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Scoping transformative changes in antimicrobial stewardship: Insights from devolved government hospitals and mission hospitals in a lower-middle income setting

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# Statement of problem:

Poor coordination of the One Health concept contributes to antibiotic misuse, leading to antimicrobial resistance in LMICs. Lack of AMR data in local settings is a major hurdle to implementing National Policies and Action Plans.

#### Objective:

To evaluate the impact of Antimicrobial Stewardship (AMS) in 11 referral hospitals in 9 counties throughout Kenya.

# Methods:

Impact assessment was conducted through the lens of Transformative Innovation Policy, Basic Science and One Health Approaches. The survey team collected data using four tools: (1) National and County Assessment Tool (2) Healthcare Facility Assessment Tool (3) Laboratory Assessment of Antibiotic Resistant Testing Capacity (LAARC) and (4) WHO's Point Prevalence Survey (PPS). The team also conducted Focus Group Discussions (FGDs) with 6-12 healthcare practitioners and 8-12 community members.

# **Results:**

A common AMS structure, resources and process existed in participating counties. Seven counties demonstrated partial or full implementation of the AMS guidelines. In six counties, AMS Interagency Committees (CASICs) were partially or fully established. A total of six hospitals reviewed and updated AMS clinical guidelines. Nine laboratories can perform culture and disk diffusion tests. Digital innovations, One Health, directionality, societal goals and inclusiveness were integral to nearly all AMS interventions. Learning, reflexivity and conflict resolution are lacking in the interventions. Among the 5,574 surveyed records, 81% of patients had used at least one antibiotic. The most

commonly prescribed antibiotics for obstetric or gynecological infections were Ceftriaxone (32%; n=1,793) and Benzyl-penicillin (18%; n=996).

## Conclusion:

The study reveals that, most county governments set up AMS interventions using existing structures and resources. Government hospitals and mission hospitals are at different stages of implementation. Moreover, antibiotic prescription rates, especially among young female patients, are high and antibiotic misuse is increasing. Consequently, county governments must incorporate learning and reflexivity into their AMS and address conflicts between practitioners.

# Biography

Frank N. Ndakala holds a PhD in Infectious Diseases and an MSc in Medical Parasitology from the University of Nairobi and a Postgraduate Diploma in Translational Medicine from the University of Edinburgh, Scotland. He is an Assistant Director in the State Department of University Education and Research (SDUE&R), Ministry of Education (MoE) in Kenya. Also, he is the current Project Lead and Principal Investigator for Pfizer Quality Improvement project on hospital treatment programmes in Kenya. He has served for over 15 years at Senior Management positions in the public and private sectors. Furthermore, he has previously coordinated research and projects at national, regional and international levels, including collaboration with Science Policy Research Unit (SPRU), University of Sussex, UK, Pfizer Global Medical Grants and Horizon Europe on research and innovation. He has served in the Board of Management of three National Public Institutions and one University Council.