

Promoting appropriate prescription of antibiotics, for acute respiratory infections and diarrhoea among adolescents and adults, at rural health centres in Punjab, Pakistan



PAKISTAN



Project sector
Humans



Project partners
Health Services Academy in the Ministry of National Health Services Regulations and Coordination

Directorate General of Health Services Punjab

Dure Technologies, Geneva



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INTERNATIONAL
CENTRE FOR
**ANTIMICROBIAL
RESISTANCE
SOLUTIONS**

Context

In Pakistan, rising antimicrobial resistance is a major public health crisis. Antibiotic consumption in the country increased by 65% between 2000 and 2015. According to a study, the irrational prescription of antibiotics at primary level healthcare is reported to be around 60% in Pakistan. Contributing factors to rising antimicrobial resistance in Pakistan relate to:

- inappropriate antibiotic prescription at public and private clinics
- lack of awareness at the patient level, leading to inappropriate
- antibiotic consumption including high demand and self-medication
- easy access to antibiotics, for example many available products,
- over-the-counter sales, and misleading promotion of antibiotics.

Problem

In Punjab, Pakistan, the two most reported infectious diseases at primary healthcare centres are acute respiratory infections (15%) and diarrhoeal conditions (5%). It is also likely these numbers are underestimated, with 48% of infectious disease cases being reported as 'other'. A study found that 82% of prescriptions contained antibiotics, but in outpatient settings only 16% were appropriate. Public healthcare facilities also lack endorsed treatment guidelines. Therefore, efforts are required to address inappropriate antibiotic use in these settings.

"Inappropriate antibiotic prescription at primary healthcare level is currently a huge problem in Pakistan, and this ICARS-supported project is a significant step towards addressing the challenge."

Muhammad Amir Khan, Chief Coordinating Professional, ASD, Pakistan



Project overview

In Pakistan, inappropriate prescription and irresponsible consumption of antibiotics is a significant public health challenge. The project aims to develop a replicable intervention for appropriate prescription and responsible consumption of antibiotics among those with acute respiratory and diarrhoeal conditions at rural health centres in Punjab, Pakistan. The intervention will be evaluated, through a mixed-method design, for effectiveness, cost effectiveness and implementation outcomes of the intervention package. The design of the study will be informed by the Medical Research Council framework on complex interventions and implementation science frameworks with an embedded theory-based process evaluation to assess the implementation outcomes/ questions regarding acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, penetration, and sustainability. An incremental cost-effectiveness analysis will then be conducted to inform future scale-up. The evidence from this study will inform the potential province-wide scaling of the intervention, with potential to replicate in other provinces of Pakistan.

The project aims to tackle inappropriate antibiotic use in rural health centres for adolescents and adults with respiratory infections and diarrhoea. It includes:

- Understanding and using PPS and qualitative methods, the context of prescribing and consuming antibiotics at rural health centres – to inform the context and delivery methods of the intervention

- To develop and pilot an intervention (i.e., contextualised desk-guide and staff training, and EMR-linked monitoring and response) for the appropriate prescription of antibiotics in acute respiratory and diarrhoeal conditions at RHCs
- Developing and piloting a digital application for engaging respective patients and their families in the responsible consumption of antibiotics
- Assessing the effectiveness and incremental cost-effectiveness of implementing the intervention, on appropriate antibiotic prescription, as compared to usual care
- Assessing the implementation outcomes and the barriers and drivers of the appropriate prescription and responsible consumption of antibiotics
- Disseminating the results and support evidence-informed scaling decisions/ plans in Punjab.
- Building mid-level staff capacity through post-graduate qualification & skill-based short trainings

Outcomes

- Improved appropriate prescription and dispensing of antibiotics at Rural Health Centre (RHC)
- Increased meaningful engagement of staff, patients and families in safe and responsible use of antibiotics.
- Evidence; informed provincial considerations/ decisions on sustainability and scaling.

