Prevalence and Drivers of Burnout Among Antimicrobial Stewardship Personnel in the United States: A Cross-Sectional Study

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Background

- Antimicrobial stewardship personnel are often faced with occupational stressors that could put them at risk for burnout
- These stressors were escalated during the COVID-19 pandemic, potentially threatening the stability and composition of the stewardship workforce in the future
- Little is known about the degree to which antimicrobial stewards experience occupational burnout

Objective

To characterize the prevalence of, and identify factors associated with, burnout among antimicrobial stewardship personnel practicing in United States (US) hospitals.

Methods

- From October-December 2021 we conducted a cross-sectional survey of antimicrobial stewardship personnel
- Respondents were recruited via email through four US-based professional organizations and self-administered a structured questionnaire measuring demographics, stewardship program structure, resources, and perceptions of organizational climate
- Burnout was measured using the Maslach Burnout Inventory, a 22-item validated instrument with 3 subscales (emotional exhaustion [EE], depersonalization [DP], and professional accomplishment [PA])
- Burnout was defined as a dichotomous outcome based on the presence of high scores on the EE subscale along with either a high DP score or a low PA score
- Descriptive statistics and univariable logistic regression analyses were performed

Results

Table 1: Respondent Demographics (N = 259)

	%
Gender	
Female	64.3 (n = 166)
Male	35.7 (n = 92)
Degree	
PharmD	78.2 (n = 201)
MD/DO	21.8 (n = 56)
Role on Stewardship Team	
Pharmacist Lead	47.5 (n = 123)
Physician Lead	17.4 (n = 45)
Stewardship Pharmacist	25.9 (n = 67)
Physician Participant	4.6 (n = 12)
Other	4.6 (n = 12)
Race	
Black/African American	1.2 (n = 3)
White	76.8 (n = 199)
Asian	15.4 (n = 40)
Other	6.6 (n = 17)
Ethnicity	
Hispanic, Latinx, Spanish	5.1 (n = 13)
Median Age	
36 (IQR, 32-41)	
Relationship Status	
Single	22 (n = 56)
Married or Partnered	76.4 (n = 194)
Separated or Divorced	1.6 (n = 4)
Hospital Census Region	
Northeast	20.2 (n = 49)
Midwest	23.6 (n = 57)
West	24.0 (n = 58)
South	32.2 (n = 78)
Hospital Teaching Status	
Teaching	84.1 (n = 212)
Non-Teaching	15.9 (n = 40)
Hospital Type	
Community Hospital - Rural	9.8 (n = 25)
Community Hospital - Urban	31.5 (n = 80)
Academic Medical Center	53.5 (n = 136)
Children's Hospital	5.1 (n = 13)

Thirty-six percent (n=94 of 259) of respondents met the definition for burnout. There were no significant differences in burnout by respondent demographics or professional role.

Table 2: Logistic Regression Predicting Burnout[a]

Variable	Odds Ratio (95% CI)	*P* value, χ^2
Female gender	1.5 (0.9-2.6)	0.137
PharmD degree[b]	1.8 (0.9-3.4)	0.088
Stewardship is not an institutional priority	5.8 (2.8-12.4)	<0.001
Hospital leadership unsupportive	6.6 (3.1-13.8)	<0.001
Prescriber resistance to stewardship is common	2.3 (1.3-4.1)	0.005
Unsupported by ID colleagues	4.3 (1.9-9.7)	<0.001
Unsupported by pharmacy colleagues	6.9 (2.4-19.7)	<0.001
Stewardship team does not work well together	19.7 (2.4-158.5)	0.005
Stewardship work is not intellectually stimulating	8.2 (2.6-25.9)	<0.001

[a] Defined as a dichotomous outcome based on the presence of high scores on the emotional exhaustion (EE) subscale along with either a high depersonalization (DP) score or low professional accomplishment (PA) score. High scores by subscale are defined as: EE scores of ≥27, DP scores of ≥10 and PA scores of ≤33.
[b] Reference group is MD/DO degree.

Conclusions

- Over a third of antimicrobial stewardship personnel in our sample met predefined, standardized criteria for burnout
- Contextual aspects of the work environment, including leadership, unsupportive peer climate and conflict were associated with burnout
- Efforts to prevent occupational burnout in stewards should consider the role of context, climate, and culture in addition to individual burnout prevention strategies

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