

REPORT ON THE ANTIMICROBIAL RESISTANCE (AMR) SUMMIT

The Department of Health organised a summit on Antimicrobial Resistance (AMR) the purpose of which was to bring together all stakeholders involved in work related to infectious diseases, to commit to the implementation of the Antimicrobial Resistance National Strategy Framework for South Africa.

Background

AMR has become an international topical subject due the concerns about the upward trends of antimicrobial resistance patterns; some resistance even exists to the newer groups of antimicrobials. Most developed countries have already put plans in place to manage AMR. Notably, the European Union has banned the use of in-feed antimicrobials and also antimicrobials as growth promoters in food producing animals. The United States Food and Drug Administration [USFDA] has agreed to the principle that the use of medically important antimicrobial drugs in food-producing animals should be limited to those uses that are considered necessary for assuring animal health. In addition, that the use of medically important antimicrobial drugs in food-producing animals should be limited to those uses that include veterinary oversight or consultation. (Guidanceforindustry)

The World Health Organisation [WHO], in its resolution at the Executive Board meeting of 24 January 2014 entitled 'Combating antimicrobial resistance, including antibiotic resistance', summarised the actions required of member states (WHO, 2014):

- Increase political awareness, engagement and leadership
- Strengthen infection prevention and control
- Strengthen international collaboration
- Strengthen overall pharmaceutical management systems, including regulatory systems and supply chain mechanisms, as well as laboratory infrastructure
- Monitor the extent of antimicrobial resistance
- Encourage and support research and development
- Promote responsible use of antimicrobials
- Encourage the development of novel diagnostics and antimicrobial drugs
- Develop an AMR Surveillance System for inpatients in hospitals, for outpatients in all other health care settings and the community, and for animals and non-human usage of antimicrobials
- Develop a national plan with accountability and civil society engagement.

In May 2014, the WHO released its report titled "Antimicrobial Resistance- Global Surveillance in Surveillance" which in great detail investigates the following areas:

- Current status of resistance to antibacterial drugs
- Burden of resistance to antibacterial drugs

- Surveillance of antibacterial resistance
- Surveillance and present status of antimicrobial drug resistance in disease-specific programmes
- Antibacterial resistance in food-producing animals and the food chain
- Resistance in systemic candidiasis

In recognition of the fact that AMR is not a human health only issue, but that Animal Health and Production industries have a part to play, the World Animal Health Organisation [OIE] has also taken up the issue. The OIE created an international expert group to address the public health risks related to AMR originating from the use of antimicrobial drugs in veterinary medicine. The Expert Group was mandated to develop guideline documents for all OIE Member Countries relating to (CJ Teale, 2012):

- Risk analysis methodology for managing the potential impact on public health of antimicrobial resistant bacteria of animal origin
- The responsible and prudent use of antimicrobial agents in veterinary medicine
- Monitoring the quantity of antimicrobials used in animal husbandry
- Harmonisation of national antimicrobial resistance monitoring programmes in animals and animal-derived foods
- Standardisation and harmonisation of antimicrobial susceptibility testing methodologies

In looking at AMR, it is important to the current global situation and its impact on the health of people and animals in various countries and regions. It is essential to investigate the drivers of AMR and how those change over time. In order to institute appropriate AMR management strategies, the usage patterns as well as volumes of products used should be recorded, considered and monitored. In South Africa, many antimicrobials are used in animals for treatment, prophylaxis and metaphylaxis. Some of these antimicrobials are banned for use in human health. Globally studies have been published, including those showing the effect of antibiotic use in animals on human health.

It is becoming increasingly difficult to manage diseases using narrow-spectrum antimicrobials. For some pathogens, the health practitioners have to rely on one or many broad-spectrum antimicrobials to effectively treat common conditions that were previously considered minor.

The AMR is being monitored in human health. The surveillance is shedding light on current resistance and also picking up on emerging resistance issues. Unfortunately, though there is a lot of work done in animal health, very little is in the public domain, making it impossible to quantify the problem and coming up with effective management programmes.

Efforts are being made to address the issue of AMR and South Africa has undertaken the following initiatives:

- Global Antibiotic Resistance Partnership (GARP) in South Africa (GARP-SA)
- South African Antibiotic Stewardship Programme (SAASP)

Strategic objectives	Governance Structures Strengthen, coordinate and institutionalise interdisciplinary efforts through national and health establishment level governance structures		
	Surveillance Optimise surveillance and early detection of antimicrobial resistances to enable reporting of local, regional, and national resistance patterns to optimise empiric and targeted antibiotic choice	Infection Prevention & Control Enhance infection prevention and control of the spread of resistant microbes to patients in healthcare settings, focusing on improvement in hand hygiene and the identification and isolation of patients with resistant organisms. Community measures include preventing infection through wide-reaching vaccination programmes and improvements in water and sanitation.	Antimicrobial Stewardship Promote appropriate use of antimicrobials in human and animal health through antimicrobial stewardship including: <ul style="list-style-type: none"> • Effective policies and protocols • Stewardship at point-of-care • National prescribing guidelines • Appropriate antibiotic choice
	Legislative and policy reform for health systems strengthening to support the quality of antimicrobials in the country and to enable control over prescribing of antimicrobials in the animal health sector.		
Strategic enablers	Education of all levels of health providers in human health and agriculture in the critical concepts of antimicrobial stewardship, infection control, infectious diseases, microbiology and pharmacology.		
	Communication to educate the public, create awareness of the dangers of inappropriate antimicrobial use and enhance patient advocacy to combat antimicrobial resistance.		
	Research into novel diagnostics, such as point of care testing, new antimicrobials and implementation of treatment guidelines (treatment duration, antimicrobial consumption).		

Table 1: Strategic objectives and enablers

Commitments		Time Frames & Actions
1.	To collaborate as intersectoral, interdisciplinary organisations and departments to strengthen, co-ordinate and institutionalise efforts to address Antimicrobial Resistance	Short term – March 2015: Establishment and initial meeting of National Ministerial Advisory Committee Short to medium term 2015 - 2019: Strengthen governance at Health Establishment levels
2.	To establish a national surveillance system to track and report resistant organisms and Antimicrobial use in agriculture and human health	Short term 2015 - Develop an Antimicrobial Resistance map for South Africa through data sharing between the private and public sector laboratory services
3.	To enhance the processes, structures, resources and supplies needed for effective Infection Prevention & Control	Short term 2015: Ensure the equipment and Infection Prevention & Control resources required to practice effective hand hygiene are available at all times in all Health Establishments Medium term 2016 – 2019: All Health Establishments meeting compliance of the National Core Standards relating to Antimicrobial Stewardship and Infection Prevention & Control
4.	To promote the appropriate use of Antimicrobials in human and animal health through antimicrobial stewardship in facilities and suitable enabling legislation and regulations	Short term 2015: Ensure availability of Antimicrobials according to Essential Medicines List in all Health Establishments Medium term 2016 – 2019: Review of antimicrobials use in feed additives
5.	To build the expertise and strengthen the competency of health and veterinary professionals and improve the staffing levels of the workforce in Antimicrobial Resistance and Infection Prevention & Control	Medium term 2016 – 2019: Development of strategy and operational plan for the integration and implementation of Antimicrobial Resistance and Infection Prevention & Control training into the undergraduate and post graduate medical curriculums of health care professionals in South Africa
6.	To increase the community awareness of Antimicrobial Resistance	Short term 2014 – 2015: Design of an awareness campaign relating to Antimicrobial Resistance based on past successful campaigns
7.	To promote research into novel diagnostics and clinical trials in Infection Prevention & Control and Antimicrobial Resistance	Long term 2019 – 2024: Defined research opportunities

Table 2: Commitments, Time Frames and Actions