East Midlands Antimicrobial Pharmacist Group

How non-specialist ward pharmacists support Start Smart Then Focus

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Background

The role of pharmacists in leading Antimicrobial Stewardship (AMS) programmes in UK hospitals has expanded in recent years, however, on average Trusts only employ one full-time antimicrobial specialist pharmacist (AMP) per 776 beds [1]. Around one third of patients in acute hospitals are on antibiotics at any one time [2], therefore it is not possible for the AMP to review and optimise the treatment of all patients or ensure that policies and guidelines are being adhered to at an individual patient level. However, all pharmacists have a role to play in AMS [3], and most acute hospitals have a well-established clinical pharmacy service, whereby the pharmacotherapy of inpatients is reviewed on a regular basis.

The East Midlands Antimicrobial Pharmacist (EMAP) group wished to explore the extent to which non-specialist clinical pharmacists contribute to AMS, and to identify potential areas where their contribution can be developed further.

Methodology

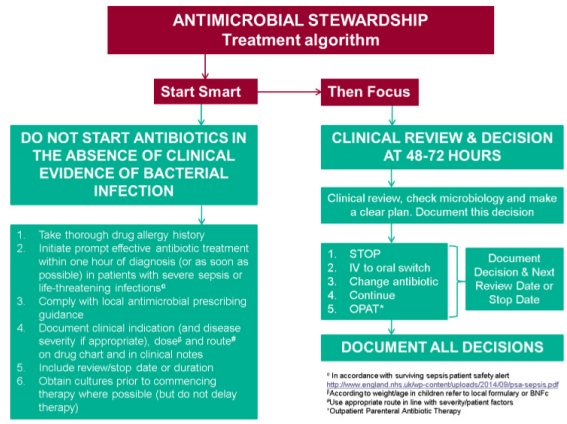
Data was obtained from the 2016 East Midlands pharmacy contributions audit. Over a one week period in November 2016, all contributions/advice given to a healthcare practitioner or patient in order to optimise pharmacotherapy were recorded in a standardised format across all acute hospitals in the East Midlands.

The antimicrobial contributions were extracted and categorised by the AMPs from 5 acute Trusts, according to the type of intervention and the stage in the 'Start Smart and then Focus' algorithm (figure 1) [4].

AMPs initially categorised a random sample of 100 interventions to gain agreement on the category definitions, and then each AMP categorised all interventions for their Trust.

Independent prescribing and contributions from pharmacy technicians were excluded due to variable data collection between Trusts.

Figure 1: Antimicrobial Stewardship (AMS) – Treatment algorithm



Results

- 7976 contributions were made, 10.4% related to antimicrobials, making it the top therapeutic area where pharmacists contributed to patient care.
- This equates to 25 interventions per 1000 bed days, or an estimated one intervention for every 13 patients on antibiotics.
- 57% of these contributions were made at the "Start Smart" Stage and 43% at the "Then Focus" stage (figure 2).
- Pharmacists supported "Start Smart" by challenging compliance with guidelines in terms of antibiotic choice and dosing.
- Pharmacists also contributed to the "Then Focus" stage by highlighting opportunities for treatment cessation (course complete or no indication), reviewing dosing, and supporting therapeutic monitoring.
- IV to oral switching and changing antibiotics at the "focus" stage were areas where pharmacists made fewer interventions. There were no interventions relating to sending cultures, ensuring prompt treatment for sepsis or surgical prophylaxis.
- Contributions classified as "other" included patient education, advice on administration and correcting transcription errors

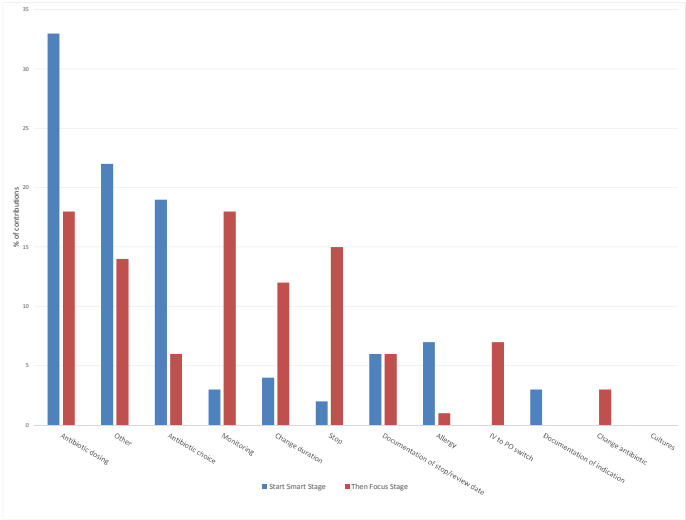


Figure 2. Type of contribution made during the Start Smart and Then Focus stages of care. Percentages are relative to the total number made for each of Start Smart and Then Focus.

Discussion

Pharmacists are confident in following guidelines and making dosing recommendations, but may be less confident in interpreting culture and sensitivity results and in advising on IV to oral switch. Reviewing microbiology and criteria for IV to oral switch is time consuming, so it is possible that non-specialist pharmacists do not have time to fully review each case. The absence of contributions in areas such as advising on cultures and treatment of sepsis is likely explained by the fact that pharmacists often review patients once treatment has started. However, the growing role of pharmacist prescribers in secondary care is expected to place pharmacists within the decision making stages of patient care e.g. on ward rounds and in surgical pre-op assessment clinics, where the pharmacists contribution will be to get it "right first time". These contributions have been excluded in this study. Another limitation is that whilst the pilot stage did help improve consensus for assigning the contribution's category this was still a subjective exercise, resulting in a large number of contributions categorised as "other". The study has not identified how many opportunities for contributions were missed by the non-specialist ward pharmacists.

Conclusions

Non – specialist ward pharmacists make a valuable contribution to AMS, particularly in areas where guidelines exist. This study has identified areas that AMS programs can focus on to further enhance the contribution of ward pharmacists.

References

1) Wickens. H.J., et al., (2013), JAC, 68:2675-2681
2) RPS (2017) The Pharmacists Contribution to Antimicrobial Stewardship
3) PHE (2017) English Surveillance Programme for Antimicrobial Utilisation and Resistance (ESPAUR)
4) PHE (2015), Start smart then focus: antimicrobial stewardship toolkit for English hospitals