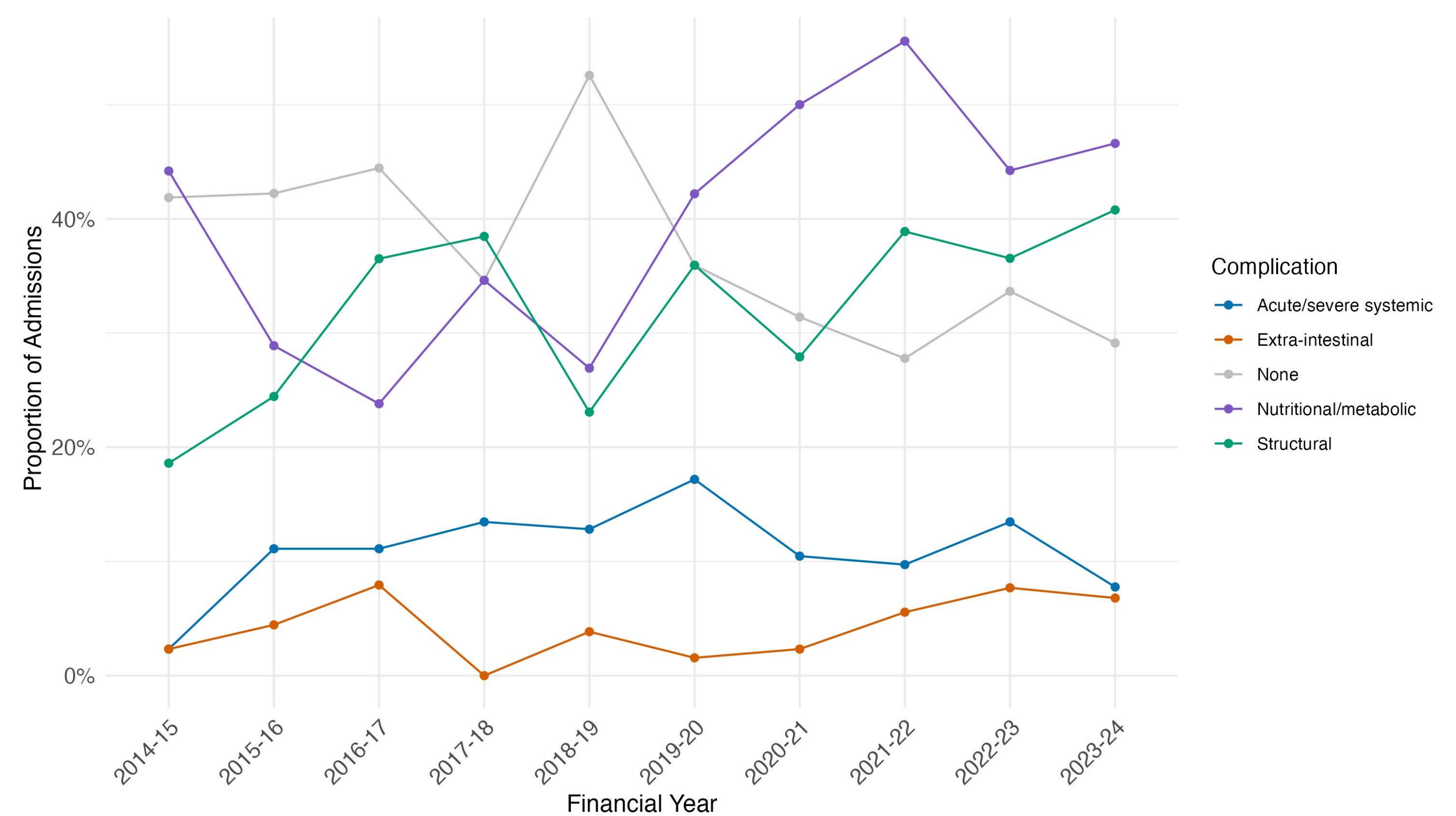


Figure 1. Trends in emergency Crohn's disease admissions by complication domain across financial years (2014–15 to 2023–24).

CONCLUSIONS

- Emergency CD admissions are increasingly complication-affected, driven by a fivefold rise in structural complications.
- This suggests increasing burden of patients with fibrostenotic and penetrating phenotypes despite available advanced therapies.
- Earlier identification and intervention in high-risk patients remain a key therapeutic priority.