

Exploring the use of electronic guidance tools to help reduce inappropriate prescribing of antibiotics

Background:

Inappropriate use of antibiotics continues to contribute to bacteria becoming resistant to treatment. A number of guidance tools (or sheets) have been developed to help doctors decide when it is appropriate to prescribe antibiotics for acute respiratory tract infections such as sore throat, but it is not clear if they use these in their decision-making process. Limited evidence suggests doctors may not be familiar with these guidance tools or prefer to use their own clinical judgement.

An example of the guidance tool :

Symptom	Yes	No
Fever	+1	0
Absence cough	+1	0
Symptom onset < 3 days ago	+1	0
Inflamed tonsils	+1	0
Tonsillar exudate	+1	0

Score	Outcome
1	Antibiotics not indicated
2-3	Consider delayed script
4-5	Antibiotics indicated

This is the FeverPAIN score which gives one score for the presence of each symptom: fever, having the illness for less than 3 days, having inflamed tonsils, having pus on tonsils. Absence of cough is given a score of 1. The total score is then calculated. A low score would suggest antibiotics will not be needed, a high score suggests antibiotics may be beneficial.

Methods:

Our study explored UK doctors' views and experiences of using these (electronic) guidance tools for respiratory tract infections. We interviewed about 25-30 doctors from a range of urban, rural, large and small practices and with a mix of gender, age and years of experience, over the phone. We asked them questions about barriers and facilitators of using these sheets during consultations. We also explored whether uptake of these tools varies with years of clinical experience and across practices.

Study findings:

We found that most doctors were aware of these tools. Overall, doctors reported that they felt these tools were useful but not necessary and many doctors admitted that they often didn't use these tools and ultimately relied on their clinical instinct.

Doctors reported that they may sometimes use the tool to:

- Facilitate discussions with patients and justify prescribing decisions to patients.
- Support or confirm their own prescribing decision, particularly when it was less clear whether the patient may benefit from antibiotics
- Document their decision in case of later scrutiny or for medical-legal reasons

Doctors also highlighted concerns and reservations to using these tools. For example, they felt:

- The tools did not account for patient complexity (including recurrent infections, existing health issues or social factors such as living alone)
- Using the tools on a computer sometimes affected the consultation and took away focus from the patient
- The tools did not add value to their decision as it didn't ask anything they wouldn't normally ask a patient during a consultation
- Lack of time was the main constraint to not using the tool.

The discussion also suggested that any new tools should be:

- Simple, quick and easy to use
- Easily accessible and well embedded into clinician systems
- Evidence of the impact of these tools need to be presented clearly and endorsed by national guidelines.

Doctors also highlighted the potential for patients to complete their scores themselves. This may be particularly useful considering we may be having more remote consultations in the future.

Conclusion

The findings of the study has improved our understanding of reasons for using or not using guidance tools. We hope the findings will allow more acceptable guidance tools to be developed in the future to encourage more widespread adoption by doctors in practice. This in turn will reduce unnecessary antibiotic prescribing and resistant bacteria.