

# Community-based antibiotic access and use in rural South Africa

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## 1 Background and Aims

**Study Title:** The ABACUS (AntiBiotic ACcess and USE) study

**Background:** AMR transmission and prevalence in low- and middle-income countries (LMICs) is largely unknown. The extent of antibiotic use and consumption patterns outside hospital settings is undocumented.

**Aims:** To compare socio-cultural determinants of appropriate access and use of antibiotics between **six** different LMICs by:

- Assessing community reported supply and use of antibiotics.
- Identifying contextualized factors and behaviours that may serve as targets for development of tailored interventions.
- Distinguishing country-specific provision and needs.

**Research Questions (country-specific):** In rural South Africa...

1. What is the profile of antibiotic suppliers?
2. What are the prescribing patterns (or antibiotic exposure) of antibiotics?
3. What is the level of knowledge and self-reported use of antibiotics?

## 3 Results

Our study is ongoing. We are documenting patterns of treatment-seeking in the community and purchasing of antibiotics for selected common infections. The sources include over-the-counter antibiotics from pharmacies and other informal shops (legal or illegal), traditional African medicine, home-based care, private and government biomedical care.

**Initial findings from the six countries:**

**Vietnam** – has the highest percentage of illegal medicine suppliers. **Thailand** – has evidence of poly-pharmacy: mixed meds in the same packet (Fig. 2). Patient does not know which tablet is for what. **Bangladesh** – customers bring back unused antibiotics in return for cash. **Ghana/Mozambique** – patients share their antibiotics with their fowl/sheep when livestock are unwell. There are many drug peddlers selling antibiotics illegally. People take antibiotics with alcohol “to speed recovery”. **South Africa** – patients get antibiotics from the public sector primary healthcare clinics and are told by the nurses “to finish the course” (Fig. 3). A patient’s understanding of antibiotics is... “I think I can say antibiotics are the treatment that is fighting with illnesses in our bodies..... I mean something like high blood” (Patient, aged 62).

Theme	Finding
<b>Common Antibiotics</b>	Amoxicillin, Flucloxacillin.
<b>Reasons for taking antibiotics</b>	Diarrhoea, wound infections, cough, pain, fever, gastrointestinal infections, anaemia, muscle, stomach-ache, menstruation pain.
<b>Access</b>	Public and private facilities including hospital pharmacies, licensed and unlicensed retail drug shops, peddlers and grocery stores.
<b>Regulations</b>	Governance around the regulations and enforcement regarding access and use of antibiotics is not adhered to.
<b>Knowledge</b>	Overall confusion what an antibiotic is versus uses of anti-inflammatories. Community members had no idea of what ‘Antibiotic Resistance’ means across all six HDSS sites. However, most suppliers had some level of understanding.
<b>Research Challenges</b>	Mapping exercise to locate suppliers and their unavailability/unwillingness to be interviewed.



Figure 2.

## 4 Conclusion

**Key messages:**

- To achieve appropriate antibiotic prescribing, LMICs have to strengthen their health systems: including health insurance, provision of laboratory support, and increased access to diagnostics and primary prevention measures.

- Awareness raising around antibiotic use and education concerning resistance to be led by national government, backed by policy.
- We will use the findings from this multi-site study to address issues and systematically investigate antibiotic usage, health-seeking/prescribing behaviours and the wider context that affects patient & supplier behaviours.
- The results can inform the design of community-based interventions to promote optimal appropriate antibiotic use in LMICs.
- Sen’s Capability Approach will act as a theoretical framework to guide this.



Figure 3.

