

Can the utilization of a practice formulary improve antibiotic prescribing habits in Primary Care?

Helena Hobbs, Rebecca Lee, Derek Forde
Slaney Medical Centre

Aim: Antibiotic resistance is one of the biggest threats to global health today. Appropriate antibiotics should be prescribed, where clinically indicated, at an appropriate dose for an appropriate duration.[1] Our study aims to determine if the introduction of an up-to-date practice formulary can positively influence antibiotic prescribing habits with reference to evidence-based antimicrobial guidelines.

Methods: The electronic health record of adults attending the practice, who were treated for an acute infectious cough in January 2018 were examined. Patients who were not treated with antibiotics or those with chronic lung diseases or significant medical comorbidities were not included in this study. Data was examined by clinical staff and entered anonymously into a spreadsheet which was analysed using Microsoft Excel.

A practice meeting was held and the practice formulary was updated to reflect current national HSE guidelines for the treatment of infectious cough i.e. amoxicillin 500 mg TDS for 5 days or doxycycline 200 mg stat/100 mg OD for 5 days.[2]

Following this intervention in November 2018, the electronic health records of adults presenting with an acute infectious cough in January 2019 were examined, following the methodology outlined above and the results were compared.

Results: In January 2018, only 2% of patients were treated in accordance with guidelines for acute infectious cough. In January 2019, 70% of patients were treated in accordance with guidelines i.e. 70% improvement.

Table 1

Antibiotic	Jan-18	Jan-19			
	N=60	Cases	%	Cases	%
Amoxicillin 500mg TDS x 5/7		1	2	54	71
Amoxicillin 500mg TDS x 6/7		37	62	5	8
Amoxicillin 500mg TDS x 7/7		4	6	1	1
Clarithromycin 500mg BD x 7/7		1	2	8	11
Clarithromycin LA 500mg OD x 7/7		10	17	1	1
Doxycycline 200mg stat then 100mg OD for 5 days		0	0	1	1
Erythromycin 250m TDS x 5/7		1	2	0	0
Cefaclor 375mg BD x 6/7		1	2	0	0
Augmentin 625mg TDS x 7/7		3	5	6	8
Levofloxacin 500mg BD x 5/7		1	2	0	0

Conclusion: It is encouraging that a simple intervention such as the implementation of an up-to-date practice formulary can improve prescribing habits so quickly and effectively. In the future, we wish to continue improving our standard of care. To do this, we intend to audit antibiotic prescribing in other respiratory conditions such as community acquired pneumonia and infective exacerbation of COPD.

References:

- [1] Who.int. (2018). *Antibiotic resistance*. [online] Available at: <https://www.who.int/news-room/fact-sheets/detail/antibiotic-resistance> [Accessed 3 Mar. 2019].
- [2] HSE.ie. (2019). *Acute Cough, Bronchitis - HSE.ie*. [online] Available at: <https://www.hse.ie/eng/services/list/2/gp/antibiotic-prescribing/conditions-and-treatments/lower-respiratory/acute-cough-bronchitis/acute-cough-bronchitis.html> [Accessed 3 Mar. 2019].