



# Development of Antimicrobial Stewardship Programs in Central and South America

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## OBJECTIVE

- To assess progress in the development of Antimicrobial Stewardship Programs (ASPs) in Latin America through a cross-sectional survey

## METHODS



- Self-assessment of AS activities
- 40 acute care hospitals
- Guatemala, Panama, Ecuador, Colombia, and Argentina
- A previously validated tool derived from the Centers for Disease Control and Prevention Core Elements of Antibiotic Stewardship (AS) was distributed through a research network to hospitals in Latin America
- Evaluations were completed in March 2022
- The evaluation included 94 questions. Each question included a graded response (meets criteria, partially meets criteria, does not meet criteria, or not applicable)

## RESULTS

- 22 public and 16 private hospitals completed the assessment (95% response rate)
- The average number of beds was 371 (range 45-650) and 303 (range 51-1000) for private and public hospitals, respectively
- Answers to questions are presented by hospital type and summarized in the **Table**
- 94% of private and 64% of public hospitals reported to have partial or complete electronic medical records



**References:** Quirós RE, et al. M; PROA-LATAM Project Group. Antimicrobial stewardship programs in adult intensive care units in Latin America: Implementation, assessments, and impact on outcomes. *Infect Control Hosp Epidemiol.* 2022; Muñoz JS, et al. , Current Antimicrobial Stewardship Practices in Latin America: Where Are we?, *Open Forum Infectious Diseases*, 2015

## RESULTS

- Table:** Percent of hospitals meeting the indicator partially or completely

Item evaluated	Private hospitals	Public hospitals
<b>Antimicrobial stewardship program structure and operations</b>		
There is an official document designating the responsible physician/professional and outlining their responsibilities in Antimicrobial Stewardship (AS)	93.8%	59.1%
There are annual AS goals and a strategic plan to achieve the goals of the AS program (ASP)	75.0%	54.5%
Hospital leadership evaluates the ASP annually	68.8%	36.4%
There is a specific budget for AS activities including salary support	62.5%	13.6%
There is a specific AS committee (even if the individuals on it are also on the Infection and Prevention committee)	75.0%	40.9%
AS Committee meets regularly	87.5%	22.7%
AS Committee collaborates with other committees	75.0%	22.7%
There are physicians from other specialties represented in the AS committee	75.0%	40.9%
ASP participates in decisions regarding inclusion/exclusion of antimicrobials in the hospital formulary	87.5%	72.7%
The hospital has regular access to new gram-negative antimicrobials	100.0%	81.8%
ASP participates in decisions regarding inclusion/exclusion of antimicrobials in the hospital formulary	87.5%	72.7%
<b>Informatics and Technology (IT) resources</b>		
IT assists with data extraction and reporting (e.g., antimicrobial consumption data)	31.3%	22.7%
<b>Microbiology</b>		
Access to rapid diagnostics	81.3%	77.3%
The microbiology laboratory disseminates annual antibiograms	87.5%	68.2%
<b>Treatment guidelines</b>		
Guidelines are developed and adapted by consensus with multidisciplinary teams	100.0%	77.3%
Guidelines are adapted based on local epidemiology and sensitivity patterns	93.8%	81.8%
Treatment guidelines include recommendations on the duration of antimicrobial therapy	93.8%	77.3%
• Community-acquired pneumonia	81.3%	68.2%
• Hospital-acquired pneumonia including ventilation associated pneumonia	93.8%	68.2%
• Urinary tract infection	93.8%	68.2%
• Skin and soft tissue infections	68.8%	59.1%
• Intra-abdominal infection	56.3%	59.1%
• Sepsis of unknown source	62.5%	31.8%
• Multidrug-resistant organism infections	56.3%	50.0%

Item evaluated	Private hospitals	Public hospitals
<b>AS Interventions</b>		
ASP performs post-prescription review and feedback at 48-72 hours	93.8%	81.8%
Certain antimicrobials require pre-authorization	75.0%	77.3%
ASP conducts handshake stewardship	87.5%	81.8%
The hospital has a therapeutic drug monitoring program (e.g., for intravenous vancomycin)	87.5%	86.4%
The hospital has implemented "auto-stops"	43.8%	54.5%
There are process in place to alert of duplicate therapy (e.g., duplicate anaerobic coverage)	31.3%	31.8%
Pharmacists participates in antimicrobial dose adjustments	56.3%	59.1%
<b>Monitoring and Reporting</b>		
Antimicrobial consumption is monitored regularly	87.5%	77.3%
ASP monitors adherence to clinical practice guidelines	56.3%	63.6%
The hospital monitors rates of MDROs	100.0%	86.4%
<b>Education and Training</b>		
Healthcare workers are trained in communication strategies to provide better quality of services (communication with supervisors, colleagues, subordinates, patients)	68.8%	36.4%
Healthcare workers receive education upon hiring on AS principles	43.8%	31.8%
The ASP conducts annual awareness campaigns on the responsible use of antimicrobials and/or antimicrobial resistance	50.0%	54.5%
<b>Work climate</b>		
AS team recommendations are valued and considered by the members of the treating team	100.0%	95.5%
The hospital regularly conducts safety culture surveys	100.0%	36.4%
The hospital has an anonymous reporting system to report AE	100.0%	59.1%

## CONCLUSIONS & LIMITATIONS

- Although we included a diverse sample of hospitals, results may underestimate gaps in AS in the region as hospitals that agreed to participate may have been more engaged in AS than hospitals that did not
- We found several opportunities for improvement, which differed between private and public hospitals
- Common barriers to both settings include insufficient access to IT support; pharmacist and physician resource allocation, education, and monitoring of process and outcomes measures

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