

Why do patients have unplanned colorectal re-admissions at University Hospital Geelong

BACKGROUND:

Hospital readmission after surgery is associated with increased patient morbidity, poorer patient satisfaction⁽¹⁾ and increased cost to the healthcare system. It is also increasingly being used as a surrogate marker for determining quality of care and funding⁽²⁾. Currently, the nature of colorectal readmissions at University Hospital Geelong is largely undefined.

PURPOSE:

- To determine reasons for patients' readmissions to hospital following an initial colorectal operation, and;
- Identify potential risk factors for readmission. In order to identify methods of preventing readmissions to improve future practice.

METHOD:

- Retrospective analysis of colorectal audit data
- Over 5 years from 2014-2018 inclusive
- Single centre, University Hospital Geelong
- Readmission within 30 days of discharge following a colorectal operation
- Elective and emergency

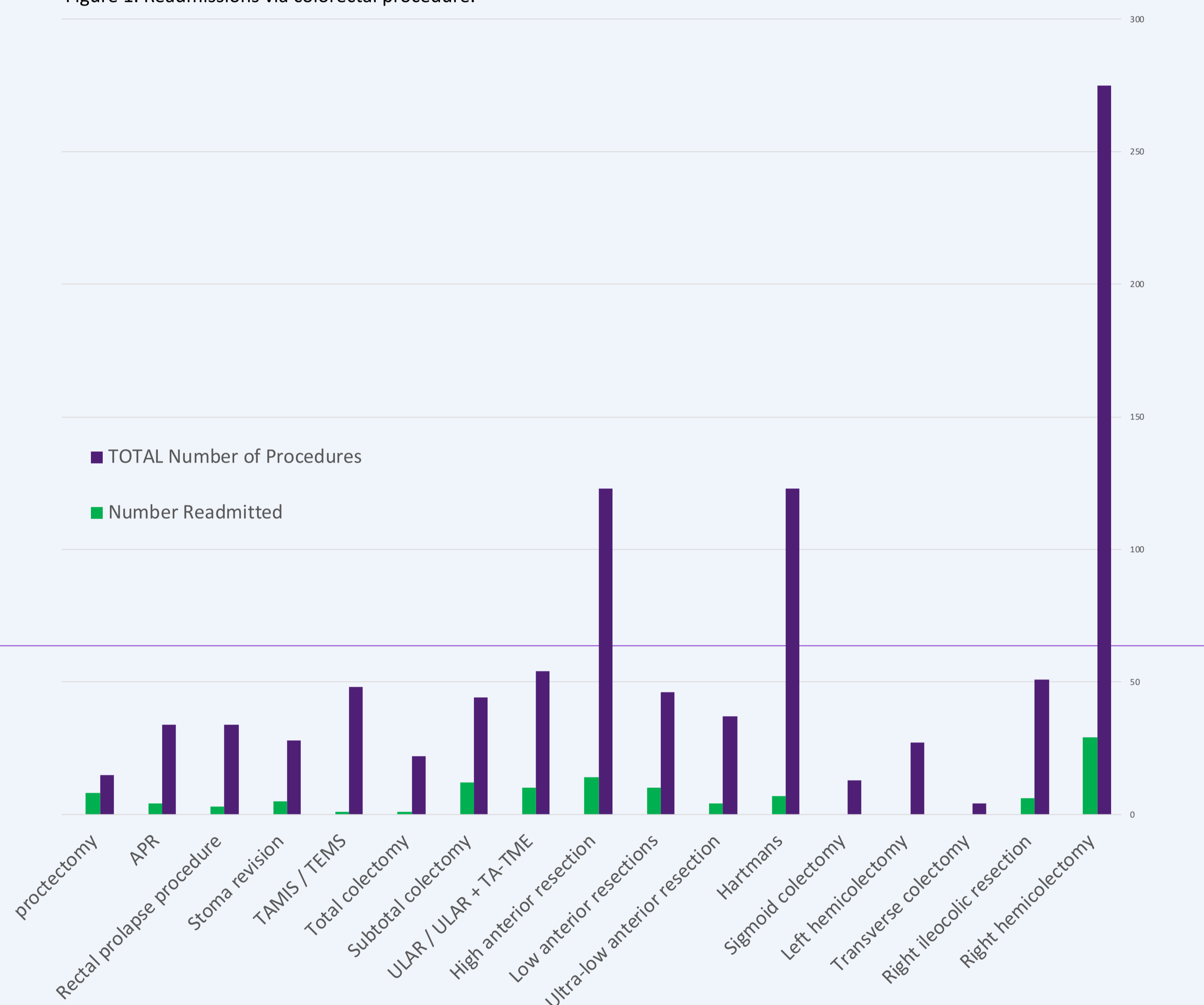
RESULTS:

- 12% readmission rate over 5 years (Table 1) = 148 patients
- Average time to readmission was 8 days
- Female = 53%, average age 58.6 years
- 50% ASA Grade III or above
- Average re-admission length 6 days
- Most common reasons for readmission were:
 - Wound infection
 - Abdominal pain
 - Stoma related complications
 - Abdominal collection
- 34 patients (24%) who were readmitted had a subsequent return to theatre

	Number of cases			Number Readmitted		
	Elective	Acute	TOTAL	Elective	Acute	TOTAL
2014	176	98	274	23 (13%)	9 (9%)	32 (12%)
2015	139	97	236	7 (5%)	14 (14%)	21 (9%)
2016	149	69	218	19 (13%)	9 (13%)	28 (13%)
2017	162	79	241	26 (15%)	8 (10%)	34 (14%)
2018	201	73	274	29 (14%)	4 (5%)	33 (12%)
TOTAL	818	416	1243	104 (13%)	44 (11%)	148 (12%)

Table 1. Admission rates from 2014 – 2018

Figure 1. Readmissions via colorectal procedure.



DISCUSSION:

Hospital readmission after colorectal surgery is a substantial contributor to patient morbidity and overall hospital experience. Our readmission rate of 12% is comparable to published international admission rates from 9 – 25%^(1,2,4-6). A significant proportion (up to 40%) of readmissions are potentially preventable⁽⁴⁾ – those related to pain, stoma complications and acute kidney injury. Our rate of potentially preventable readmissions for these indications is ~39.8%. Known risk factors for re-admission^(3-5,7)

- Acute/emergent operation
- Recent MI
- Comorbidities
- ASA \geq 3
- Procedure type
- Intraoperative stapler complication
- Postoperative complications – arrhythmia, anaemia
- Length of stay

Further analysis of our data is needed to identify statistically significant risk factors for readmission in our cohort

CONCLUSION:

Hospital readmission after colorectal surgery is a substantial contributor to patient morbidity and overall hospital experience. A significant proportion of readmissions are potentially preventable(45%) - those related to pain, stoma complications, acute kidney injury and gastrointestinal bleeding⁽²⁾. Our in-depth analysis will identify risk factors related to re-admission, and how we can identify ways to reduce overall rates of readmission.

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