



Antimicrobial resistance. What is its relevance to shelter?

Sarah Dobson Health Specialist Mott MacDonald

What is antimicrobial resistance?

AMR



Microorganisms are small, living organisms that share the world with us. This includes bacteria, viruses, and fungi.



Antimicrobials are used to kill microorganisms when they create problems for us. Examples include antibiotics, antivirals, and antifungal agents. Around 60% used on farm animals.



AMR is when microorganisms evolve (through a process of natural selection) to no longer respond to antimicrobial agents. **Antibiotic resistance** is a sub-set of AMR.



- 1. Awareness
- 2. Use antimicrobials wisely: animals and people
- 3. Infection prevention and control
- 4. Care of the environment
- 5. Drugs, vaccines and diagnostics
- 6. Make the economic case

The problem of Antimicrobial Resistance has escalated due to the misuse (overuse and incorrect use) of antibiotics.

Resistance is easily transferred between bacteria and multiplies rapidly.



The World Bank estimates that by 2050.... AMR will cause 10 million additional deaths per year annually around the world (that means death rates from serious infections increasing by 20% a year).

.....and will result in an additional 24 million people in extreme poverty.

Conditions in which vulnerable populations such as refugees live, increase the risk of infection.

- Poor overcrowded living conditions
- Inadequate sanitation
- Poor quality drinking water
- Lack of access to health services
- Propensity for self medication
- Conflict affected areas (disruption to services, stewardship etc)



Research

high-migrant settings

Conditions in refugee camps, transit centres, or detention centres, (in transit and in host countries) foster spread of infection and MAY have an important role in the dissemination of AMR.

Estimated prevalence of any AMR carriage or infection was higher in refugees and asylum seekers (33.0%) than in other migrant groups (6.6%)



Antimicrobial resistance among migrants in Europe: a systematic review and meta-analysis. *Laura B Nellums, Lancet Infect Dis 2018; 18: 796–811; May 2018.*

International/inter-province travel increases AMR

During their journey or whilst in host countries, migrants may acquire antibioticresistant organisms.

Transmission of AMR may occur from local populations to migrants or between migrants (who may or may not come from very different places).



Two way transmission

Important to understand the transmission and not stigmatise anyone Migrants can acquire antibiotic-resistant organisms in host countries

Lack of evidence of high rates of transmission of AMR to host populations.

Interventions

- Better sanitation for the migrant population Increased quality of living conditions and less overcrowding
- Better access to quality health services (including vaccines)
- Information to increase awareness and improve standards of practice.



A clean and plentiful water supply is crucial to the cycle of health hand washing is one of the most cost effective AMR interventions.

Important across sectors to understand what good living conditions contribute to global health and use this as an argument for funding.



AMR as a cross cutting concern

Global health security

AMR is another reason to do the right thing.

Global Health Security: Scope





The Lancet (2015):

http://www.thelancet.com/infogr aphics/global-health-security





