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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Tables

Table 1: Demographic characteristics of participants

Characteristic	**Physicians *(n, %)***	**Pharmacists *(n, %)***
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
Years of Practice						
• ≤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%)**
	*p < 0.0001*****			*p = 0.0042***		
Position/Practice Rank						
• 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%)**
	*p < 0.0001*****			*p = 0.018**		
Previous AMS training						
• 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%)**
	*p < 0.0001****			*p = 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	**137 (100%)**	0	0	**61 (100%)**
Antimicrobial resistance is currently NOT a problem in my daily practice	**129 (94%)**	8 (6%)	0	**59 (97%)**	2 (3%)	0
I consider microbial sensitivity patterns when selecting antimicrobials for treatment of a patient	5 (4%)	17 (12%)	**115 (84%)**	2 (3%)	8 (13%)	**51 (84%)**
Rational use of antimicrobials can prevent antimicrobial resistance	1 (1%)	3 (2%)	**133 (97%)**	4 (7%)	0	**57 (93%)**
Choice of antimicrobial use should be based on laboratory/microbiology test results	15 (11%)	30 (22%)	**92 (67%)**	6 (10%)	8 (13%)	**47 (77%)**
Choice of antimicrobial to use must be based on hospital antimicrobial policy/guidelines	17 (12%)	18 (13%)	**102 (74%)**	2 (3%)	4 (7%)	**55 (90%)**
Choice of antimicrobial to use should be based on antimicrobial medicines available in the Pharmacy	16 (12%)	10 (7%)	**111 (81%)**	22 (36%)	7 (11%)	**32 (52%)**
Choice of antimicrobial used should be based on the severity of infection	0	4 (3%)	**133 (97%)**	0	5 (8%)	**56 (92%)**

Table 4: Participants' preferred mode of AMS training

Mode of AMS training preferred:	**Physicians *(n = 137)***	**Pharmacists *(n = 61)***
• 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%