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## Antimicrobial stewardship knowledge and perception among physicians and pharmacists at leading tertiary teaching hospitals in Zambia: implications for future policy and practice

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### Publication date

09-06-2023

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### Document Version

Accepted version

### Citation for this work (American Psychological Association 7th edition)

Kalungia, A. C., Mwambula, H., Munkombwe, D., Marshall, S., Schellack, N., May, C., Jones, A. S. C., & Godman, B. (2019). *Antimicrobial stewardship knowledge and perception among physicians and pharmacists at leading tertiary teaching hospitals in Zambia: implications for future policy and practice* (Version 1). University of Sussex. <https://hdl.handle.net/10779/uos.23468492.v1>

### Published in

Journal of Chemotherapy

### Link to external publisher version

<https://doi.org/10.1080/1120009X.2019.1622293>

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## Tables

Table 1: Demographic characteristics of participants

Characteristic	Physicians ( <i>n</i> , %)	Pharmacists ( <i>n</i> , %)
Sex		
• Male	80 (58%)	26 (43%)
• Female	57 (42%)	35 (57%)
Years of Practice		
• <5 years	81 (59%)	28 (46%)
• 5 to 10 years	37 (27%)	24 (39%)
• >10 years	19 (14%)	9 (15%)
Position/Practice Rank		
• Intern	58 (42%)	28 (46%)
• Resident	55 (40%)	21 (34%)
• Senior	10 (7%)	9 (15%)
• Consultant/Clinical Specialist	14 (10%)	3 (5%)
Hospital		
• Adult hospital	98 (71%)	47 (77%)
• Children's hospital	22 (16%)	5 (8%)
• Mother and New-born hospital	17 (12%)	9 (15%)

Table 2: Physicians and pharmacists' knowledge on AMS concepts

	Physicians			Pharmacists		
	AMS Knowledge					
	None	Moderate	High	None	Moderate	High
<b>Years of Practice</b>						
• ≤5 years	56 (41%)	22 (16%)	3 (2%)	21 (34%)	17 (28%)	4 (7%)
• >5 years	14 (10%)	33 (24%)	9 (7%)	3 (5%)	8 (13%)	8 (13%)
	<i>p</i> < 0.0001****			<i>p</i> = 0.0042**		
<b>Position/Practice Rank</b>						
• Junior Officer (Intern/Resident)	68 (50%)	39 (28%)	6 (4%)	23 (38%)	19 (31%)	7 (11%)
• Senior Officer (Senior/Clinical Specialist)	2 (1%)	16 (12%)	6 (4%)	1 (2%)	6 (10%)	5 (8%)
	<i>p</i> < 0.0001****			<i>p</i> = 0.018*		
<b>Previous AMS training</b>						
• Have Ever Undertaken AMS Training	0 (0%)	7 (5%)	4 (3%)	0 (0%)	4 (7%)	3 (5%)
• Never Undertaken AMS Training	70 (51%)	48 (35%)	8 (6%)	24 (39%)	21 (34%)	9 (15%)
	<i>p</i> < 0.0001***			<i>p</i> = 0.029*		

\*Freeman-Halton extension Fisher's exact test

Table 3: Participants' perceptions and attitudes towards antimicrobial use and AMR

	Physicians (n, %)			Pharmacists (n, %)		
	Disagreed	Unsure	Agreed	Disagreed	Unsure	Agreed
Inappropriate use of antimicrobials needs to be curbed	0	0	<b>137</b> <b>(100%)</b>	0	0	<b>61</b> <b>(100%)</b>
Antimicrobial resistance is currently NOT a problem in my daily practice	<b>129</b> <b>(94%)</b>	8 (6%)	0	<b>59</b> <b>(97%)</b>	2 (3%)	0
I consider microbial sensitivity patterns when selecting antimicrobials for treatment of a patient	5 (4%)	17 (12%)	<b>115</b> <b>(84%)</b>	2 (3%)	8 (13%)	<b>51</b> <b>(84%)</b>
Rational use of antimicrobials can prevent antimicrobial resistance	1 (1%)	3 (2%)	<b>133</b> <b>(97%)</b>	4 (7%)	0	<b>57</b> <b>(93%)</b>
Choice of antimicrobial use should be based on laboratory/microbiology test results	15 (11%)	30 (22%)	<b>92</b> <b>(67%)</b>	6 (10%)	8 (13%)	<b>47</b> <b>(77%)</b>
Choice of antimicrobial to use must be based on hospital antimicrobial policy/guidelines	17 (12%)	18 (13%)	<b>102</b> <b>(74%)</b>	2 (3%)	4 (7%)	<b>55</b> <b>(90%)</b>
Choice of antimicrobial to use should be based on antimicrobial medicines available in the Pharmacy	16 (12%)	10 (7%)	<b>111</b> <b>(81%)</b>	22 (36%)	7 (11%)	<b>32</b> <b>(52%)</b>
Choice of antimicrobial used should be based on the severity of infection	0	4 (3%)	<b>133</b> <b>(97%)</b>	0	5 (8%)	<b>56</b> <b>(92%)</b>

Table 4: Participants' preferred mode of AMS training

<b>Mode of AMS training preferred:</b>	<b>Physicians (<i>n</i> = 137)</b>	<b>Pharmacists (<i>n</i> = 61)</b>
• Training workshops	51%	54%
• On the job hands-on training	24%	25%
• Short course (4 – 6 weeks)	11%	16%
• Self-paced online course	14%	5%