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# Antimicrobial Stewardship in a Large Teaching Hospital: Is the reassessment of intravenous antimicrobials on our safety radar?

## Background

Antimicrobial resistance (AMR) poses one of the greatest patient safety threats of our time and a significant risk factor in the spread of AMR is the inappropriate use of antimicrobials.

In secondary care settings, the majority of patients admitted with severe infections are initially started on intravenous (IV) antimicrobials and administration by this route may be preferable in the first instance.

Short intravenous course of therapy for 48-72 hours followed by oral medications for the remainder of the course is found to be beneficial to many patients. Unnecessarily prolonged courses may predispose patients to superinfection with *Clostridium difficile* or other multi-resistant microorganisms posing a threat to the clinical effectiveness of overall treatment.

The aim of this study was to gain an accurate picture of current practice relating to the reassessment of intravenous antimicrobials to support the development of a strategy to improve "Then Focus" element of Start Smart Then Focus.

## Method

A web-based survey was developed using SurveyMonkey software, piloted and then completed by clinical pharmacists for all inpatient wards in the first week of October 2017.

## Results

In total, 94 responses (100%) were obtained from 44 specialties. 42% of wards reported that patients on IV antimicrobials were highlighted in medical handovers but only 31% routinely discussed a plan for these patients during their safety huddles which was mainly attended by nursing staff.

Although all patients are reviewed by the medical/surgical team, only 54% of wards were reported to review IV antimicrobials every day.

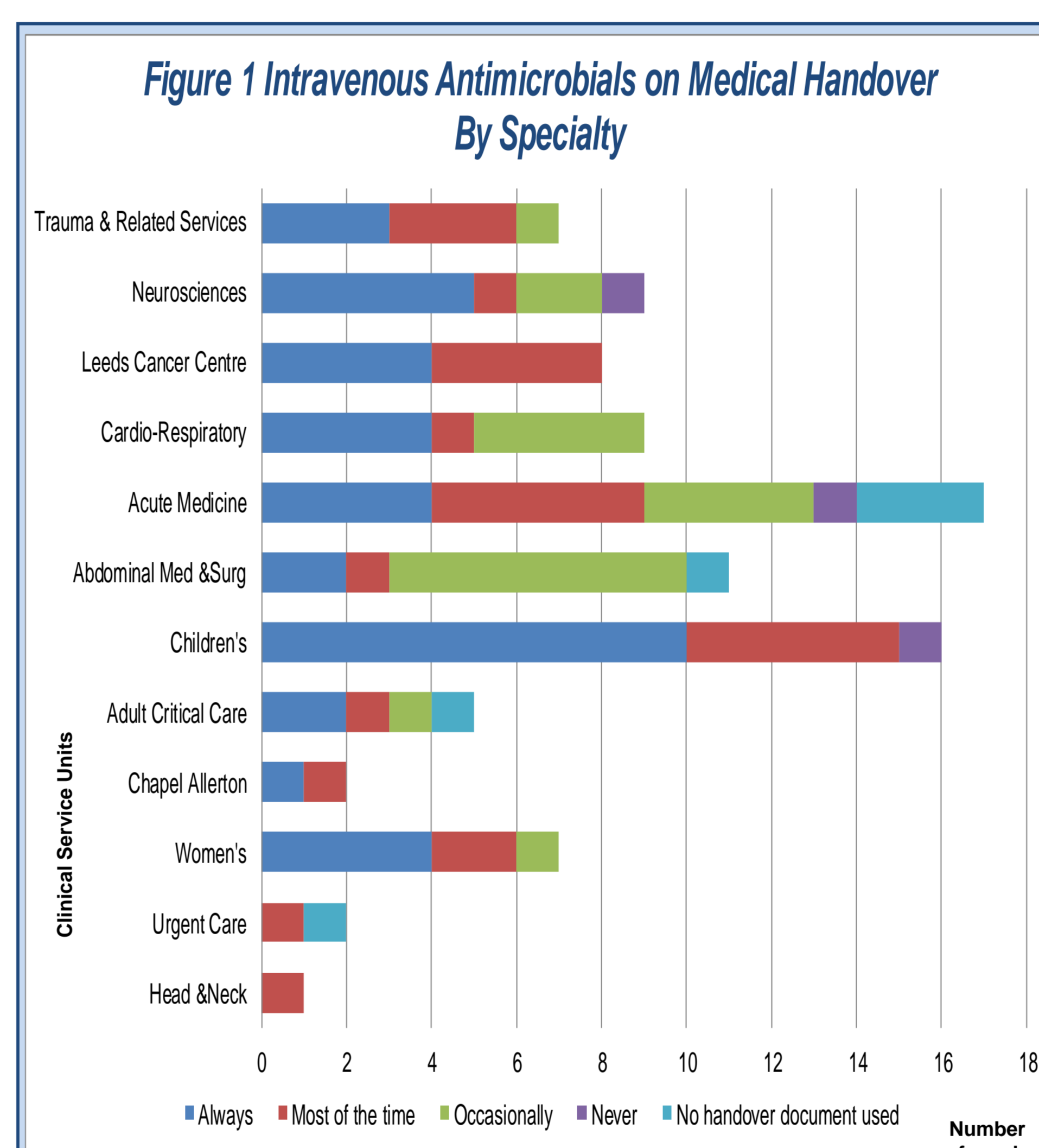
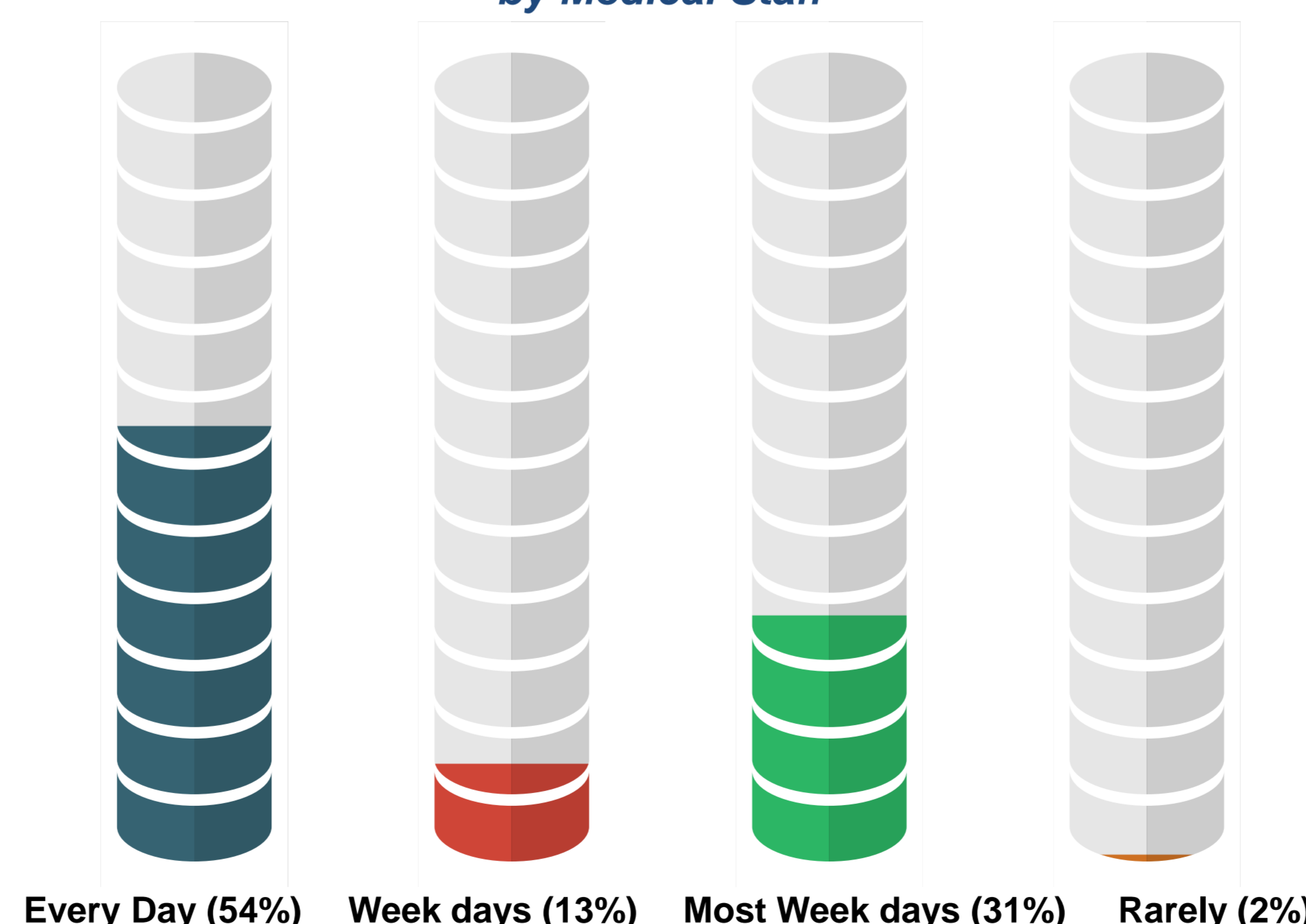


Figure 2 Frequency of Intravenous Antimicrobial Review by Medical Staff

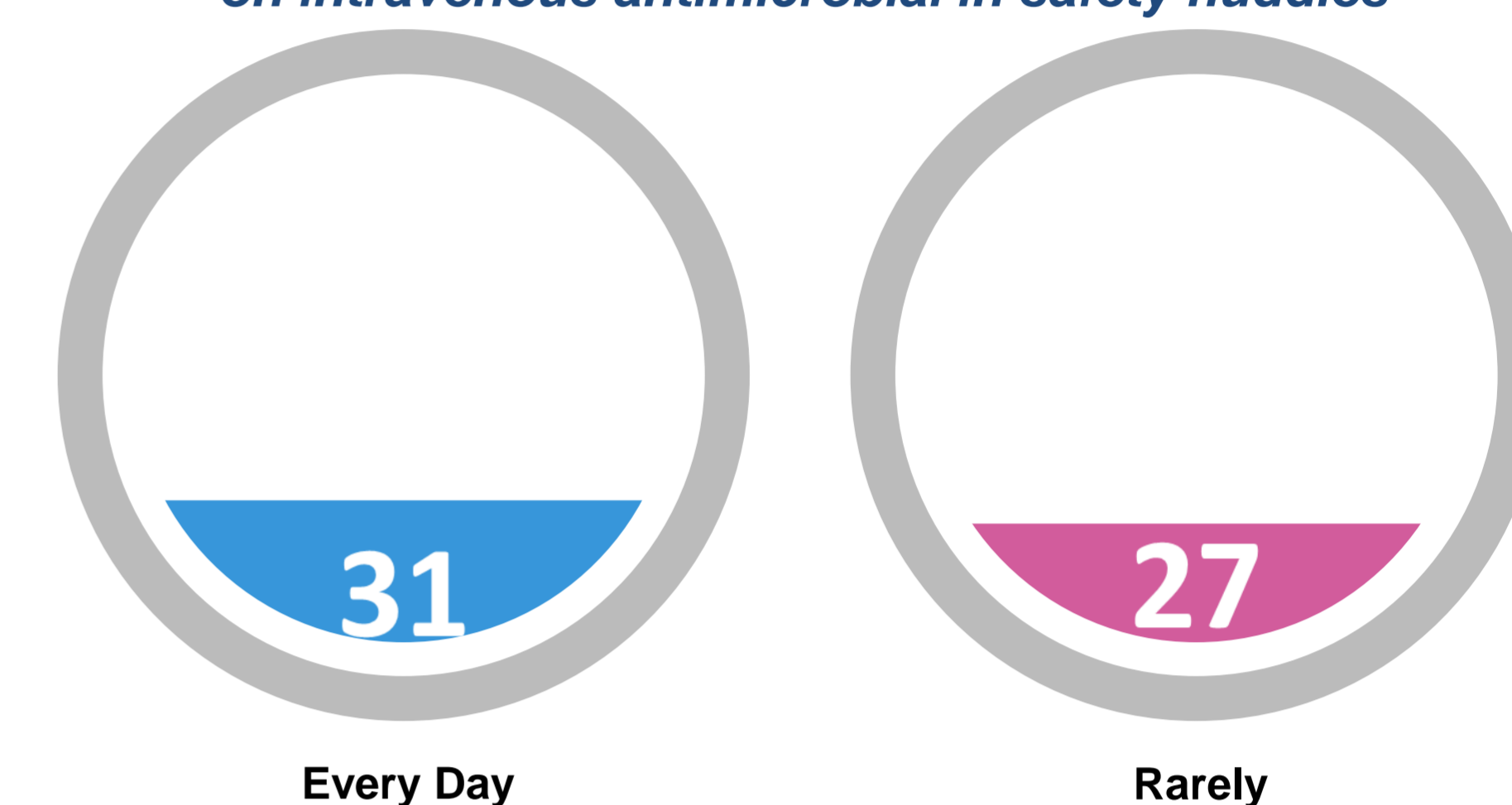


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Figure 3 Percentage of Specialties discussing patients on intravenous antimicrobial in safety huddles



## Discussion

It is reported that on average a third of patients receive antimicrobial therapy and approximately 40% of these patients will receive an IV agent. However, the number of patients on IV antimicrobials in our Trust is 10% higher than this average with a 3% increase in the last two years.

Up to 40% of antimicrobial prescriptions are incorrectly prescribed or inappropriate, which often reflects overuse of expensive IV antimicrobials.

Inappropriate use of the intravenous route can have adverse consequences for patients, future antimicrobial resistance patterns, staff time and financial resources.

Prudent antimicrobial prescribing, which includes the appropriate length of treatment, route of administration and regular reassessment will help to avoid these consequences and ensure optimal patient care and use of resources.

## Conclusion

Improved antimicrobial stewardship is needed, not only to curb the threat of antimicrobial resistance but also to avoid exposing patients to unnecessary risks.