ReAct Africa – Annual Conference

Supporting LMICs in developing NAPs that address the 'One Health' approach

Wednesday 26th – Friday 28th October 2016
Brackenhurst Conference Centre, Limuru, Kenya

ReAct Africa held its first Annual Conference from 26th to 28th October 2016, in Limuru, Kenya. The conference was themed "*Supporting LMICs in developing National Action Plans (NAPs) on antimicrobial resistance (AMR) under the umbrella of the 'One Health' approach*". Participants included AMR Focal Points at country level, experts from the animal and human health sectors, environmental and agriculture sector, civil society, academia and multilateral partners. A total of 11 African[i] countries were represented. The conference was hosted by the Ecumenical Pharmaceutical Network.

Learning through sharing

In order to foster open discussions, the conference took a roundtable discussion format with the following objectives:

- Sharing country updates including status of situational analysis studies conducted and AMR burden both in human and animal sector
- Discussions and sharing experiences on challenges of developing NAPs in low resourced countries
- Exploring regional collaborations, partnerships and stakeholder engagement
- Exploring the meaning of the 'One Health' approach and how it can be operationalized
- Sharing of the online ReAct Toolbox[ii] and
- Drawing lessons from the HIV and AIDS, TB and Malaria programs that would apply to AMR interventions.

In the opening comments and discussions the picture of Antibiotic Resistance (ABR) and AMR where presented pointing out that, AMR is a quintessential One Health issue, involving an interaction of humans, animals and the environment. AMR is a real problem in African countries and is 'here to stay'. It is a big threat to achieving the Sustainable Development Goals (SDGs) and Universal Health Coverage (UHC). It is a global phenomenon, which has an adverse impact on poverty and economic growth and is a threat to sustainable food production.

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Determinant factors contributing to AMR on the African continent

Here are some determinants that were noted:

- Easy access to antimicrobials with or without a prescription and indiscriminate use and abuse of antimicrobials in both the human and animal sector. Common mistakes seen in antibiotic administration are: routinely given at, for example, admission, given for incorrect duration, in incorrect doses, duplication of antibiotics with the same spectrum of activity and excessive use of intravenous antibiotics.
- Wrong public perceptions about the magic of antibiotics and inadequate knowledge or low level of awareness about the consequences and health implications of misuse/ abuse of antimicrobials
- Weak health and regulatory systems that do not support the responsible use of antimicrobials especially antibiotics.
- The proliferation of sub-standard, spurious, falsely labeled, falsified and counterfeit products (SSFC) on the African market.
- High poverty levels
- Increased burden of infectious diseases
- Lack of awareness about AMR and the local and global consequences of it.

Taking an example from the Medicines sans Frontiers Tuberculosis inpatient programmes in the Democratic Republic of Congo and the Central African Republic the following was the experience, which is common in many African countries:

- Inappropriate and excessive use of antibiotics.
- The lack of recognition that hospital acquired infections are causing morbidity and mortality.

What are the drivers to AMR?

1. Urbanization – The rate of urbanization has escalated rapidly. In 2015, 17 of the 22 megacities where located in developing countries with the projection that by 2030, 60% of the worlds population will live in cities or urban sites.[iii]
2. The need for meat has grown around the world, including Africa. Meat consumption (kg per capita, carcass weight equivalent) and production has been on the rise.
3. Intensification and industrialization of animal production – increased opportunities for pathogens colonization – increased antimicrobial use (AMU) and AMR.
4. Mixed/integrated crop/livestock/ aquaculture systems and human dwellings – complex pathways of spread of animal, human and zoonotic pathogens – challenges for risk management.

Challenges of the One Health Concept

The One Health Concept, adopted and promoted by the World Health Organization (WHO), Food and Agriculture Organization (FAO) and the World Organization for Animal Health (OIE), has many challenges namely:

- Concept definition of One Health is perceived by many as difficult to understand.
- Proof of concept – there are limited number of examples of where the concept has been operationalized and/or been implemented successfully.
- Business case – With no business case, it is a concept that would be very difficult to sell, especially to policy makers.
- How to achieve the paradigm shift from business as usual to the new way of thinking.
- Thinking globally, acting locally/nationally.

Current knowledge gaps that should be addressed

1. Lack of information for consumption data of antimicrobials both in the human and animal sector.
2. There are key knowledge gaps and a weak evidence base making the identification of effective actions difficult
    - How will changing demand for animal source foods influence antibiotics?
    - What are the transmission pathways of AMR determinants among livestock, people and environments?
    - What effect will different interventions have in diverse settings?
    - What is needed to bring about behavioral change?
3. Most African countries lack national AMR surveillance and AMU monitoring systems; where they exist the quality of data is generally poor. Only 27% of OIE-member countries for example have systems in place for monitoring veterinary AMU.[iv] The consequences of these include;
    - Lack of a sound evidence base for policy making and design of risk management.
    - Limited knowledge about the extent of misuse and overuse of antimicrobials.
    - Inability to quantify the impact of interventions along the food chain and to design risk based interventions.
    - Lack of local surveillance data to guide clinical and policy decisions.
    - AMR is invisible in settings without access to microbiological culture and sensitivity testing.
    - Local community-acquired pathogens and resistance profiles are unknown.
4. FAO data suggests that more than 50% of consumed fish world-wide are from aquaculture.[v] The extent of use in African countries is not known. This information would be useful in combating AMR.
5. Causes and true cost of AMR largely remain unclear.[vi] E.g. economic assessments do not address the marginal costs and benefits, the value of alternatives, and the costs of undesired consequences.

Recommendations from the Conference

The recommendations take the One Health Approach and promote integration in areas where that would yield the highest and maximum value.

Data

• AMU/AMR data and information are key to effective policies and risk management hence an opportunity for institutions, governments and partners to strengthen data collection, collation and use.

Infection Prevention and Control

• Focus should be given to reducing hospital acquired infections through hand-washing and ward hygiene. In many clinical settings, patient families are responsible for the basic nursing needs of patients that include feeding, washing, aiding with toileting and providing and changing bed linen. Unfortunately they are not included in infection prevention and control efforts by the clinical and nursing staff.

AMU

• Interventions to mitigate AMR would include reduction of overall consumption with regard to livestock production, better targeting of antibiotic use and reduction of transmission of genetic determinants in both animals and humans.

• Reduce the use of antibiotic residues in agriculture and environment.

Risk Management

• AMR Risk Management is needed to build a strong case for AMR interventions. African countries and many LMICs are not able to effectively implement AMR risk management programs that would inform policy development.[1] Lack of information and technical capacities to inform the design of effective risk management measures exacerbate AMR risk.

• Governments need to invest and strengthen capacities to implement policies and regulatory interventions that address the following gaps:

- Poor understanding of favorable policy environments to support changes in AMU and to stimulate investments in alternative preventative measures.
- Ineffective regulation of AMU in food and animals.
- Lack of political will to enforce regulation, and promote cross-sector collaboration.

• Promote and make access to quality-assured antimicrobials a reality to those who need them, when they need them.

Behavior Change – Measures / Communication

• Governments can play a role through legislation and enforcement, BUT the day-to-day management of food systems is in the hands of private individuals and businesses.

• More appreciation and analyses of incentives and behavioral change drivers are needed to reduce AMU and to ensure responsible and prudent use.

• Increase knowledge on the role that sustainable agriculture systems can play in combating AMR.

• Health care workers need to be advocates for change – so they need to believe that change is necessary and that they are an essential part of this.

Socio-Economics of AMU/AMR

• Account for the wider impacts of AMR on food security, food safety, protection of livelihoods and resources through assessments.

• Support and invest more in economic analysis of benefits of AMR preventive measures in agriculture e.g. costs of alternatives to AMU and improved biosecurity and husbandry practices.

• Measure the impact of interventions and understand incentives.

Conclusion

AMR is clearly a One Health issue – human, animal and the environment have a big role to play in finding solutions.

References

[i] Cameroon, Ethiopia, Ghana, Kenya, Malawi, Nigeria, Rwanda, South-Africa, Tanzania, Uganda and Zimbabwe.
[ii] www.reactgroup.org/toolbox
[iii] UN, 2015
[iv] Nisi, Brink et al. 2013
[v] FAO, 2013
[vi] Stockwell & Duffy, 2012

EPN
Ecumenical Pharmaceutical Network
Réseau Pharmaceutique Œcuménique

The Ecumenical Pharmaceutical Network (EPN) supports churches and church health systems to provide just and compassionate quality pharmaceutical services. EPN host the ReAct Africa Node.
www.epnetwork.org

ReAct
Action on Antibiotic Resistance

ReAct Africa is part of the global ReAct network with nodes on the five continents. ReAct's vision is: "A World free from fear of untreatable infections".
www.reactgroup.org

TOOLBOX

The ReAct Toolbox is a web-based knowledge repository for antibiotic resistance that collects:

- Scientifically accurate information
- Practical advice
- Links to useful resources
- Examples from the field

www.reactgroup.org/toolbox