

Can we engage surgeons in antimicrobial stewardship?

Experience from weekly surgical AMS rounds



Objectives

Antimicrobial stewardship (AMS) programmes traditionally encounter barriers when engaging surgical teams. We initiated weekly AMS rounds across 3 surgical disciplines and evaluated participating clinicians' attitudes and outcomes.

Methods

An AMS team (ID specialist/microbiologist and pharmacist) met weekly with 3 different surgical teams (JMOs, registrars, staff specialists and pharmacists). The surgical specialties included Vascular, Colorectal, and Upper GI. Patients were identified using an AMS electronic prescribing tool (mPage) and during these meetings the electronic medical record, chart, microbiology and surgical plan were reviewed.

This study had two parts:

- 1 During each meeting the AMS pharmacist recorded data on the attendees, time taken, patients, and antimicrobials discussed.
- 2 A 30-item online questionnaire was emailed to attendees via RedCap after they had attended at least one meeting. The tool (5-point Likert scale and free-text questions) assessed the educational components of the meetings, consistency of advice, attitudes and perceived patient outcomes. Participants were sent 3 follow up reminders.

Results (1) – surgical meetings

82 meetings were recorded for outcomes across the 3 surgical disciplines, with the majority of these meetings being attended by a senior surgeon (n=56, 68%).

The average round took 19 minutes (range 3-48 minutes).

864 interventions were documented, with the most common being a duration plan (n=191), no change (n=159), providing an ID approval code for a restricted agent (n=101), and stopping an antimicrobial (n=98).

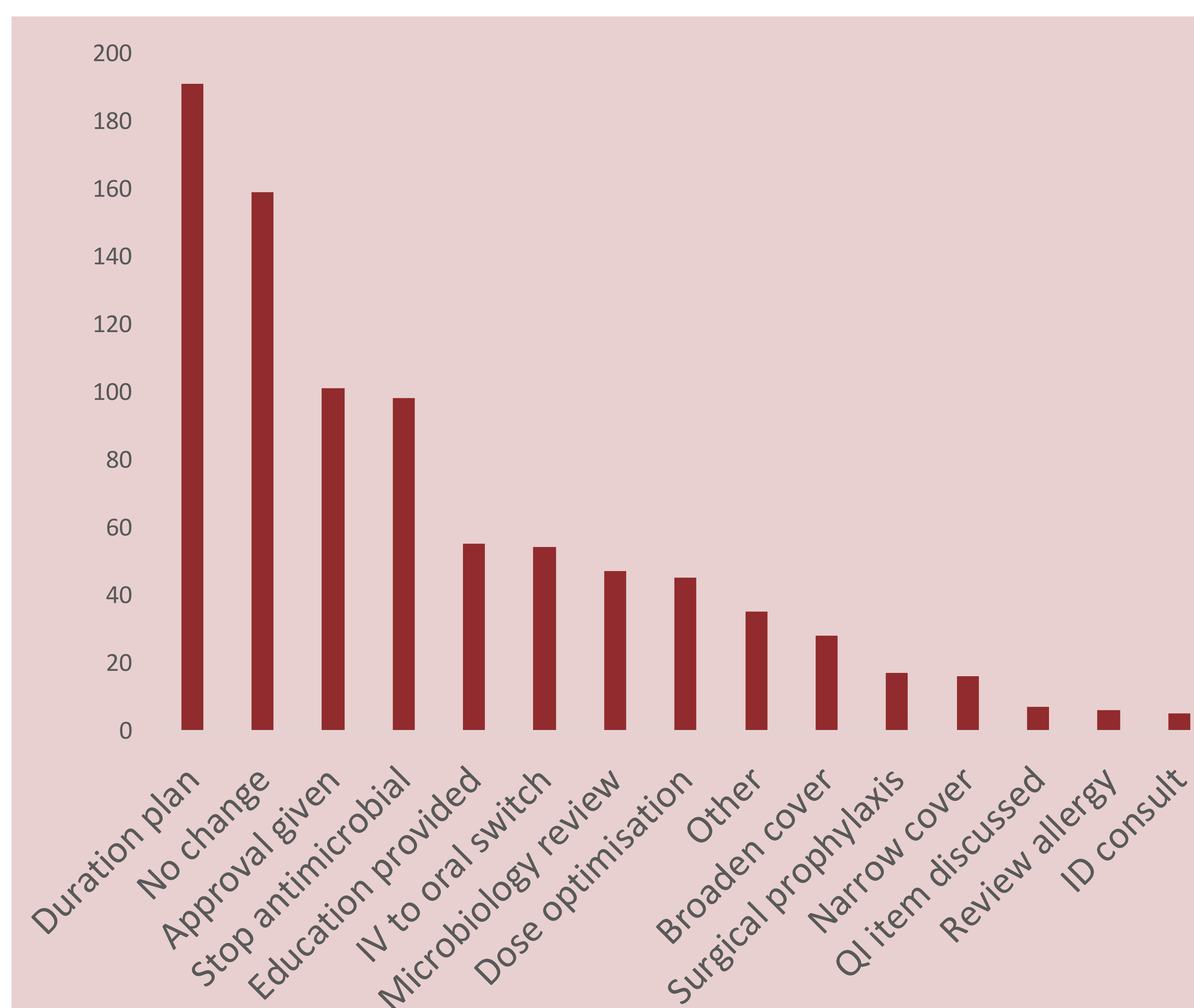


Figure 1. Frequency of interventions

Results (2) – survey of participants

The survey response rate was 71% (n=54/76).

54 responses were included: medical interns (n=28), residents (n=14), registrars/fellows (n=8), and specialists (n=4). All participants attended at least one Vascular, Colorectal, or Upper GI surgical AMS round between 2015 and 2018.

The majority (n=49/54) thought that the Registrar/Fellow drove antimicrobial prescribing. While nil identified the medical intern as a team member that commonly selects the antibiotic treatment.

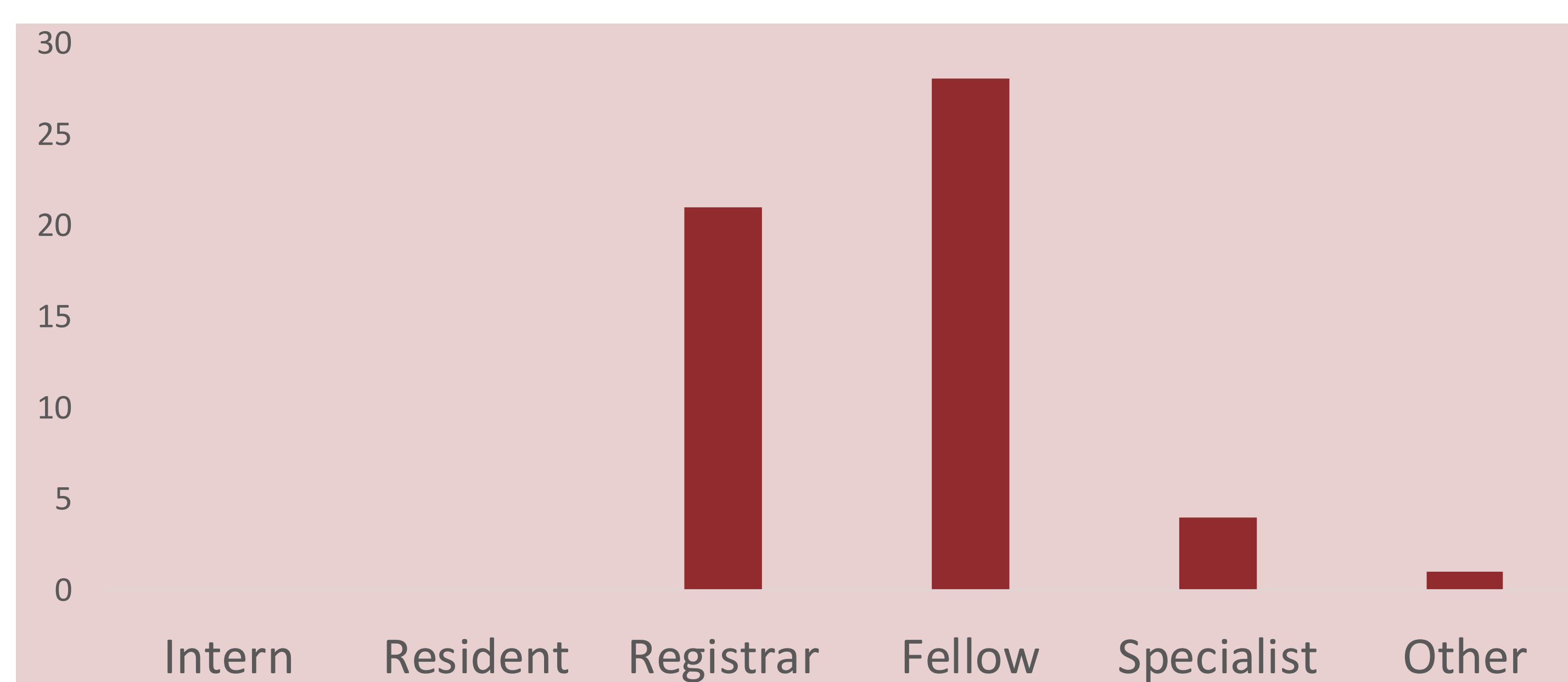


Figure 2. Who in your team most commonly selects treatment with an antibiotic?

Participants agreed that the details presented in these rounds are sufficient to provide good antibiotic advice. All participants agreed that their knowledge of antibiotics improved, that advice was practical and was frequently followed by the admitting Specialist and that the rounds have altered their future approach to antibiotic prescribing.

Most participants agreed that the advice provided in these meetings was implemented within 24 hours (n=52/53), and was a collaborative approach to AMS (n=52/53).

The main benefit described by respondents was drawing key stakeholders together to discuss the surgical plan, reviewing dosage/duration of antibiotics and understanding microbiology results.

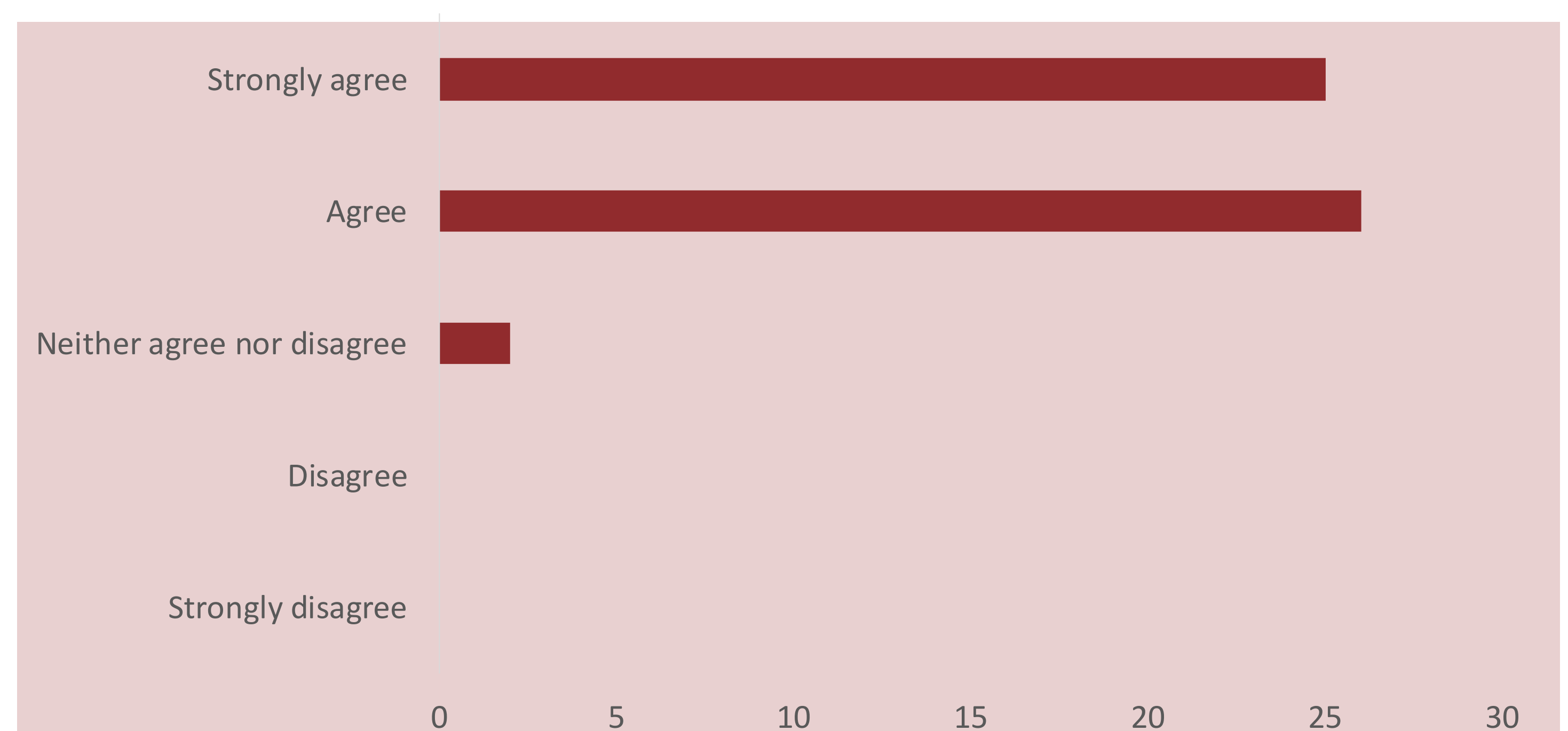


Figure 3. The details that can be provided at these meetings are enough for the ID team to provide me with good antibiotic choices

Conclusion

Weekly surgical AMS rounds are an effective way to engage surgical teams, and are most efficient when a senior surgeon is present.

Regular AMS chart rounds are valued by surgical teams, are quick and efficient. Access to electronic patient information, especially the live mPage surveillance tool, helps facilitate this.

They enable engagement with prescribers, improve the quality use of antimicrobial agents and can alter attitudes to antibiotic prescribing.