Drivers of antibiotic prescription and use in three MSF projects in Africa

SCIENTIFIC DAYS

Eibs T[1], Koscalova A[1,2], Jimenez C[3], Lasry E[3], Kohler G[1], Grohma P[1], Rawa B[1]

[1]MSF Vienna Evaluation Unit, Vienna, Austria, [2]Slovak Medical University, Department of Infectious Diseases, Bratislava, Slovakia, [3]MSF, Barcelona, Spain.

Background

Misuse of antibiotics is one of the main factors contributing to antibiotic resistance. Since data on antibiotic use and underlying drivers from the sub-Saharan region is scarce, a mixed methods evaluation was conducted in multiple countries with the objective to form the basis for (project-specific and cross-cutting) interventions aimed at improved use of antibiotics.
Here, we present the **results of the qualitative component**.

Methods

Data was collected in **3 MSF-OCBA project areas** (project sites and catchment areas): Lulingu, Democratic Republic of Congo (DRC), Kabo, Central African Republic (CAR), and Tawila, Sudan.

Data collection methods included observations and in-depth individual interviews as well as group discussions with community members, patients in the facilities, prescribers in out-patient and in-patient departments, formal and informal dispensers as well as other health professionals.

Community sites and respondents were purposively selected based on relevant criteria together with MSF project staff. Overall, there were 372 participants. Data gathered was systematically screened and coded based on thematic content analysis. Results were triangulated with the results of the quantitative component on antibiotic prescription.

Results

Antibiotic prescription habits

The degree to which prescribers **adhere to MSF protocols varies** across projects and health facilities. The coexistence of MoH protocols in DRC leaves room for deviations and protocols are not always physically present in consultation rooms. Knowledge and understanding of importance to follow protocols vary as well.

Due to stock shortages incomplete treatment is handed out (DRC) and additionally prescribers consciously decide to deviate from protocols because they anticipate auto-medication (DRC), attempt to prevent diseases in contexts of low hygiene (Sudan) or assume underlying parasitosis in non-bloody diarrhoea (Sudan).

Prescribers also experience **patients' demands for quick relief treatment** (injections), rarely for antibiotics (except for DRC). If these demands influence their antibiotic prescription is unclear.

Shortcomings in case management have been observed with influencing factors including the following:

– High number of patients results in lack of time for consultation (CAR, Sudan)
– Patients' medical history is not systematically assessed/checked, so repetitive treatments are given for the same complaints (esp. CAR)
– Diagnostic tools are not always available and/or underused

Interestingly, in CAR and DRC prescribers seem to **exaggerate diagnoses** to justify antibiotic treatment.

In one **health centre (Tchonka) in DRC outstanding positive prescriber performance** was observed.

Patients' knowledge and consumption habits

In the communities there is **little knowledge** about medical treatment and antibiotics and **only in DRC a concept of antibiotics exists** – antibiotics being perceived as very powerful drugs.
A high rate of auto-medication was observed in all contexts.

Barriers to access health facilities include lack of money and time, long distances, but also cumbersome admission procedures: At times patients are spending the whole day waiting for a consultation and are sent home unattended when consultation hours are over.

In all three project areas **access to antibiotics** is **facilitated through formal and informal vendors**. In DRC, particularly antibiotics are actively advertised. On top of that, repetitive treatments are given for the same conditions (esp. CAR) and treatment is not effective (according to statements by some community members in CAR and in DRC).

Oftentimes antibiotic **treatment is not completed,** the reasons being

– Lack of money (as antibiotics are sold in single dosage, only **part of treatment** is purchased; DRC, MoH structures)
– **Lack of knowledge**, as intake is stopped when patients are feeling better
– **Insufficient explanations** by dispensers and/or prescribers
– **Instructions are not understood** (illiteracy, language barriers, unaccompanied children)

Influence of **traditional medicine seems to interfere less** with antibiotic consumption than local pharmacies.

Conclusion

Our data demonstrated a complex interplay of factors that can counteract rational use of antibiotics. While some factors are cross-cutting, others are **very specific to the context**. On the one hand, **lack of resources** (especially money and time) is a huge barrier for the population to seek professional health care, on the other hand **cumbersome admission procedures** can deter people from seeking a health facility again. Health care providers have not advocated enough in the communities for seeking professional consultations (little communication about diagnosis and treatment/intake) in the project catchment areas. Local formal and informal pharmacies are the means of choice for treatment and in DRC the selling of antibiotics is a particularly lucrative business for shop keepers. Context-specific findings are forming the basis for the development of interventions and provide robust documentation for health education strategies.

Ethics

Authorisation was obtained from the South Kivu Provincial Division of Health of the Ministry of Health, DRC, the *Comité Scientifique et Ethique de la Faculté des Sciences de la Santé de l'Université de Bangui*, CAR and the MSF Ethics Review Board.

Acknowledgements

MEDECINS SANS FRONTIERES