

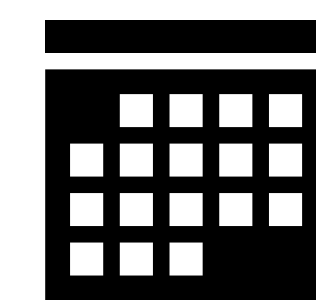
## Introduction

- Epidural catheters for open abdominal incisions have been challenged by abdominal wall nerve blocks and multimodal analgesia as the gold standard[1]
- While several studies have compared the clinical efficacy of epidurals and abdominal wall blocks [2–4], few studies consider the amount of work required to care for these patient populations postoperatively.
- **Aim:** Compare estimates of clinical work by an acute pain service in caring for patients with either epidurals or abdominal wall blocks.
- **Hypothesis:** Epidural catheters, because of their location in the neuraxial space, will take more clinical work than abdominal wall catheters.

## Material and Methods

- **Population:** open abdominal surgery patients with epidural or abdominal wall nerve block catheters
- **Measure:** Pages compiled for these patients, categorized with estimated time to respond (conservative + realistic) based on consensus of senior physicians and prior analysis of similar service at our institution [5] (Table 1)
- **Analysis:** Estimated times to care for epidural vs abdominal wall nerve blocks compared using U-Mann-Whitney

## Results



**Days of total use**  
Nerve block catheters > Epidural catheters



**Median time spent per day of treatment**  
Nerve block catheters = Epidural catheters



**Most time-consuming task**  
Daily rounding

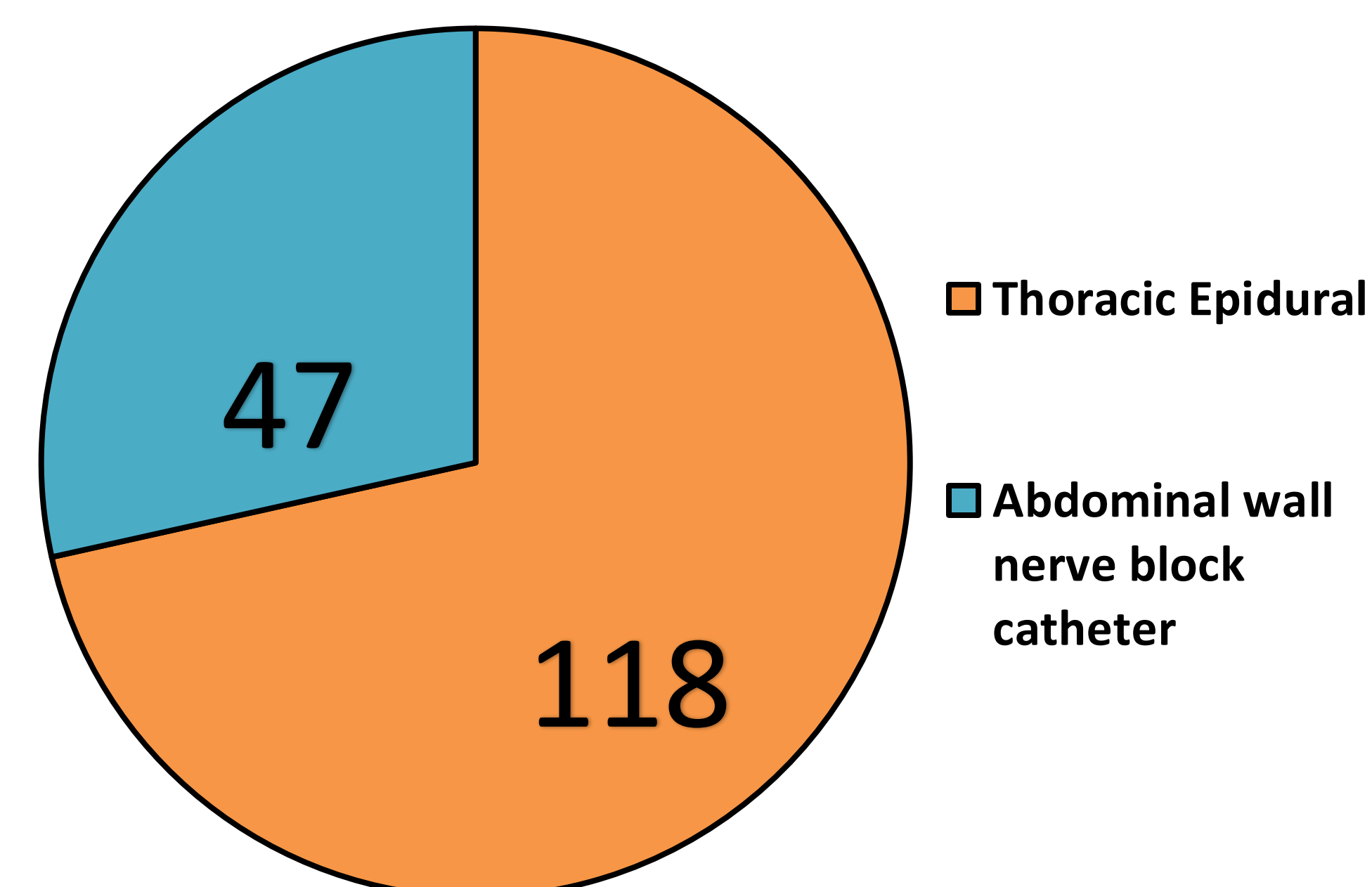


Figure 1: Distribution of study subjects (total n=165) by post-operative pain management technique: thoracic epidural (n=118) vs abdominal wall nerve block catheter (n=47)

| Model        | Daily Rounding (minutes) | Replacement (minutes) | FYI Page (minutes) | Please call (minutes) | Please Assess (minutes) |
|--------------|--------------------------|-----------------------|--------------------|-----------------------|-------------------------|
| Conservative | 15                       | 30                    | 0                  | 5                     | 10                      |
| Realistic    | 30                       | 45                    | 2                  | 10                    | 20                      |

Table 1: Two models estimating the amount of time in minutes it takes the acute pain service team to address pages and perform daily rounds on patients.-

|                                                                       | Epidural group       | Abdominal wall nerve catheter group | P-value |
|-----------------------------------------------------------------------|----------------------|-------------------------------------|---------|
| Sample size (n)                                                       | 118                  | 47                                  |         |
| Median treatment days per patient                                     | 3 [2.25 - 4]         | 4 [3-5]                             | 0.020   |
| Median FYI pages per patient                                          | 1 [1 -2]             | 1 [1-1.75]                          | 0.508   |
| Median please call pages per patient                                  | 2 [1-3]              | 1.5 [1 - 3]                         | 0.061   |
| Median please assess pages per patient                                | 1 [1-2]              | 2 [1 - 2]                           | 0.019   |
| Number of replacements                                                | 1                    | 1                                   |         |
| Median number of pages per day of treatment                           | 0.9 [0.3-1]          | 0.5 [0.3-0.8]                       | 0.024   |
| Median time estimated per day of treatment (conservative assumptions) | 18.8 min [16.3-21.3] | 18.6 min [16.3-20]                  | 0.392   |
| Median time estimated per day of treatment (realistic assumptions)    | 38.5 min [33.1-42.5] | 37.1 min [32.9-40.7]                | 0.318   |

Table 2: Applying the two models to estimate the clinical work required to care for patients with epidurals and nerve catheters

## Discussion

- There were more pages received overall regarding patients with epidural analgesia; however, there was not a significant difference between the median time spent per day of treatment between epidurals and nerve block catheters
- This suggests, despite more daily pages, there is a minimal difference in *daily* time spent on caring for these patients postoperatively
- Overall incidence of pages regarding epidurals or nerve block catheters was low with less than one page per treatment day
- Largest amount of care time was spent on daily rounding.
- Nerve block catheters used longer than epidurals in this patient population.
- Further investigation is warranted whether, by extension, nerve blocks necessitate more care time cumulatively

## Works Cited

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