



SPARC - Surveillance and Prescribing Support for Antimicrobial Stewardship Resource Capacity Building Phase II Programme Evaluation

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Background

There is a global call for urgent cross sectoral rationalisation of antimicrobial use, alongside increased governance on antimicrobial stewardship (AMS), improved surveillance and monitoring. These factors underpin the prevention and control of infections in humans, animals, food, agriculture and aquaculture sectors, which are key to tackling antimicrobial resistance (AMR).

In line with this call, the Surveillance and Prescribing Support for AMS Resource Capacity Building (SPARC) programme aims to improve AMS, surveillance and prescribing in low- and middle-income countries (LMICs). Phase 1 of the programme (SPARC1) was launched in January 2022, focusing on building capacity and resilience across the health workforce through:

1. Development and launch of the **Prescribing Companion App** and website, providing national antimicrobial guidelines and resources to support prudent antimicrobial prescribing and use in human and animal health;
2. Quality data collection on antimicrobial prescription/use through **point of prevalence surveys** (PPS), supported by **behaviour change training**, to create a culture of **continuous quality improvement** in practice.

SPARC2 has been designed using a theory of change process to complement and amplify the work conducted during SPARC1 to leverage antimicrobial use surveillance and ensure that data is converted into actions that deliver better prescribing practices and improved outcomes for patients affected by AMR.

AIM

Evaluate SPARC2, including strengths, weaknesses, challenges and lessons learnt as well as recommendations for continuous quality improvement.



Fig.1 SPARC delivery countries.

Since its inception, in January 2022, and through the leadership of empowered in-country consultants, app and site champions as well as data collectors, SPARC has already reached 22 countries, > 25 hospital sites, 10,700 in-patient beds and 10,000 healthcare staff, with an estimated 12+ million patient population served with >20,000 registered users on the app. We aim to continue building on the success of this programme to continue enhancing patient care.

SPARC 2 objectives

1. To further develop and promote the Prescribing Companion App (Fig 2) in 13 countries and beyond: Bangladesh, Bhutan, Ghana, Kenya, Malawi, Nepal, Nigeria, Sierra Leone, Tanzania, Timor-Leste, Uganda, Zambia, Zimbabwe.
2. To build capacity in antimicrobial use surveillance through PPS (Fig 3) to promote practice change in 5 countries: Malawi, Nepal, Nigeria, Timor Leste, and Zimbabwe.
3. To develop and deliver an innovative electronic medicines management system (eMMS) in Malawi, as a proof of concept, to address gaps in antimicrobial consumption data.



Fig. 2 SPARC Workstream 1 - The Prescribing Companion App.

Baseline assessment

Assess current AMS context and landscape in-country / health facility to guide recommendations.

Leadership and accountability

Train leaders, AMS Committees, and policy makers to enable change through governance, leadership and accountability structure.

Data collection

Train in-country healthcare teams on PPS methodology and undertake surveys to collect data on antimicrobial prescription / use.

Data analysis

Support in-country health care teams to analyse PPS data collected to summarise trends in antimicrobial prescription / use.

Data use and behaviour change

Train in-country healthcare teams to use PPS data to champion evidence-based clinical practice and improve antimicrobial prescription / use.

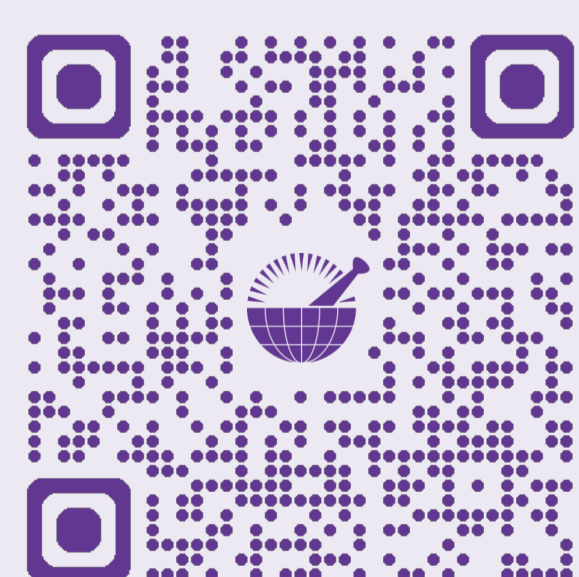
Follow up assessment

Assess outcomes achieved and identify areas for continuous quality improvement.

Fig. 3 SPARC Workstream 2 - Data for Action.

SPARC 2 evaluation method

1. **Development of an evaluation framework**, including a set of quantitative and qualitative indicators, to enable the measurement of progress and impact of SPARC2.
2. **Data collection/analysis** following a mixed methods approach:
 - online surveys, to be developed and disseminated to key stakeholders;
 - focus groups and/or semi-structured interviews with key stakeholders.
3. **Data analysis:**
 - quantitative data: descriptive and inferential (where possible) statistics.
 - qualitative data: thematic analysis.



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