



Agricultural  
Workers Trade  
Group and IUF  
Meat Division

# Antimicrobial Resistance (AMR)

## A Workplace Hazard

### Workers in the food chain are at risk of contracting AMR diseases and infections

**Agricultural workers:** working with farm animals/  
animal products- meat, poultry, dairy, milk, eggs, honey

**Aquacultural workers:** handling fish, molluscs,  
crustaceans - in ponds, lakes, rivers, wetlands and  
coastal or offshore waters

**Meat and poultry slaughterhouse workers:** handling  
carcasses and raw meat or offal.

**Transport /distribution workers:** handling raw animal  
food products

**Retail workers:** handling contaminated food and  
packaging, contact with raw meat.

**Food preparation:** restaurant kitchen and catering  
workers

## What is Antimicrobial Resistance (AMR)?

Antimicrobial resistance is the ability of microbes to resist the killing action of antimicrobial treatments. This includes bacterial infections which become resistant to antibiotics and can mutate into new superbugs that can cause untreatable infections in people.

All uses of antibiotics can result in resistance but inappropriate and uncontrolled uses are of particular concern. Much of the use of antibiotics in food animal production is considered inappropriate and a major cause of resistance in diseases which can infect humans. As a result drug resistant bacteria are present in the food chain from farm to table. Workers on farms and in slaughtering houses are at high risk of exposure to 'super bugs' that in some cases can resist as many as 12 antibiotics.

**Workers may carry these dangerous microbes home to family and community.**

Much of our information about antibiotic resistance in agriculture and meat processing comes from our studies of MRSA. MRSA (Methicillin Resistant Staphylococcus Aureus) is a strain of staphylococci (staph) bacteria that is resistant to several important antibiotics, including penicillin. Staph aureus can produce skin and blood borne infections. Skin cuts can increase the risks of blood borne infections, and the working conditions in slaughterhouses involve both exposures to staph aureus and the risk of cuts. **If you become infected the normal antibiotics don't work.**

Microbes continue to mutate as they build resistance and the prevalence of the use and misuse of antibiotics in the growing of meat and poultry puts workers in the frontline of risk. Both illness and mortality rates are increased by AMR infections.

**AMR strains of E Coli, staphylococci bacteria, salmonella and campylobacter are all pathogens in the food chain that pose risks to workers.**

Bacteria that are able to withstand attack by antibiotic drugs make the standard treatments ineffective and infections persist, threatening the individual infected, and increasing the risk of spread to other persons.

It is important to note that the sources of AMR bacteria in farm, slaughtering, processing and food preparation are the conditions under which animals for food are raised. Workers are not the primary sources of AMR.



## The size of the problem

In the past 5 years there has been growing alarm throughout the international health community concerning drug resistant diseases which are a serious threat to public health. Unless there is concerted global action, the World Health Organization (WHO) has predicted millions will die from routine infections which, for over eighty years, have been successfully treated with antibiotics.

Each year in the United States, 2 million people become infected with antimicrobial resistant bacteria and 23,000 die. The death rate is similar in Europe.

Using less than the amount of antibiotics to kill microbes (subtherapeutic) for unnecessary purposes, such

as growth promotion and the routine application for the prevention of disease, in intensive livestock and poultry raising, has contributed to the emergence of multi-drug resistant pathogens in the food chain.

Despite efforts in some countries to reduce the use of antibiotics in animal, poultry and fish production, the UN Food and Agriculture Organization (FAO) estimates that their use could grow by two thirds between 2010 and 2030.

Infections can be caused by cuts and abrasions on farms and in slaughter and processing plants and by breathing contaminated air in confined spaces where animals and birds are raised.

## The Risk to Workers

**Worker health and safety has been almost completely ignored in the global fight to contain AMR. Antimicrobial resistance, especially antibiotic resistance, is a work-related hazard and unions must get active in advocating for recognition of the hazard and for measures to reduce the risk and to ensure that workers are covered for medical treatment and lost earnings.**

Workers employed in the raising of pigs or poultry can be exposed to AMR pathogens repeatedly. If the exposure is continuous and causes an infection, repeated treatment can cause increasing antibiotic resistance among the pathogens. This may mean that the only hope for a worker who contracts an antibiotic resistant infection to receive effective treatment is to stop working in the contaminated workplace.

Meat and poultry processing workers can be at risk of contracting an AMR infectious disease through handling carcasses, infected work tools and raw meat products. The risk of contracting an AMR disease is greatly increased when a worker has suffered a skin laceration, cut or wound (however small) because many disease carrying microbes can only enter the body through broken skin. Other AMR diseases can also spread through inhalation and ingestion.

In addition to the risk to themselves, workers may unknowingly act as 'carriers' of pathogenic microbes and pass the risks of disease on to others. These carriers do not fall ill or show symptoms of the microbial diseases but the pathogens contracted from the animals or carcasses pose risks to their co-workers, their families and friends.

Workers are often blamed for spreading the disease through sickness, unwashed hands, open cuts and contaminated clothing. However, the exposure to the hazard is due to an unsafe and unsanitary working environment. While regular handwashing and prompt attention to cuts and lacerations is important, blame should not be directed at the perceived lack of personal hygiene in an environment of unsanitary working conditions. **It is the workplace that contaminates the worker, not the worker who contaminates the workplace.**

Additionally, in meat and poultry processing plants there are seldom enough bathroom and shower facilities, access can be restricted, and there is little time allocated for personal hygiene, all of which are crucial for preventing the spread of pathogens.



Sustained efforts must be made to contain this serious occupational health hazard and minimize its potential impact on worker health. The availability and appropriate use of personal protective equipment, changes in work processes and the reduction in line speeds in meat and poultry processing plants are among the measures that can reduce the risk of AMR infections.

Good health and safety systems have strong worker participation in learning and sharing knowledge and include workers' right to negotiate over the safety of the work.

**These workplace hazards in livestock raising and on the meat processing line are a graphic illustration of the undeniable connection between worker safety and the safety of our food.**





## Where AMR diseases are present in the food chain, urgent action is required by employers and regulatory authorities to protect workers:

- Regulatory agencies must recognize antimicrobial resistant pathogens as a work-related disease.
- Use health and safety experts in conjunction with elected H & S representatives and committees to assess the risk of AMR in workplaces. Any risk requires the adoption of best management practices to protect workers from threats posed by AMR pathogens.
- Notify management and your union of all cuts and lacerations promptly, treat and cover to prevent further risk of infection.
- Wash workers' outer clothing daily through a laundry service. Potentially contaminated clothing should be washed at a temperature of at least 70 degrees Celsius and not be laundered at home. Disinfect work boots upon leaving the workplace.
- Provide and regularly inspect appropriate personal protective equipment (PPE). Workers must be trained in the proper use of this equipment.
- Provide paid time for the necessary training activities.
- Screen workers and their families regularly for drug resistant diseases. Any necessary treatment should be at the employer's expense.
- Make notification to regulatory agencies and union representatives compulsory when AMR pathogens are discovered in processing plants and on farms.
- Provide training on AMR diseases, especially bacterial infections, on how workers can help protect themselves and all of us who eat the food they produce.

## On Farms

- Clean and disinfect boots- dispose of covers for shoes
- Remove work clothes before leaving the farm
- Wash hands thoroughly with warm water and soap
- Dry hands with a paper towel
- When hands are completely dry, disinfect with sanitizer and rub for at least 30 seconds
- Always take a shower before going home
- Change into clean clothes kept in an enclosed space
- Avoid placing personal items, such as mobile phones, in livestock or poultry raising areas.

## In meat and poultry processing plants

- Slow line speeds to reduce the number of lacerations and improve the ability to keep surfaces clean of contaminated matter. Contaminated sharp tools and edges and animal bones can all infect the worker.
- Provide adequate hand washing stations which include soap and disinfectants.
- Make showers freely available for use everyday at the conclusion of the work shift.

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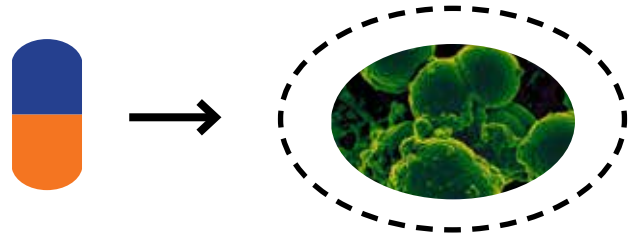
The death rate is similar in  
Europe.



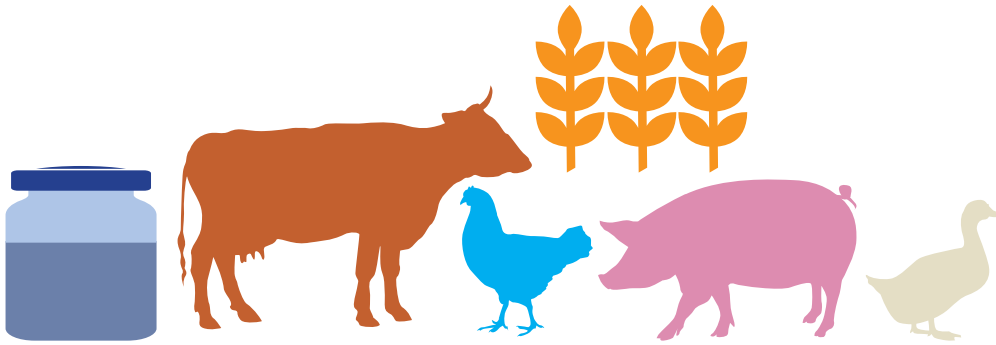
# DRUG RESISTANT INFECTIONS

Antimicrobial Resistance (AMR) **is resistance to drugs that treat infections** caused by microbes.

This is a natural phenomenon: **microbes evolve to develop resistance to drugs as they are exposed to them.**



## BUT HUMAN ACTION IS MAKING AMR WORSE...



... with the misuse or overuse of antimicrobial drugs in health care and the farming of animals.

adapted from World Bank Group

## Managing the hazard in the workplace

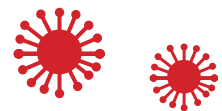
The primary objective in fighting for a safe workplace is to remove the hazard. The IUF urges regulators to ban the unnecessary subtherapeutic use of antibiotics in livestock and poultry rearing. These drugs should only be used sparingly on sick individual animals under the direct supervision of a veterinarian.

The IUF calls on regulators to recognize the transmission of drug resistant pathogens as a work-related disease that requires access to appropriate medical care and protection of earnings.

The International Labour Organization (ILO) must be part of the UN inter agency coordination group established to overcome the global health threat posed by AMR.

Unsafe workplaces produce unsafe food.

We cannot protect the integrity of the food we eat without protecting the workers who produce it.



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