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Antibiotics in care homes-a retrospective analysis of medicines administration records

Fadya Alhamadani, Helena Sakota, Efi Mantzourani, Mark Gumbleton and Mathew W Smith
Cardiff University, UK

Statement of the Problem: Residents of care homes are noted for the complexity of their care needs, multiple co-morbidities and the incidence of polypharmacy. This makes them particularly susceptible to medicines related harm. Antibiotic prescribing in care homes is particularly prevalent and their inappropriate administration risks the development of antimicrobial resistance. The aim of this present study was to identify the prevalence and types of prescribing and administration errors related to antibiotics in Care Homes

Methodology & Theoretical Orientation: A retrospective study was conducted in 12 Care Homes in South Wales over an eight month period (Feb-Oct 2015). Anonymised real-time data was collected from an electronic medicines management system and the prevalence of antibiotic determined. The data was also analyzed for errors related to the prescribing and administration of antibiotics. The type and frequency of medication errors were recorded in excel and selected data was transferred into SPSS for further analysis.

Findings: A total of 142 (43.16%) residents received at least one antibiotic over the study period. The most commonly prescribed antibiotic was trimethoprim (24.6%). Some 9499 administrations were analyzed against pre-defined medication error categories with 2247 medication errors identified, 79.6% of residents were exposed to at least one error. The most frequent administration error type was duration error (44.5%) where the antibiotic was administered either for a period shorter or longer than the prescribed duration, followed by dose omissions errors (38.9%). The most common prescribing error type was similarly duration errors (74.3%)

Conclusion & Significance: This evaluation of the management of antibiotics in care homes in South Wales has revealed that the prevalence of antibiotic prescribing along with the incidence of administration and prescribing errors related to antibiotics is significant. This may result in antimicrobial resistance in a particularly vulnerable patient cohort

Error type	Sub-category	Number of Errors	% of error type constituting to total administrations (n=9499)	Rate of Administration Errors for Residents on antibiotics
Administration				
Dose	Deviation	1	0.01%	9499
	Omission	861	9.06%	11
Duration	Attendant	986	10.38%	10
	Intended Time	20	0.21%	475
Frequency	Attendant	344	3.62%	28
	TOTAL	2212	23.29%	4
Error type	Sub-category	Number of prescriptions	% of prescriptions	Rate of prescription

Error type	Sub-category	Number of Errors	% prescriptions containing prescribing error (n=250)	Rate of prescription errors for residents on antibiotics
Prescribing				
Dose		3	1.18%	10
Duration	Over	3	1.18%	11
	Under	23	9.06%	10
Frequency		6	2.36%	475
Drug Choice	Cannot Access	-	-	28
TOTAL		35	13.78%	117

Biography

Fadya Hamadani has acquired her BSc in Pharmacy and MSc in Clinical Pharmacy from College of Pharmacy, Baghdad University (1992, 1998 respectively). She is Assistant Professor in Clinical Pharmacy and since that period, she has built a variety of experience in research, evaluation, teaching in higher education institutions and providing hospital training. Currently she is a full time PhD student at the School of Pharmacy and Pharmaceutical Sciences, Cardiff University. Her PhD project involves identification of issues around safe and effective administration and management of medicines in care homes. Her research interest includes the rational use of antibiotics in care homes.

Al-Hamadani@cardiff.ac.uk