**Supplementary Table:** Free resources for Antimicrobial Stewardship (AS) Program implementation

| **Item** | **Language** | **Where to find it** | **Notes** |
| --- | --- | --- | --- |
| **Program self-assessment tools** |
| * Antimicrobial stewardship programmes in health-care facilities in low- and middle-income countries: a WHO practical toolkit
 | * Spanish
 | * <https://apps.who.int/iris/bitstream/handle/10665/335947/9789240003057-spa.pdf?sequence=1&isAllowed=y>
 | * Comprehensive guide for implementation of AS programs in low- and middle-income countries.
* Includes:
	+ How to perform a gap analysis
	+ Approach to antibiotics (AWaRe classification)
	+ How to implement AS interventions
	+ How to assess the impact of the AS program
	+ Contains indicators with questions for “basic” and “advanced” core elements
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| * English
 | * <https://apps.who.int/iris/handle/10665/329404>
 |
| * WHO policy guidance on integrated antimicrobial stewardship activities
 | * Spanish
 | * <https://www.who.int/es/publications/i/item/9789240025530>
 | * Guide for implementation of AS activities at the national and facility level.
* Contains self-assessment tools for the national and hospital levels (assesses core elements such as leadership support, AS actions, surveillance, etc.).
 |
| * English
 | * <https://www.who.int/publications/i/item/9789240025530>
 |
| * ASP in Adult Intensive Care Units in Latin America
 | * English/Spanish (upon request to first author)
 | * Supplementary material in Quirós RE et al; PROA-LATAM Project Group. Infect Control Hosp Epidemiol. 2022, PMID  33829982
 | * This self-assessment tool was adapted from the CDC core elements to the Latin America region.
* Provides a score (0-100)
* Validated with data on antibiotic use and multidrug resistance organisms (i.e., higher score correlated with better antibiotic use, less antibiotic consumption, and lower incidence of multidrug resistant organisms)
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| **Educational resources for the ASP** |
| * Agency for Healthcare Research and Quality Safety Program for Improving Antibiotic Use
 | * English
 | * Acute care hospital Toolkit:

<https://www.ahrq.gov/hai/tools/antibiotic-stewardship/index.html>* Long term care Toolkit:

<https://www.ahrq.gov/antibiotic-use/long-term-care/index.html> | * National program developed to expand ASP implementation in the United States.
* Goal is to foster antibiotic stewardship as a patient safety event.
* Directed to those leading AS activities.
* PowerPoint slides with facilitator guides.
* Covers:
	+ How to develop a culture of safety around antibiotic prescribing
	+ How to develop and improve an ASP
	+ Applying the 4 moments framework for antibiotic prescribing
	+ Best practices for the diagnosis and treatment of infectious diseases
 |
| * Toolkit to Enhance Nursing and Antibiotic Stewardship Partnership
 | * English
 | * Available at:

<https://www.hopkinsmedicine.org/antimicrobial-stewardship/nursing-toolkit/index.html> | * Toolkit to implement nurse-driven antibiotic stewardship activities.
* Includes:
	+ Implementation checklist and framework
	+ Educational modules for nurses (Urinary tract infections and urine cultures, pneumonia, and respiratory cultures, *Clostridioides difficile* testing, documentation of penicillin allergy)
	+ Algorithms to optimize urine and respiratory cultures
	+ Algorithms to optimize allergy history
 |
| * Curso para la implementación y el fortalecimiento de los Programas de Optimización de Antimicrobianos (PROA)
 | * Spanish
 | * Available at:

<https://www.campusvirtualsp.org/es/curso/curso-para-la-implementacion-y-el-fortalecimiento-de-los-programas-de-optimizacion-de> | * Periodic training by PAHO (usually every year)
* Five modules over 7 weeks
 |
| **ASP technological resources** |
| *Data tracking* |
| * PROAnet
 | * Spanish
 | * Available at:

[www.proanet.org](http://www.proanet.org) | * Free secured platform available for all countries.
* One-step registration process
* User-friendly, provides an efficient way to visualize data and track it over time
* Structured to house:
	+ Self-assessment
	+ Point prevalence survey data for antimicrobial use
	+ Antimicrobial consumption data
	+ Incidence of multidrug resistance organisms
	+ Crude mortality
	+ Allows tracking data over time
	+ Allows benchmarking to other hospitals in the country
 |
| *Clinical decision support tools* |
| * PROAnet app
 | * Spanish
 | * Available in Google play and App Store
 | * Free app
* Contains:
	+ Clinical guidelines that can be adapted to local epidemiology
	+ Antimicrobial information (e.g., dosing, drug interactions, safety in pregnancy, side effects)
	+ Renal and liver function calculator
	+ Allows uploading of local antibiograms
 |
| **General information on antimicrobial resistance per country** |
| * Latin American Network for Antimicrobial Resistance Surveillance (Pan American Health Organization established network)
 | * Spanish
 | * Available at:

<https://www.paho.org/es/temas/resistencia-antimicrobianos/red-latinoamericana-caribe-vigilancia-resistencia-antimicrobianos>and at:https://www3.paho.org/data/index.php/es/temas/resistencia-antimicrobiana.html | * One of the largest regional AMR surveillance networks in the world (over 750 laboratories within the region have reported AST data on a total of ~2,633,000 isolates).
* It includes data from 20 countries. Aggregates level standardized data on antibiotic resistance from both community and nosocomial pathogens is collected and reported annually, on number of priority pathogens-drugs combination.
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| * English
 | * Available at:

<https://www.paho.org/en/topics/antimicrobial-resistance/latin-american-network-antimicrobial-resistance-surveillance>and at:https://www3.paho.org/data/index.php/en/mnu-topics/antimicrobial-resistance.html |
| **Other implementation guides** |
| * Proposed roadmap for the adaptation and implementation of WHO policy guidance on integrated antimicrobial stewardship in the human health sector
 | * Spanish
 | * <https://www.paho.org/es/documentos/propuesta-hoja-ruta-para-adaptacion-e-implementacion-politica-oms-sobre-actividades>)
 | * This document provides a roadmap for implementation of the WHO policy on integrated activities to optimize antimicrobial use in human health
* The roadmap includes using existing resources, gap analysis, multidisciplinary work, establishing goals and assessing needed resources
 |
| * English
 | * <https://www.paho.org/en/documents/proposed-roadmap-adaptation-and-implementation-who-policy-guidance-integrated>
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| * Core Elements of Human Antibiotic Stewardship Programs in Resource-Limited Settings
 | * English
 | * <https://www.cdc.gov/antibiotic-use/healthcare/pdfs/stewardship-resource-limited-508.pdf>
 | * Based on the CDC Core elements, this guide outlines “basic” and “advanced” AS activities for implementation based on local resources
 |
| * Recommendations for Implementing Antimicrobial Stewardship Programs in Latin America and the Caribbean: Manual for Public Health Decision-Makers
 | * English
 | * https://iris.paho.org/handle/10665.2/49645
 | * This manual examines the concept and benefits of AS programs, and describes their major components: leadership, human resources, microbiology laboratories, and robust pharmaceutical services.
* Also includes AS strategies in the ambulatory setting, including legislation around over-the-counter medications.
 |