

A Multidisciplinary, French-speaking course on Antimicrobial Stewardship in Africa: the MUFASA Project

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The “Multidisciplinary, French-speaking course on Antimicrobial Stewardship in Africa” (MUFASA) is a capacity building project to raise awareness and provide basic skills to healthcare workers who may promote antimicrobial stewardship (AMS) in sub-Saharan Africa.

The emergence of antimicrobial resistance (AMR) is a public health issue worldwide and may be of special concern in countries with limited access to microbiological documentation, sub-optimal surveillance of antibiotic use / bacterial resistance, uncontrolled use of broad-spectrum antibiotics and repeated unavailability of antibiotics¹. Low- and middle-income countries, including most of sub-Saharan Africa, fulfil all these criteria². Although robust data on AMR in sub-Saharan African remain scarce³, especially in the community⁴, the high prevalence of faecal carriage of multidrug-resistant bacteria in travellers returning from Africa in the absence of any additional risk factor⁵, provides robust evidence that Africa is disproportionately affected by this scourge.

To address this public health issue, various initiatives have emerged in recent years including massive open online courses⁶, lobbying for dedicated funding^{7,8} and innovative networking activities, including toolboxes and guidelines to support developing AMS programmes within hospitals in developing countries^{1,9-12}. However, healthcare workers active in the field have almost no opportunity for practical training including direct exchanges with peers and experts in the field¹³⁻¹⁵.

Annually since 2017, the MUFASA project gathers 50–55 healthcare workers from 15–20 sub-Saharan African countries during five consecutive weeks to develop their awareness and skills on the development and the implementation of AMS programmes in Africa.

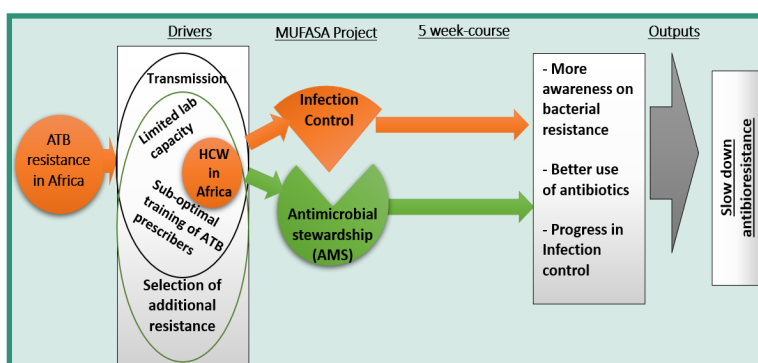
Objectives

1. To raise awareness on the extent of AMR in Africa, its determinants and what may be done in the field to reverse these trends.
2. To provide basic knowledge about microbiology, infection control, as well as infectious diseases diagnosis, treatment and prevention, so that the participants will be empowered to promote AMS in their own environment.
3. To develop skills for the design and implementation of AMS programmes taking into account local context and potential collaborators.
4. To train the participants in communication and advocacy of AMR and AMS so their training will

benefit themselves and also their colleagues and their patients when performing their routine activities.

We expect i) a better use of antibiotics not only by the participants when they return from the course, but also by

their peers and students through the trickle-down effect; and ii) progress in infection control to reduce the emergence of AMR in sub-Saharan Africa.



Assessment of Need

Due to the scarcity of data available on AMS programmes¹¹ and AMR^{3,4} in Africa, baseline data were limited when the MUFASA project was initiated. In addition, initial metrics were crippled by the broad heterogeneity not only from one country to another but also according to the settings (community vs hospital, primary care vs referral centres, rural vs urban, etc.). The need for intensive efforts on AMS programmes in Africa was evident for all experts in the field⁸, even in the absence of reliable quantitative baseline data for most countries.

Target Audience

Specific attention is paid to include a broad spectrum of healthcare workers involved in AMS (e.g. physicians from various medical specialties, pharmacists,

biologists, nurses, midwives and hospital administrators). In each country, key opinion leaders and stakeholders are invited to participate either directly in the course and / or in selecting candidates. Selecting candidates takes into account the quality and the background of the candidates, their contribution to fighting AMR, the needs of each participating country, with a fair balance regarding gender, religion, countries and age.

The MUFASA project trains participants from sub-Saharan African, French-speaking countries including Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Cote d'Ivoire, Democratic Republic of Congo, Gabon, Guinea, Bissau Guinea, Equatorial Guinea, Mali, Mauritania, Niger, Rwanda, Senegal and Togo. Participation is not restricted to French-speaking countries but as the training is performed in French, candidates who are not able to speak and understand French cannot be selected. As we aim to impact AMS at the country level, enhancing the trickle-down process of the knowledge, we prioritise key opinion leaders and / or healthcare workers who fight AMR in their country and positively influence their peers.

The participants, their colleagues, the patients they manage, the community healthcare settings in which they work and their relatives all benefit from the MUFASA project because AMR is transmissible. AMR is a public health issue and impacts the population as a whole, in line with the One Health approach. Hence, AMS programmes, if successful, will be beneficial to the population as a whole.

Innovation

The MUFASA project presents four major assets:

1. It deals with a neglected target, in terms of intervention for AMS programmes: healthcare workers in French-speaking countries of sub-Saharan Africa.
2. This project builds upon a robust collaborative experience within the same partners, of three consecutive courses on AMS, in 2017, 2018 and 2019 which were highly successful, despite limited support, at a lower scale than the MUFASA project (see: [Announcement of French-speaking AMS training in Africa](#) and [2018 programme](#))

3. Burkina Faso has engaged in a voluntary monitoring of country progress on AMR ([see the website](#))
4. Gathering healthcare workers from different sub-Saharan Africa countries with faculty members from Africa and Europe will stimulate interactive activities that engage learners, help them reflect on current practices with their peers and identify the gap between their current performance and the gold standard.

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Participants of the 3rd Multidisciplinary, French-speaking course on Antimicrobial Stewardship in Africa, Bobo Dioulasso, Burkina Faso, 2019

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