Antimicrobial Resistance
MSF Activity Report 2023

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MEDECINS SANS FRONTIERES

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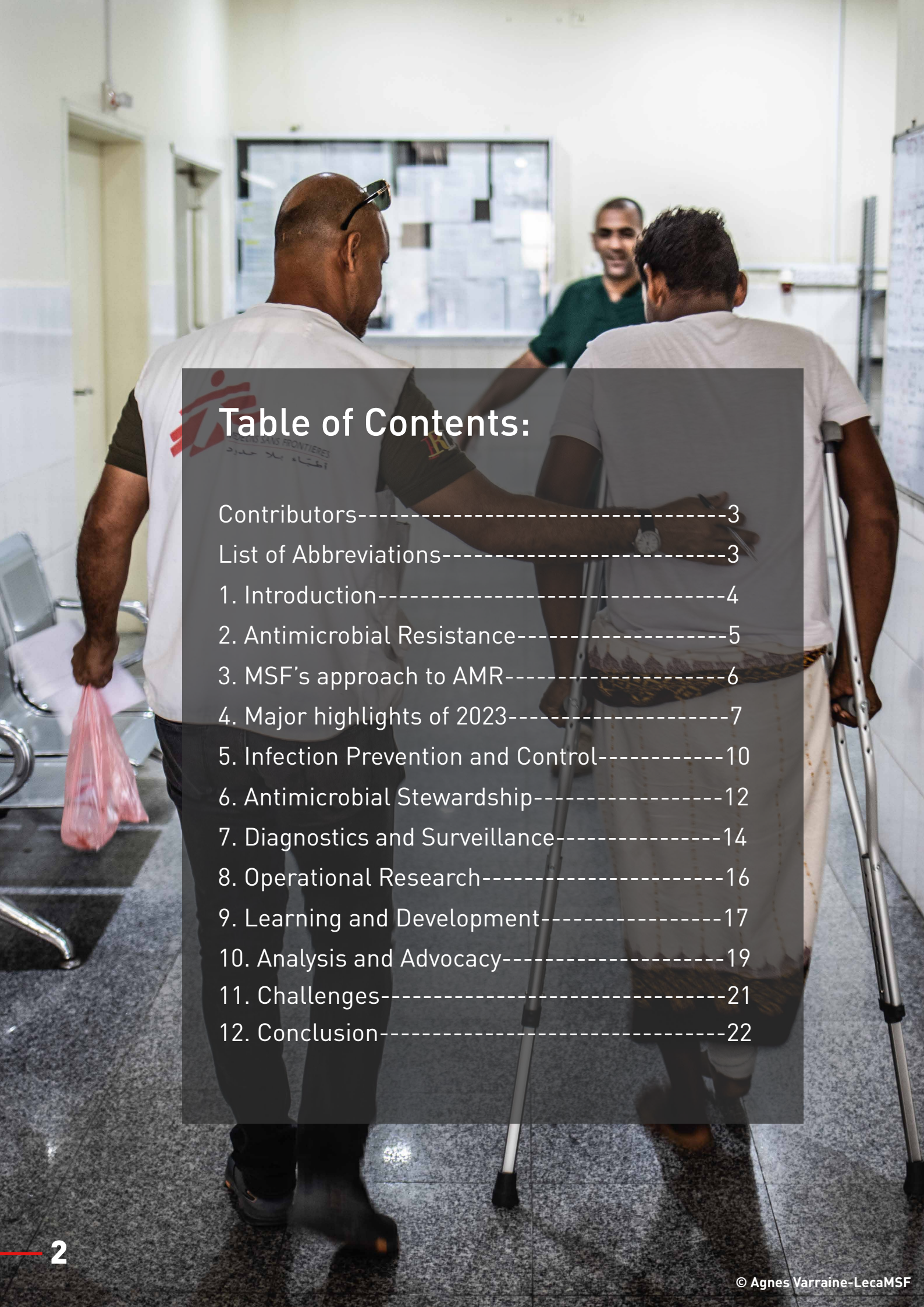

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List of Abbreviations

AMR: Antimicrobial Resistance
AMS: Antimicrobial Stewardship
CAR: Central African Republic
CR-BSI: Catheter-Related Bloodstream Infection
DDD: Defined Daily Dose
DRC: Democratic Republic of Congo
HAI: Healthcare-Acquired Infections
IPC: Infection Prevention & Control
MDRO: Multidrug-Resistant Organisms
MSF: Médecins Sans Frontières
NAP: National Action Plan
NICU: Neonatal Intensive Care Unit
OR: Operational Research
PPS: Point Prevalence Survey
SIPCA: Stepwise Infection Prevention & Control Approach
SOP: Standard Operating Procedures
SSI: Surgical Site Infection
WHO: World Health Organization

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1. Introduction

Although humanitarian needs are the primary catalyst for Doctors Without Borders/Médecins Sans Frontières' (MSF) actions, enhancing quality of care is equally imperative. MSF has committed to ensuring effective infection prevention and management within healthcare facilities, promoting judicious use of antimicrobials, tailoring empirical prescriptions to local resistance patterns, and when possible, ensuring that treatment is informed by diagnostics. These targeted interventions around antimicrobial resistance (AMR) are designed to enhance patient-centred care by providing treatments tailored to the characteristics of a patient's infection.

Since initiating these efforts in 2014, MSF has made significant progress in the implementation of infection prevention and control (IPC), antimicrobial stewardship (AMS), and improved access to quality microbiological diagnostics and surveillance across MSF projects. More than 30 projects now have access to microbiology supporting their IPC and AMS programmes, distributed among 16 countries. This progress has fostered a paradigm shift within the MSF movement, as actions to limit the spread of AMR increasingly become an inherent – and very necessary – part of MSF's medical-humanitarian care. Unfortunately, the actions needed to successfully limit and manage the spread of AMR are many, both within and beyond our operations, with a paucity of actors trying to meet these needs. As a global community working together, we can and must do more to prevent and slow the spread of AMR – wherever it may emerge. Ultimately, global collaborations can safeguard communities from worsened rates of resistant infections, conserve treatment options for future patients, and avert a looming humanitarian crisis.

2. Antimicrobial Resistance

Since their discovery, antimicrobials have been revolutionising medical care and alleviating human suffering worldwide. However, the ever-changing nature of bacteria, viruses, fungi, and parasites invariably leads to the emergence of drug-resistant infections, a phenomenon known as antimicrobial resistance (AMR). AMR is a pressing global public health threat that has garnered significant political attention due to its far-reaching consequences. AMR affects people at all stages of life, and results in severe infection, disability, prolonged hospital stays, mounting costs for health systems, and increased mortality.

In fact, **AMR was directly responsible for 1.27 million and indirectly responsible for 4.95 million deaths in 2019, making it a leading cause of death worldwide, with low-resource settings bearing the greatest burden.**

AMR is propagated by multiple interlocking factors such as lack of access to clean water, sanitation, hygiene, and medical care; poor implementation of IPC measures; limited availability of vaccines and appropriate treatments; the misuse of antimicrobials in humans, animals, and plants; weak regulatory control over the use of antimicrobials; limited access to appropriate diagnostics, and inadequate surveillance systems. Low and middle-income countries, as well as conflict-affected settings where MSF often operates, are particularly vulnerable. People living in these contexts invariably face additional hardships, such as overcrowding and unsanitary conditions, shortages of skilled medical staff, and lack of necessary equipment and infrastructure, making AMR an ever more urgent concern.

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3. MSF's approach to AMR

MSF is committed to tackling AMR in the contexts where we work, focusing on quality patient care and aiming at policy change through the use of a multidisciplinary strategy. Our AMR response is carried out through three key medical pillars, supported by a broad range of AMR-focused activities urgent concern.[1]

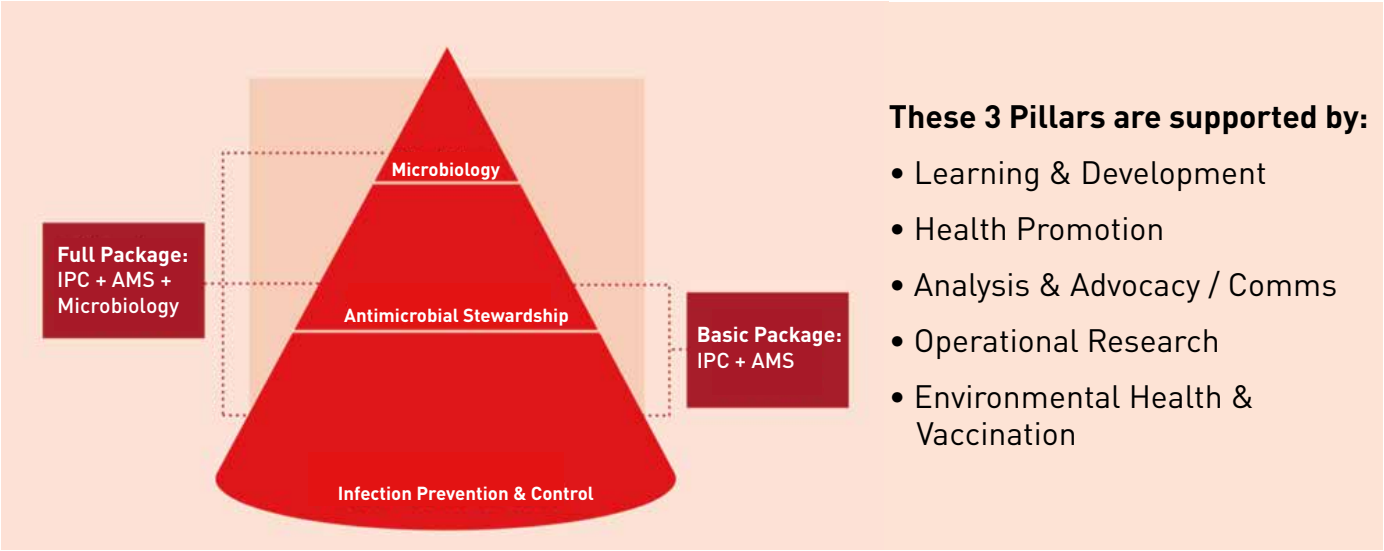

Figure 1 MSF multidisciplinary approach to antimicrobial resistance (AMR)

(1)Antimicrobial Resistance Collaborators (2022). Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. Lancet (London, England), 399(10325), 629–655. https://doi.org/10.1016/S0140-6736(21)02724-0

MSF's AMR Response Packages

As part of our strategy, the full AMR 'response package' against AMR in an MSF project consists of the three pillars as outlined in the *figure 1*. The basic package includes IPC and AMS components. The addition of microbiology – whether an MSF conventional lab or Mini-Lab, or access to an external lab validated by MSF, completes the full package.

Although AMR responses are necessary across all medical projects, MSF initially focused efforts on inpatient departments (IPDs [2]) in hospitals.and prioritised high-risk groups & contexts, including:

- **Key population groups** admitted in clinical activities, mainly neonates, children with severe acute malnutrition and medical complications, surgical and trauma patients, people with advanced HIV, and patients in intensive care units.
- **Context-specific drivers** of AMR such as conflict and forced displacement, which result in breakdown of healthcare infrastructure, access barriers, and a higher tendency to use antimicrobials inappropriately. MSF has also prioritised contexts lacking diagnostics.


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In 2024, this strategy continues to be implemented, but we are conscious of the urgent need for more action especially at a primary level of care, within MSF's operations and beyond.

(2) Inpatient structures having at least one ward, excluding emergency departments and vertical TB hospitals.

4. Major highlights of 2023: AMR response progress in numbers

30 MSF projects with access to microbiology laboratories: **12** conventional MSF labs, **7** Mini-Labs and **11** validated external laboratories (public or private).

Only **37%** of our laboratories are external, suggesting a lack of quality microbiology diagnostics in the places where MSF works.

At least one AMS component is present in **47** projects distributed among **18** countries out of 146 hospitals (**32%** of MSF hospitals).

115 IPC programmes (complete or partial), covering **79%** of MSF hospitals (115/146).

63% of AMS focal points working for MSF (34/54) received formal training in **2023**, from the MSF Academy's AMS e-learning diploma or another acknowledged diploma course.

25 projects across **16** countries using the full AMR package[3].

72% of the projects with AMS focal points (34/47) undertook antimicrobial use assessments in **2023**[4].

14 articles published in peer-reviewed journals between July **2022** and December **2023**: mostly descriptive research articles. The findings of some of these studies were presented in 5 international conferences.

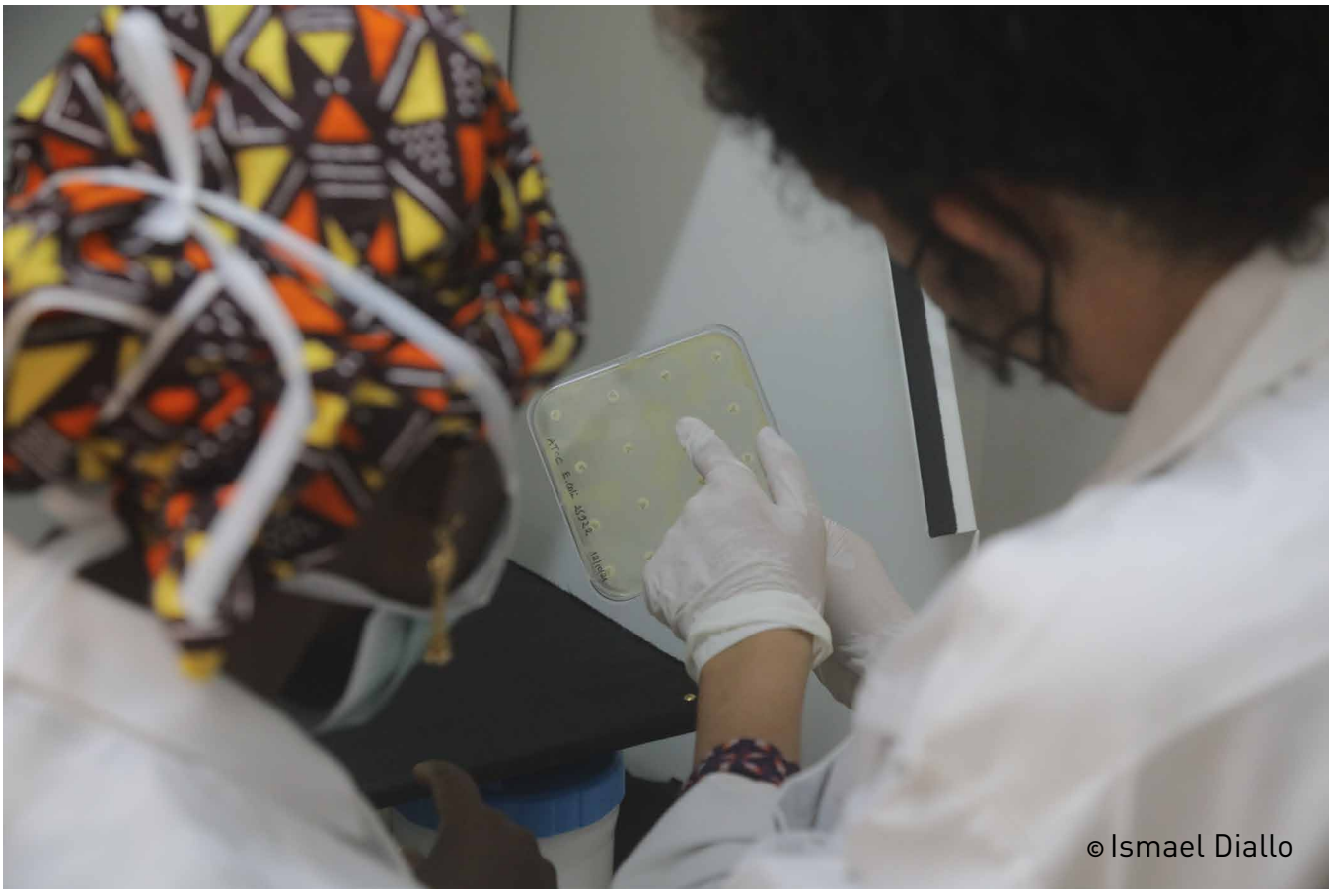
Advocated for the needs of patients through **3** external facing publications, and participating in **3** key external events.

82 of **91** learners initially enrolled in IPC and AMS programmes in the MSF Academy for Healthcare successfully completed the **5**-module diplomas in **2023**. Currently **78** learners from two other cohorts are on track to graduate in future years.

(3) Afghanistan, Bangladesh, CAR, DRC, Haiti, India, Iraq, Jordan, Mali, Mozambique, Niger, Nigeria, Occupied Palestinian Territories, Sierra Leone, South Sudan, Yemen.

(4) 23 projects used the Point Prevalence Survey (PPS) qualitative tool, 11 used the defined daily dose (DDD) quantitative tool, and 14 audits conducted chart reviews.

Figure 2 MSF projects worldwide with IPC, AMS programs and access to microbiology. Marked in blue are MSF laboratories and in green external ones supported by MSF.



5. Infection Prevention and Control

Infection prevention and control (IPC) is an evidence-based approach to reducing the risk of infections, and is crucial in all healthcare settings. IPC activities such as hand hygiene, cleaning and disinfection, and transmission-based precautions improve patient outcomes and reduce healthcare-associated infections (HAI). Effective IPC also reduces the need for antimicrobials and slows the spread of AMR. MSF's surveillance system for IPC emphasises preventing and detecting catheter-related bloodstream infections (CR-BSI), surgical site infections (SSI), and outbreaks of multidrug-resistant organisms (MDRO).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Activities and achievements for 2023

MSF continued to support the implementation and development of 115 IPC programmes, with varying levels of progress. MSF supports these projects by reviewing and providing input into existing context-specific guidelines and updating the standard operating procedures (SOPs). The goal is to improve IPC practices, particularly in managing hospital outbreaks such as ***Klebsiella pneumoniae***, methicillin-resistant ***Staphylococcus aureus (MRSA)***, ***Serratia marcescens***, ***Acinetobacter baumannii***, among others experienced mainly in neonatal and orthopedic projects. MSF has challenges in identifying these outbreaks due to an imperfect alert system, impeding early identification and reporting.

While not homogeneously implemented everywhere, MSF supported the implementation of monitoring tools for hand hygiene (Hand Hygiene Observation Tool), the Stepwise Infection Prevention & Control Approach (SIPCA) for infection prevention in IPD and PHC settings, and HAI prevention bundles (catheter-associated urinary tract infections, central-line-associated bloodstream infection and ventilator-associated pneumonia prevention bundles).

MSF also provided in-service training through the MSF Academy and mentorship to develop the capacities of IPC focal points in the different projects.

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Jaafar Khadra, Mobile Implementation Officer, IPC

Burkholderia cepacia, Neonatal Intensive Care Unit (NICU), Kenema, Sierra Leone, February 2023

Managing outbreaks requires not only medical interventions, but also changes in behaviour and the environment.

At the end of January, the first case of *Burkholderia cepacia* was identified, leading the IPC Supervisor to say: "I feel we will have the first outbreak in the hospital". After a week, we discovered that we were indeed dealing with an outbreak. Staff in the NICU began to express fear and calls for closure of the department. In Kenema, a small committee led by the Project Medical Referent was launched to formulate a quick and effective action plan. Environmental surface sampling and culture was considered. Since the outbreak was still in the early stage, existing actions continued, with many of them strengthened and new ones introduced. Some of the most important ones are worth highlighting:

- Closure of all sinks in NICU and switch to alcohol-based hand rubs.
- Deep cleaning of the entire NICU and then splitting it into three zones: for positive cases, suspected cases and negative (new admission) cases.
- Strict IPC compliance monitoring.
- Changing concentration filters and using disposable suction tubes (delivery room, NICU, OT, etc.).
- Refresher training on single-use devices and on injection safety.
- Increasing the frequency of environmental cleaning and disinfection of the NICU.
- Monitoring and limiting visitors and holding awareness sessions for mothers (Health Promotion team).

These measures helped to slow the trend of positive cases. In addition, environmental surface sampling in the NICU sink was one of the key elements in determining the source, and eventually helped to control the outbreak.

6. Antimicrobial Stewardship

Antimicrobial Stewardship (AMS) focuses on optimising how antimicrobials are prescribed and used by clinicians and patients, in order to improve patient outcomes and reduce antimicrobial resistance. MSF supports projects in the development of assessment tools, guidelines, recommendations for clinical care, capacity building of MSF staff on AMS, and generating research that informs practices in the field.

Activities and achievements for 2023

Based on MSF or external microbiology, as well as clinical data, MSF updated its drug list to procure newly added antimicrobials for MSF projects in need. Pathogen-specific guidelines are being updated to help missions tailor their treatments based on the pathogen diagnosed via culture/antimicrobial susceptibility testing.

Revising antimicrobial guidelines based on new data and evidence is also a continuous process. In 2023 MSF introduced second- and third-line antimicrobial guidance for projects in Bangladesh and South Sudan, an empirical antimicrobial guideline for Bangui in Central African Republic (CAR) and another for Beira Central Hospital in Mozambique. In preparation for the response in Gaza, MSF drafted empiric antimicrobial treatment of traumatic injuries and empiric antimicrobial management guidelines for hospitalised MSF trauma patients with sepsis.

MSF also supported teams in the development of standard operating procedures – for MDRO in Bangui, for example, and the adaptation of protocols for paediatric populations.

Clinical AMS support is complemented by health promotion (HP). HP teams play a crucial role in AMR response by focusing on behaviour change models and empowering individuals and communities around proper antimicrobial use. Some of the HP initiatives included: 1) assessments regarding antimicrobial use and health seeking behaviours, 2) public and medical awareness activities, including the yearly World Antimicrobial Awareness Week, 3) ensuring patients received quality care and support before, during, and after their visits to the health centres.

Ali Qasim, AMS Focal Point, MSF Mosul project

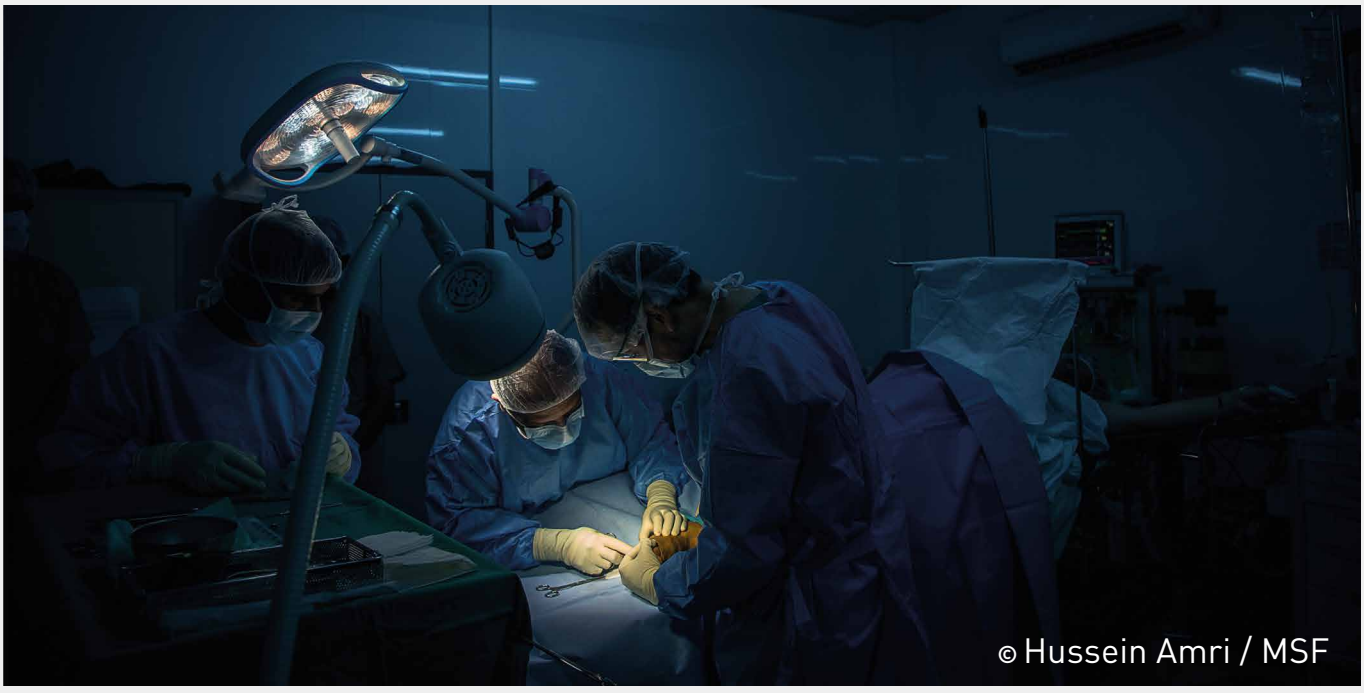
Extensively drug-resistant infections in Mosul, Iraq, 2023

The Tertiary Orthopaedic Centre (TOC) at Al-Wahda Hospital, overseen by MSF, delivers specialised orthopaedic care in East Mosul.

The year 2023 brought forth distinctive challenges as the TOC admitted eight patients grappling with extensively drug-resistant (XDR) cases, involving 29 isolates. Notably, seven out of eight cases were polymicrobial, with four linked to MRSA. Gram-negative non-fermenters, particularly ***Acinetobacter baumannii*** (4/8) and ***Pseudomonas aeruginosa*** (3/8), emerged prominently among the XDR cases, with one case attributed to ***Klebsiella pneumoniae***. Managing these complex cases posed significant challenges, compounded by inconsistent medical supplies, notably the scarcity of last-resort antibiotics like colistin and tigecycline. A multidisciplinary treatment approach, involving daily debridement in the operating theatre and meticulous wound care, became imperative.

The TOC team successfully optimised antibiotic prescriptions in six out of eight XDR cases. The remaining two cases, involving soft tissue infections sensitive only to colistin, presented complications due to stock ruptures. Remarkably, all cases are currently cured, with no signs of relapsing infection.

Among the treated XDR cases, one notable example was a 40-year-old male with a blast injury to the lower limbs on 27 April 2023. He presented with a compound right tibia fracture with external fixation and an infected wound in the left calcaneus bone and 4th and 5th metatarsal bone fractures, leading to admission on 13 May 2023. A total of 22 operations, including debridement and negative pressure wound therapy, were performed. Antibiotic therapy (4 weeks of tigecycline) commenced after the biopsy result, which revealed bone infection with ***Acinetobacter baumannii*** and ***Enterococcus faecalis***. The patient was discharged on 16 July 2023, after more than two months in hospital, ultimately achieving bone union. The external fixation was successfully removed on 11 January 2024.



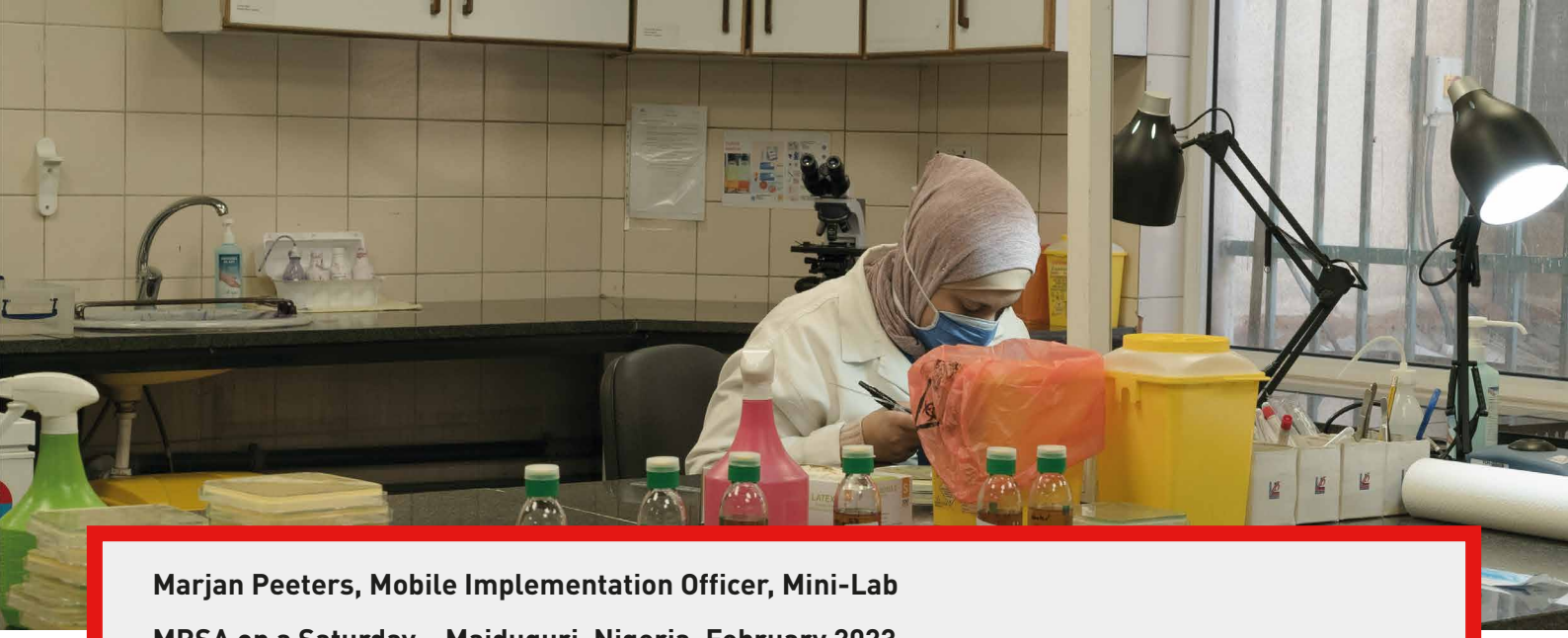
7. Diagnostics and Surveillance

Good quality bacteriological diagnostics are vital for treating patients effectively and preventing hospital-acquired outbreaks. While it has been difficult to access high quality bacteriology laboratories in the places where MSF operates, we have steadily improved capacity over the years. MSF assesses and validates bacteriology laboratories and helps MSF projects with tools including guidelines, SOPs, test selection, and protocols.

Activities and achievements for 2023

MSF continued to strengthen laboratory capacity, including development of infrastructure and training of personnel. As this has been particularly challenging in far-reaching places and those lacking human resource capacities, MSF worked to nurture laboratory innovations that are adapted for such contexts. In 2023 we continued to roll out Antibiogo, a mobile app that supports non-expert laboratory technicians in low resource settings in measuring and interpreting Antibiotic Susceptibility Tests, to aid precise antibiotic prescriptions. Antibiogo was implemented in microbiology laboratories in Aden (Yemen), Amman (Jordan), Bangui (CAR), Gaza (Palestine), Koutiala (Mali) and Kinshasa (DRC).
A wider implementation in low-resource Ministry of Health hospitals in addition to WHO evaluation are planned in selected non-MSF laboratories.

Figure 3 MSF Mini-Labs worldwide. Marked in blue are the ones fully functioning and in orange the ones still under development.



Marjan Peeters, Mobile Implementation Officer, Mini-Lab

MRSA on a Saturday – Maiduguri, Nigeria, February 2023

"The Mini-Lab has brought a major change in the way doctors are able to manage infectious diseases", Dr. Dimitri Van der Linden (infectious diseases paediatrician, volunteering for MSF in Maiduguri, Nigeria), narrated in his visit report. Two sections of MSF work in Maiduguri. One has a 65-bed secondary care paediatric hospital and the other runs a 120-bed malnutrition hospital. The sections invested in a 'Mini-Lab' – a simplified microbiology laboratory in containers designed by MSF and adapted to tropical and low-resource settings. As a microbiologist trained for the Mini-Lab, I stayed in Maiduguri from November 2022 to April 2023 to assist in its implementation. After intensive trainings for both the clinical and the laboratory teams, the first blood culture sample was proudly received on 16 January 2023 and gradually the number of blood cultures increased.

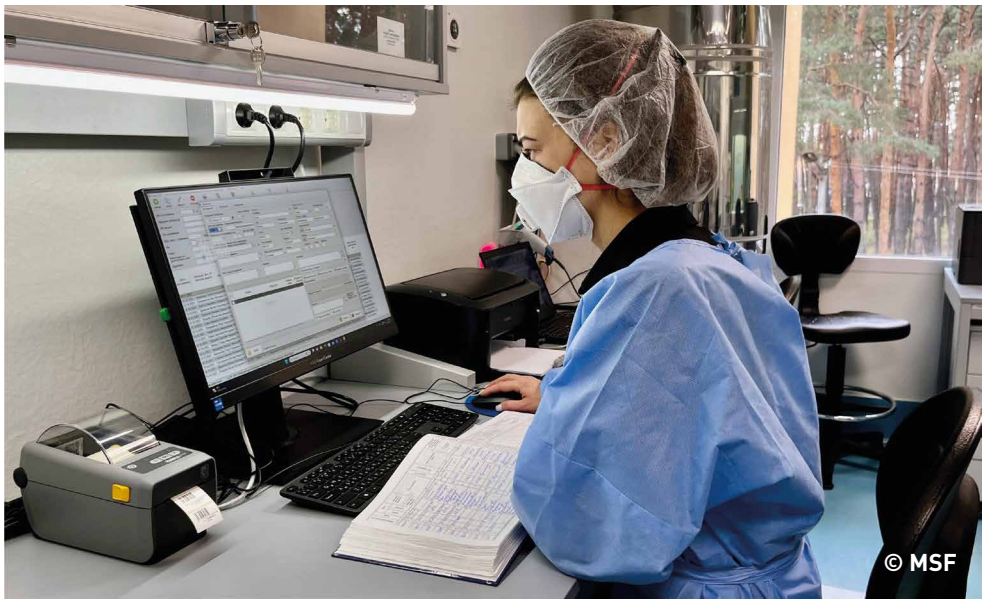
I went to the Mini-Lab this Saturday morning (4 February 2023), where laboratory technicians Aisha Dunoma and Wathanafa Madu were already reading the results of the tests incubated the day before. "You have to see this!", Wathanafa often says. Then we look in the microscope at a Gram stain full of Gram-positive cocci in chains, or this morning: a *Staphylococcus aureus* resistant to most beta-lactam antibiotics (MRSA). For Maiduguri, the prevalence of MRSA is quite low, and seeing this antibiotic resistance for the first-time spiked excitement and pressure in the Mini-Lab: we must prioritise and deliver the report as soon as possible. The blood culture was collected from a patient admitted in the malnutrition hospital, where Dr. Umar Kareto described the case: "The patient is a one-month-old infant with complaints of fever, left thigh swelling, and excessive crying for three days' duration". We collected a blood culture at admission and treated for cellulitis with two different antibiotics. After the Mini-Lab report, the antibiotic treatment was adapted, but the case became more complicated. On day 10 of antibiotics, the X-ray revealed the final diagnosis: left leg osteomyelitis with MSRA septicaemia, and the patient was referred to the tertiary hospital for an orthopaedic surgery intervention. Dr. Van der Linden and Dr. Kareto take this example to show the clear change in management and the advantage for the patient. Before access to Mini-Lab, the outcome for this patient would have been very different.

8. Operational Research

MSF Operational Research (OR) is the undertaking of scientific investigations to guide operations and decision-making, shaping policy and improving practice. OR builds knowledge and expertise, generating evidence on AMR for MSF and the wider scientific community. The research spans implementation, evaluation, and documentation activities – by MSF alone, or in partnership with external actors and scientific institutions. The results of MSF's operational research on AMR are published in open-access peer-reviewed journals to promote widespread dissemination. A compilation of our last publications can be found in the MSF Science Portal.

Publications and impact

Between July 2022 and December 2023, MSF published 14 peer-reviewed articles [CN1] and presented at five international conferences [5]. Great efforts were made to fill global surveillance blind spots, particularly with blood cultures and whole-genome sequencing [6]. Research addressed critical issues such as poor outcomes among HIV-positive patients in Guinea [7], colistin resistance in Ecuador [8], and the challenges of antimicrobial resistance in post-war Mosul, Iraq [9]. In addition, a study on practices and challenges related to antimicrobial use in pediatric populations in Niger and Uganda was published [10]. MSF publications aim toward policy change. For example, the work by Truppa et al.[11] among others, was shared with government officials responsible for AMR-related policies and programmes, including in the US.



[5]Conference included 2 External: European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) 2023 (April 2023); International Conference on Prevention and Infection Control (ICPIC) (September 2023). Additionally, 3 MSF conferences: MSF Scientific Days International 2023 (June 2023); Epicentre Scientific Day Paris 2023 (June 2023); and MSF Paediatric Days 2022 (November 2022).

[6] E.g. doi: 10.26633/RPSP.2023.8; doi: 10.1093/omcr/omad071. doi: 10.1016/S2666-5247(23)00213-6.

[7]doi: 10.1371/journal.pone.0281425.

[8] doi: 10.26633/RPSP.2023.48.

[9] doi: 10.1016/j.jgar.2022.06.022.

[10] doi: 10.1186/s13756-023-01271-7.

[11] doi: 10.1186/s13756-023-01301-4.

9. Learning and Development

MSF learning and development initiatives focus on strengthening and expanding the skills of healthcare workers in MSF projects, to have a long-term impact on the quality of care in the countries where MSF works. Specific, work-based learning programmes are developed and provided to medical and paramedical workers in targeted health structures.

Trainings

The MSF Academy for Healthcare created two courses as an AMR learning initiative in 2021, in collaboration with the British Society of Antimicrobial Chemotherapy (BSAC). These span 160 hours of comprehensive learning delivered over nine months. The initiative aims to extend access to two diploma courses, one for tailored for IPC supervisors and managers, and the other for AMS focal points operating within MSF-supported hospitals. Courses are delivered mainly through the TEMBO e-learning platform, and available in either English or French. Clinical mentors play a central role in the training delivery, ensuring that students understand the material and can successfully transfer newly acquired knowledge and skills to their professional practice. See the MSF Academy website for more information: Antimicrobial Resistance – MSF.

Once participants complete the online training, they are followed up by onsite coaching to translate their knowledge into practical skills. In 2023, infectious diseases physicians working in CAR, DRC, Gaza, Guinea, Haiti, Mozambique, Nigeria and Yemen received coaching.

MSF also introduced hands-on training via 'observerships' in collaboration with the American University of Beirut and Grenoble Hospital in France for three participants, from Amman (Jordan), Gaza (Palestine), and Mosul (Iraq). The observerships aim to increase the exposure of AMS focal points to AMS programmes that are more advanced and structured.

Complementing the MSF Academy's AMR learning programme, sseveral other in-person and online trainings were provided to teach technical skills across the IPC and microbiology pillars, integrate AMR themes within existing health promotion and advocacy trainings, and sensitize hospital leadership to AMR.

Additionally, a Community of Practice was formed for AMS professionals, so AMS focal points can discuss clinical and operational challenges and solutions.

A 3-day multidisciplinary course on AMS in low and middle-income countries was also rolled out in collaboration with the European Society of Clinical Microbiology and Infectious Diseases (ESCMID), delivered to over 100 medical doctors and pharmacists from Europe and low-income countries.

10. Analysis and Advocacy

MSF global advocacy on AMR has been developed around the populations where we work, particularly those affected by conflict and those living in 'blind spots', lacking access to information about the burden and patterns of AMR. Working to ensure that needs are not neglected by global agendas, MSF identifies and highlights key barriers to care, policies, funding gaps, and barriers to accessing tools—antimicrobials, microbiology lab equipment, and diagnostics and vaccines—that influence the development and spread of AMR.

Activities and achievements for 2023

The compilation of microbiological data, which highlighted resistance patterns, and the assignment of empowered AMS mentors on-site, laid a solid foundation for the project's growing interest in participating in advocacy efforts against AMR. MSF conducted situational analyses in countries including Palestine, Iraq, and South Sudan to identify structural, policy, and access challenges.

MSF also monitored stockouts of medicine (including antimicrobials), for example in Sierra Leone and Mozambique. Insights gained from analysis and assessments have guided MSF's engagement with health authorities. Advocacy efforts to date in the countries where MSF operates have included efforts to limit over-the-counter prescriptions of 'Reserve' and 'Watch' [12] antimicrobials in Gaza, update medicine lists, navigate import regulations in Iraq, and assist Gaza and South Sudan in defining their priorities for AMR national action plans (NAPs). These efforts have yielded limited success, underscoring the substantial support needed in these contexts.

On a regional and global scale, MSF intensified direct engagement with various governments influential in shaping global AMR policies, as well as with other organisations active in the development sector. MSF provided input into consultations and strategic plans, including the Pandemic Preparedness Treaty, the WHO EU regional roadmap on AMR in Astana, and the WHO strategic and operational priorities for tackling drug-resistant bacterial infections from 2025 to 2035. In addition to bilateral input, MSF also advocated for the needs of the patients in 3 public-facing documents[13] and participating in 3 public events[14]. MSF continues advocacy efforts internationally to ensure that health equity remains central to AMR policy discussions and is inseparable from the struggle against AMR.

[12]Access, Watch and Reserve are the three groups of the AWaRe classification of antimicrobials developed in 2017 and updated in 2021 by the WHO as a tool to support antimicrobial stewardship.

[13] Public documents include: (1) brief on Pandemic Preparedness and Response and AMR that illustrates some of the PPR-related opportunities for AMR progress, (2) communication pieces for WAAW 2023 and (3) a blog: Bridging the Antimicrobial Access Gap: Data, Accountability, and Solutions.

[14] Events include: "X space" panel (Twitter) with MSF and external experts on conflict, entitled "Resisting Resistance – Conflict and AMR", (2) participation in the ReAct high level policy dialogue: ReacT Uppsala, 2023, (3) presented on AMR and conflict at the BSAC Winter Conference: 'Infection 2023: Addressing AMR Across the Tightrope of Politics, Policy and Practice'.

11. Challenges

Based on MSF operational experience in humanitarian settings, several challenges impeded progress in 2023 and require immense multisectoral efforts to address. These include: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12. Conclusion

While we celebrate the progress outlined in this report, MSF continues to navigate the many challenges— internal or more structural—encountered in confronting AMR in the low-resource settings where we work. We recognise that this situation also presents a unique opportunity to build evidence and tackle challenges in contexts where few other actors are present.

MSF will continue to fill critical gaps in HR capacity with a strong emphasis on effective training and coaching. Devising solutions through innovative technical tools and approaches tailored to low-resource settings is an essential part of our work and MSF is committed to share successful operational models that can be replicated by others.

Data collection and analysis is essential to evaluate interventions, conduct research, communicate knowledge, and serve as a basis from which to update treatment guidelines that can be shared. This will help ensure that as many patients as possible receive the most effective treatments, with minimised risk of AMR.

Overall, MSF is actively revising our strategy to align with the forthcoming WHO global strategies, while continuing to expand our IPC, AMS, and diagnostic efforts. We are stepping up advocacy efforts to ensure that health equity remains central to AMR policy discussions and is inseparable from the struggle against AMR.

MSF is making steady progress in our projects and advocacy, but antimicrobial resistance is a challenge that needs to be met with multi-pronged approaches, multilateral and multi-stakeholder collaboration, and a significant commitment of political will and resources across the globe. MSF, for our part, is committed to sharing our expertise on the most urgent needs and what works to reduce AMR in humanitarian settings with other stakeholders and governments engaged in the same mission.

For further inquiries , kindly contact : (Anna.Farra@brussels.msf.org)