

RIBcovery: A Multidisciplinary Rib Fracture Clinical Pathway

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INTRODUCTION

- Rib fractures** are some of the most common injuries sustained by trauma patients (incidence 10-26%).¹
- Mortality is directly correlated to the number of rib fractures present, especially in the elderly population due to pain-induced impaired respiratory mechanics.¹⁻³
- The growth of regional anesthetic services and techniques allows the possibility of minimizing pain through collaborative interdisciplinary pathways.³⁻⁵
- Goal:** Develop a streamlined pathway to facilitate early regional anesthesia and optimal pain management for patients admitted with rib fractures.

METHODS

- Data gathered in collaboration with trauma surgery to identify number of **admitted patients with rib fractures over two months** (May and June 2025) at our institution.
- A retrospective review was conducted to determine how many of these patients received **inpatient pain consultations** that resulted in the placement of **epidural catheters** or other **regional anesthetic technique**.
- Based on these findings, we present a clinical pathway involving our institution's trauma surgery, inpatient pain, and regional pain teams to provide **timely evaluation and intervention for patients admitted with rib fractures**.

RESULTS

- A total of **39 trauma patients** were admitted **with rib fractions** in May and June 2025.
- 15 (38%) patients received inpatient pain service (IPS) consultation.
 - 5 patients received thoracic epidural catheters
- 11 (28%) received regional service consultation
- Only 3 patients received a regional service consultation **without IPS consultation**.
 - 2 patients received no intervention
 - 1 patient received bilateral serratus anterior plane single shot blocks

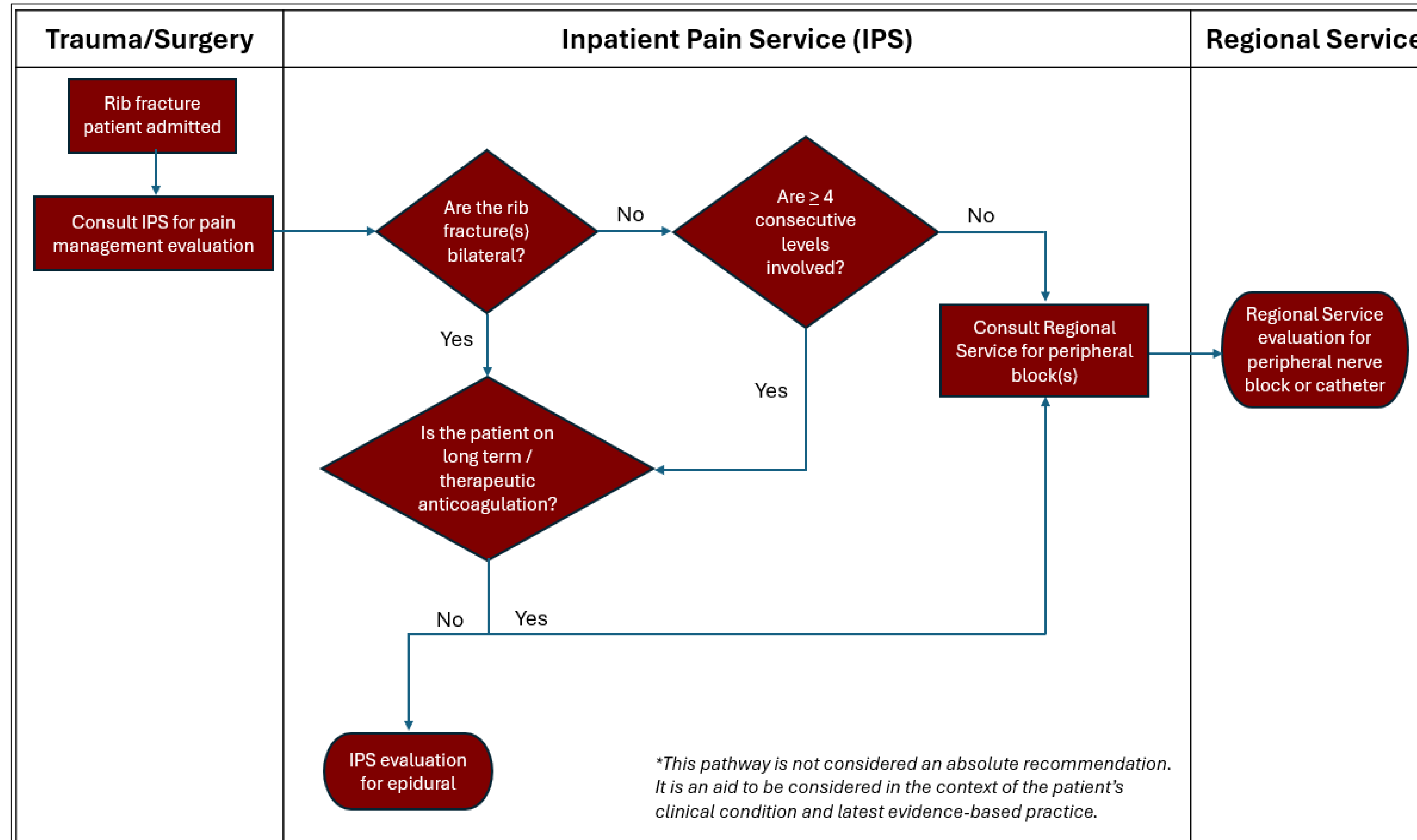


Figure 1. Proposed institutional rib fracture clinical pathway involving trauma/surgery, inpatient pain service, and regional service based on number of rib fractures and anticoagulation status.

Table 1. Stratification of consults and block interventions for rib fracture trauma patients from May to June 2025 along with length of stay data.

Total Number of Admitted Rib Fracture Patients	39
Total Number of IPS Consults	15 (38%)
Total Number of Regional Consults	11 (28%)
Total Number of Blocks Placed	7 (18%)
Median Length of Stay (days)	4
Average Length of Stay (days)	8.5

Table 2. Number and type(s) of blocks placed for trauma patients admitted for rib fractures from May to June 2025.

Block Type	Number (% Total)
Thoracic Epidural	5 (13%)
Paravertebral Single Shot	1 (3%)
Serratus Anterior Plane Single Shot	1 (3%)

DISCUSSION

- Early pain evaluation and intervention for trauma patients with rib fractures help minimize the morbidity and mortality associated with thoracic trauma.
- Further studies are needed to better identify timing of pain interventions as they pertain to length of stay.
- Future directions include potentially decreasing length of stay by discharging patients with superficial regional catheters (e.g. erector spinae plane or serratus anterior plane) if pain is precluding their discharge home.

CONCLUSION

- In large institutions, clearly defining team responsibilities and roles for providing care to medically complex trauma patients is crucial to improving outcomes.

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