

High incidence of potentially preventable emergency department visits after major elective colorectal surgery

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INTRODUCTION

- Unplanned emergency department (ED) visits and readmission after surgery represent a significant cost burden on the healthcare system.
- Many ED visits are related to issues of healthcare delivery services and may be avoidable.
- Few studies have assessed the reasons for ED visits after elective colorectal surgery.

OBJECTIVES

(1) Identify the reasons patients presented to the ED within 30 days of discharge following elective colorectal surgery

(2) Determine if these visits were potentially preventable.

METHODS

- A retrospective chart review including all elective major colorectal surgery cases performed in our center from 2017 to 2019.
- Data collected included demographics, past medical history, intraoperative details, postoperative complications, ED visits within 30 days of discharge, and readmissions. For each ED visit, final diagnoses were collected.
- Each ED visit was reviewed by two independent reviewers and graded on a scale adapted from the New York University ED algorithm, shown in Figure 1 below. Grades 1-3 were deemed potentially preventable.
- Multiple logistic regression identified independent predictors of potentially preventable ED visits.

Table 1: Demographics of patients with unplanned ED visits vs no visits.

NO ED VISIT		ED VISIT
62.0 years	Age	58.6 years
3.97	Charlson Comorbidity Index	3.62
63.24%	% Cancer cases	50.85%
21.14%	% Rectal cases	25.42%
67.43%	% Laparoscopic	61.86%
20.19%	% New stoma formation	33.05%**
6.0 days	HLOS	4.6 days

Table 2: Most common causes of all ED visits.

Diagnosis	Percent of total visits
Non-infectious GI issues	14.8%
Ileus/SBO	12.6%
Minor bleeding	11.9%
Superficial wound infection	11.1%
Pain	10.4%
Organ space infection/anastomotic leak	10.4%

RESULTS

- 643 patients were included in the final analysis, 118(18.3%) of which presented to the ED within 30 days of surgery for a total of 135 ED visits.
- Of the patients who presented to the ED, 41.5% required readmission.
- The most common cause of ED visit are shown in Table 2.
- 66.7% of visits were considered potentially preventable.
- The most common causes of preventable ED visits are shown in Table 2.
- The most common causes of readmission were ileus/SBO (30.4%) and organ space infection/anastomotic leak (25.0%).
- Creation of a new stoma was the only independent risk factor for potentially preventable ED visits (OR 2.14, 95%CI 1.03-4.47).

CONCLUSION

- Approximately 2/3rds of ED visits within 30 days of colorectal surgery were potentially preventable.
- These findings indicate a need for better access to outpatient care to reduce preventable ED visits after elective surgery.
- Harnessing the potential of telemedicine to enhance surgeon-patient communication in the outpatient postoperative period represents a potential solution. A prospective study assessing the benefit of remote monitoring using an app-based solution is currently underway.

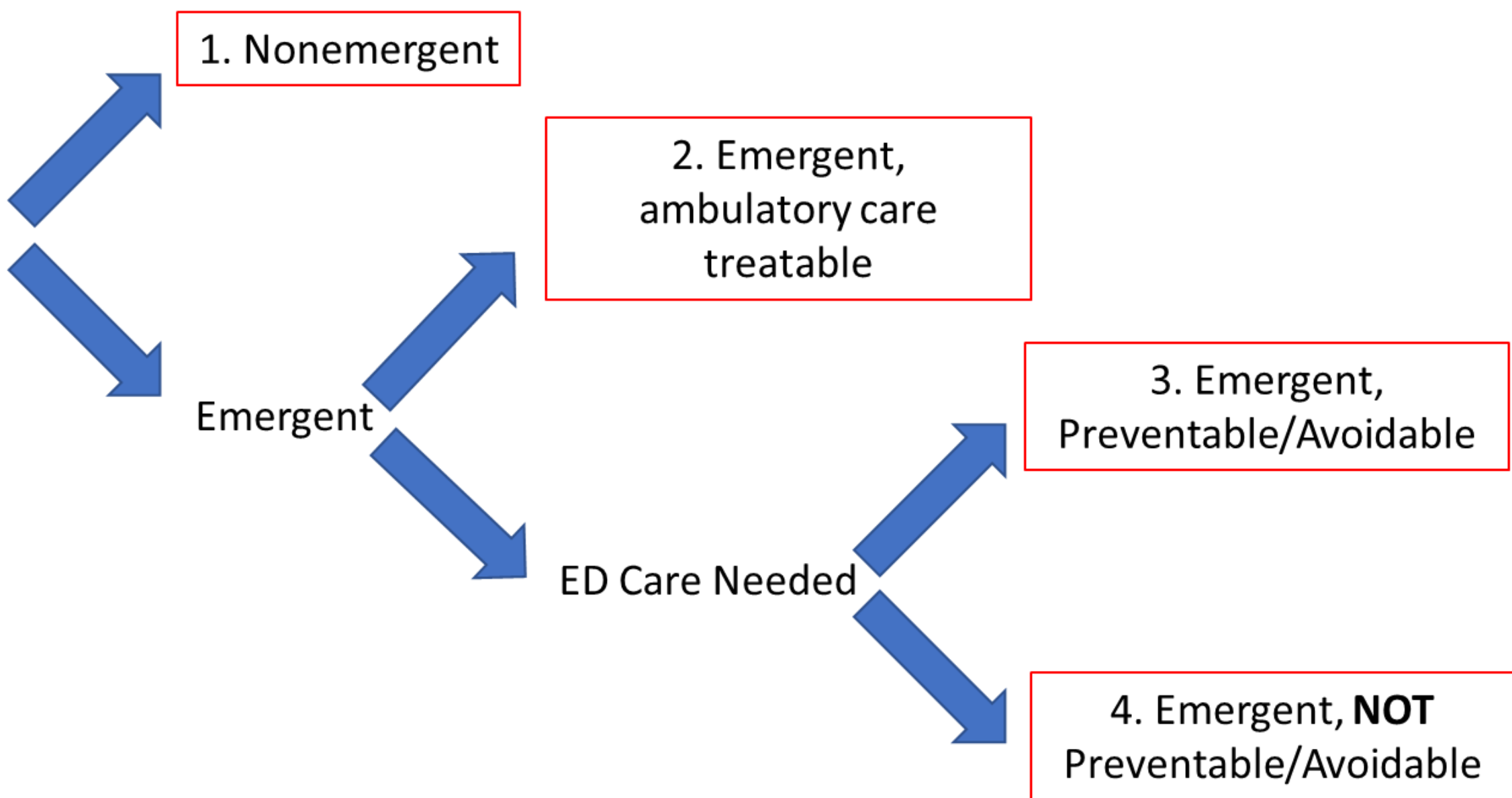


Figure 1: Grading for potential preventable ED visits.

Figure 2: Proportion of visits by preventable grading.

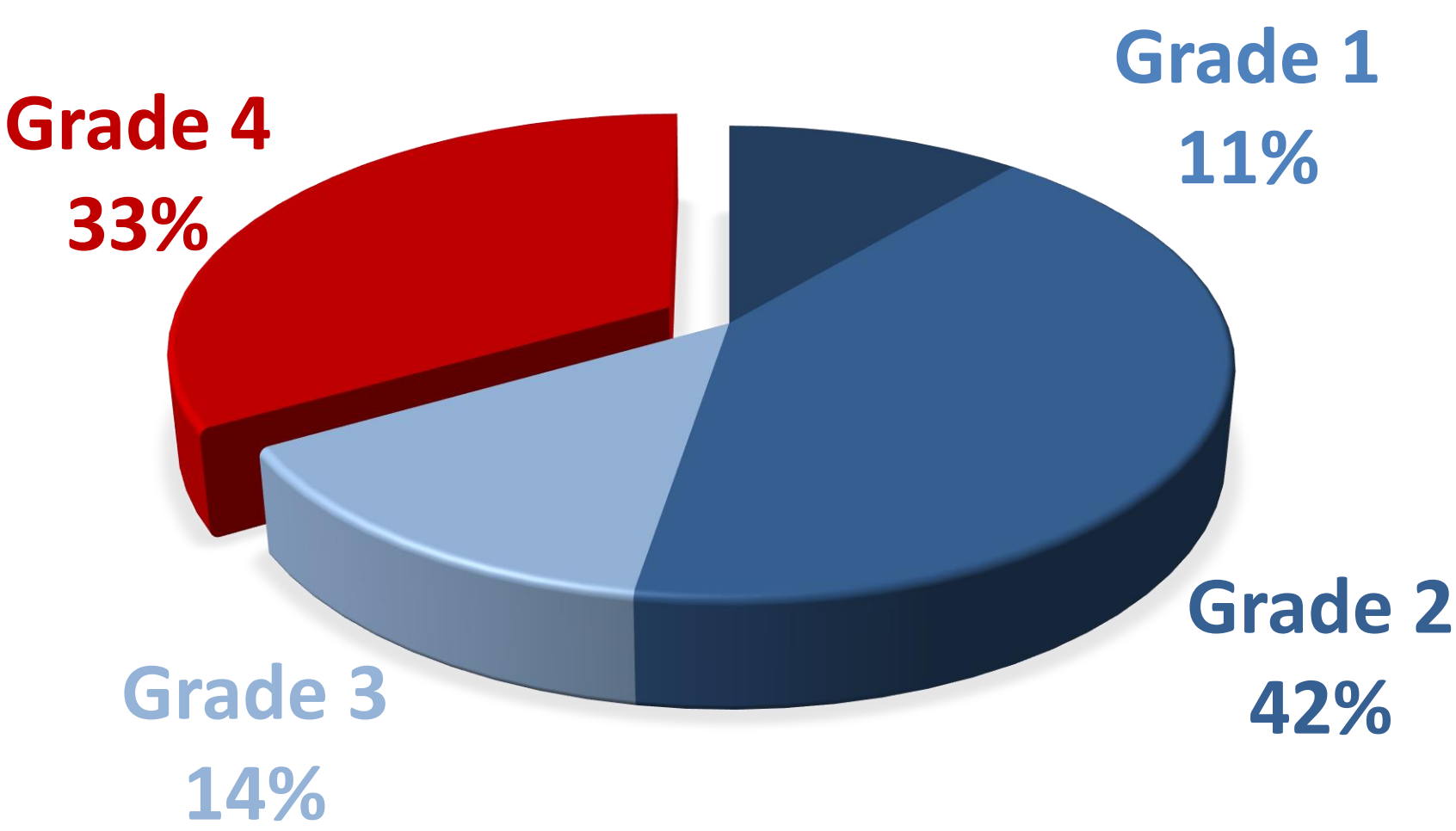


Table 3: Most common causes of preventable visits.

Reason for preventable visit	Percent of preventable visits
Non-infectious GI issues	22.2%
Superficial wound infection	16.7%
Minor bleeding	15.6%