

Antibiotic Resistance in Humanitarian context:

MSF experience in the Middle East and African Sahel region

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POPULATION AT RISK

CAUSES OF ANTIBIOTICS RESISTANCE

Paediatrics / Malnutrition

Massive Increase, Spread, and Exchange of Extended Spectrum β -Lactamase-Encoding Genes Among Intestinal *Enterobacteriaceae* in Hospitalized Children With Severe Acute Malnutrition in Niger

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War injury / Surgery / Natural disaster

Multidrug-Resistant Chronic Osteomyelitis Complicating War Injury in Iraqi Civilians

Richard A. Murphy, MD, MPH, Jean-Baptiste Ronat, MS, Rasheed M. Fakhri, MD, Patrick Herard, MD, Nikki Blackwell, MBBS, Sophie Abgrall, MD, PhD, and Deverick J. Anderson, MD, MPH

J Trauma. 2011;71: 252-254

Antimicrobial Drug-Resistant Bacteria Isolated from Syrian War-Injured Patients, August 2011-March 2013
Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 20, No. 11, November 2014

Compromised hosts: burns, HIV, etc.

OPEN ACCESS Freely available online



Highly Drug-Resistant Pathogens Implicated in Burn-Associated Bacteremia in an Iraqi Burn Care Unit

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Movements of populations uprooted by violence



Overuse of antibiotics

Desintegration of hospitals and poor hygiene



Poor hand hygiene and quality of care

Bad habit of population (self-prescription)
Overprescription of antibiotics for non-bacterial illness



ROAD MAP TO ADDRESS THE CHALLENGE POSED BY RISING THREAT OF ANTIBIOTIC RESISTANCE IN MSF PROGRAMS



Conserve and steward the effectiveness of existing antibiotics

- **Rationalize** the use of antibiotics in MSF hospitals with antibiotic stewardship programs
- **Monitor** antibiotic use in key syndromes in MSF outpatient department and pilot new strategies to improve outpatient antibiotic use
- **Prevent** development of antibiotic resistance in poor contexts, reduce program costs, and preserve life span of existing antibiotics

Implement diagnostic tools and AMR surveillance activities

- **Improve** access to microbiology laboratory for certain programs
- **Extend** use of existing Rapid Diagnostic Testing
- **Develop** a "small-scale, quality-assured, low-cost, stand-alone and transportable clinical bacteriology laboratory for Low resource area
- **Improve** means of data collection and sharing on antibiotic resistance

Improve infection prevention and control (IPC)

- **Implement** effective Infection Control Committees in each MSF hospital
- **Visualize** current processes (e.g. hand hygiene compliance) and outcomes (e.g. hospital infection rates) in MSF hospitals
- **Implement** international flying infection control team
- **Create** an e-learning module for IPC

Advocate to support the implementation of strategic framework

- **Advocate** for better access to diagnostic technologies in Low and Middle Income Countries
- **Advocate** to the ministries of health on antibiotic market regulation
- **Disseminate** MSF experience in addressing antibiotic resistance in humanitarian context through conferences, articles and other communications

