



Healthcare expense in patients with acute severe ulcerative colitis (ASUC) is driven by initial length of stay and need for rescue therapy

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INTRODUCTION

- Acute severe ulcerative colitis (ASUC) is a severe presentation of ulcerative colitis (UC), affecting up to of 25% of patients with UC.
- ASUC contributes substantially to morbidity and healthcare expenditure in patients with UC.
- Conventional standard of care for ASUC includes hospitalisation for intravenous (IV) corticosteroids, salvage therapy with infliximab or cyclosporin for inadequate response, and colectomy for refractory cases.
- We aimed to evaluate healthcare costs and associated factors in patients with ASUC for the first 12 months.

METHODS

- Consecutive patients admitted to a tertiary inflammatory bowel disease centre with ASUC between January 2016 and January 2024 were included.
- Costs were calculated for the index admission and during the subsequent 12 months, including total outpatient, endoscopy, and medication costs.
- Associations between costs and clinical factors (length of hospital stay, disease phenotype, disease severity, need for colectomy or inpatient rescue therapy, prior biologic use, CRP/albumin ratio, total steroid exposure, and hospital readmission) were evaluated.

RESULTS

- 122 patients (51 [30%] female; median age 39 [IQR 25–54] years) were included.
- 72 patients (59%) had a pre-existing diagnosis of UC.
- The median length of stay for the index admission was 6 (IQR 4–8) days.
- 67 (55%) received medical rescue therapy during the index admission (infliximab in 65, upadacitinib in 1, adalimumab in 1) and 4 required second-line rescue therapy (upadacitinib in 3, tacrolimus in 1).
- 4 underwent colectomy during index admission, and a further 6 in the subsequent 12 months.
- The median cost of the index admission was \$16,422 (IQR \$11,449-24,131) AUD, associated with length of stay ($P<0.01$) and the need for rescue therapy ($p<0.01$).
- The median total healthcare cost over 12 months was \$35,502 (IQR \$22,106-52,119) AUD, driven by length of stay ($P<0.01$), need for rescue therapy ($P<0.01$), and readmission ($P=0.018$).
- Need for colectomy was not associated with cost for index admission or at 12 months.

Total patients, n	122
Female, n (%)	51 (30)
Age, median, years (IQR)	38 (30–53)
Weight, median, kg (IQR)	74 (67–87)
Existing diagnosis of ulcerative colitis, n (%)	72 (59)
Disease location, n (%):	
Proctitis	5 (3)
Left-sided colitis	56 (46)
Extensive colitis	62 (51)
Previous biologic exposure, n (%)	17 (14)
Length of stay, median, days (IQR)	6 (4–8)
CRP/Albumin ratio, median	0.88
Inpatient endoscopy performed, n (%)	113 (93)
Mayo Endoscopic Subscore, n (%):	
1	7(6)
2	57 (48)
3	49 (43)
Inpatient rescue therapy, n (%)	67 (55)
Colectomy during index admission, n (%)	4 (3)
Colectomy within 12 months, n (%)	10 (8)
Index admission cost, median, AUD (IQR)	\$16,422 (\$11,449–\$24,131)
12-month total cost, median, AUD (IQR)	\$35,502 (\$22,106–\$52,119)

Table 1. Patient Demographics, Clinical Characteristics, and Cost Data

CONCLUSIONS

- Healthcare expenditure related to acute severe ulcerative colitis (ASUC) remains substantial.
- Key drivers of cost include length of hospital stay, need for rescue therapy and readmissions.
- Need for colectomy did not significantly contribute to overall healthcare expenditure.
- Strategies to reduce hospital stay and prevent readmissions warrant further investigation to help lower the cost of managing ASUC.