

Gaps and Barriers in Implementing Antimicrobial Stewardship Programs



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[Lazure P, Augustyniak M, Goff DA, Villegas MV, Apisarnthanarak A, Péloquin S. Gaps and barriers in the implementation and functioning of antimicrobial stewardship programmes: results from an educational and behavioural mixed methods needs assessment in France, the United States, Mexico and India. \[published correction appears in JAC Antimicrob Resist. 2023 Jan 21;5\(1\):dlad010\] JAC Antimicrob Resist. 2022;4\(5\):dlac094. doi:10.1093/jacamr/dlac094](#)

A needs assessment study published by the AXDEV group was performed in 4 countries to identify educational gaps and systemic barriers obstructing adherence to AMS principles.

Antimicrobial stewardship (AMS) programs, recommended by the 2016 WHO action plan, are being implemented by healthcare professionals (HCPs) to combat antimicrobial resistance (AMR), improve antibiotic prescribing practices and increase patient safety and health outcomes. However, evidence shows that many countries are lagging in implementing and adhering to such programs. This study assessed current knowledge of HCPs and systemic barriers and gaps hindering the management of AMR.

Study design:

- An educational and behavioral mixed methods needs assessment was conducted in France, the USA, Mexico, and India
- Participants (n=383) included infectious disease physicians, infection control specialists, clinical microbiologists, pharmacologists or pharmacists applying AMS principles, whether a member of an AMS committee or not
- A combination of qualitative interviews (n=33) and quantitative online surveys (n=350) were conducted respectively between January/February 2021 and May/June 2021.

Results:

- The study identified knowledge, skills and attitudinal gaps at both an individual level and a leadership/communication level
- Individual-level knowledge gaps were shown for both AMS members and non-AMS members
- Triangulated data identified gaps in leadership and communication skills required to educate teams on AMS principles, insufficient funding, and a lack of trained HCPs
- At the leadership level, quantitative data showed skill gaps among AMS committee members in applying AMS principles, due to the challenge of prioritizing the functioning of AMS programs among leaders with competing roles and responsibilities
- Both qualitative and quantitative data identified a lack of time, funding, and trained HCPs across countries to implement and run AMS programs

In conclusion, this study identified **multiple knowledge and skill gaps** that can hinder optimal implementation of AMS programs. These findings, together with other assessments, can guide HCPs towards available resources to implement AMS programs. Furthermore, **the identified educational needs will inform future continuous professional development activities in AMS.**



“This study identified numerous gaps preventing [healthcare professionals] in France, the USA, Mexico and India from optimally adhering to AMS principles, contributing to learning and behaviour change of colleagues, and to the prioritization of AMS at the individual, organizational and systemic level,” concluded the study authors.