INDEPTH Network welcometrust SCHOOL OF Volkswagen**Stiftung** Abacus UNIVERSITY OF LIFE SCIENCES **Community-based antibiotic access** NARWICK and use in rural South Africa INTEGRATE ANTIMICROBIAL RESISTANCE Authors: 1*Anstey Watkins, J., 2Wagner, F., 2Gómez-Olivé, F. X., Hollingsworth, D., 1Keeling, M., & 3Kinsman, J. ¹The University of Warwick, UK., ²University of the Witwatersrand, South Africa., ³Umeå University, Sweden. Contact: 1* i.watkins.1@warwick.ac.uk **Background and Aims** Methods Study Title: The ABACUS (AntiBiotic ACcess and USe) study **Research Setting:** Agincourt Health and Socio-demographic Background: AMR transmission and prevalence in low- and Surveillance System (HDSS) site is in north-east South Africa. The area is rural, densely settled, high-unemployment rate, middle-income countries (LMICs) is largely unknown. The extent of antibiotic use and consumption patterns outside hospital poor water & sanitation, and with limited access to healthcare. -Ethics clearance approved by Wits and Oxford Universities. settings is undocumented. Aims: To compare socio-cultural determinants of appropriate Research Design: PHASE 1, Sample: n=32 in-depth interviews access and use of antibiotics between six different LMICs by: and n=16 focus-group discussions with community members Assessing community reported supply and use of antibiotics. and medicine suppliers. Data is collected by local fieldworkers. o Identifying contextualized factors and behaviours that may -A medicine show card (Fig. 1) is shown to participants to help serve as targets for development of tailored interventions. identify what drugs they have taken in the past. -Thematic analysis of emerging themes is being conducted to o Distinguishing country-specific provision and needs. determine current levels of access & use of antibiotics. PHASE 2, Qualitative findings will influence the questions in the Research Questions (country-specific): In rural South Africa.. quantitative household survey, n=1000. 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? Results Figure 1 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). Finding Theme

Common Antibiotics	Amoxicillin, Flucloxacillin.
Reasons for taking antibiotics	Diarrhoea, wound infections, cough, pain, fever, gastrointestinal infections, anaemia, muscle, stomach-ache, menstruation pain. Figure 2.
Access	Public and private facilities including hospital pharmacies, licensed and unlicensed retail drug shops, peddlers and grocery stores.
Regulations	Governance around the regulations and enforcement regarding access and use of antibiotics is not adhered too.
Knowledge	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.
Research Challenges	Mapping exercise to locate suppliers and their unavailability/unwillingness to be interviewed.



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 <u>antibiotic usage</u>, <u>health-seeking/prescribing</u> <u>behaviours</u> and the wider context that affects patients 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.
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