ReAct Africa and South Centre Conference 2019

Theme: Achieving Universal Health Coverage while Addressing Antimicrobial Resistance

Four Points by Sheraton Airport Hotel, Nairobi, Kenya
July, 23 -25th, 2019
PARTICIPANTS OF THE REACT AFRICA CONFERENCE 2019
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PREFACE

Antimicrobial resistance (AMR) remains a global public health threat. Unless the importance of addressing the barriers to conservation of antibiotics and promoting prevention of infections is addressed with urgency, the AMR burden will only worsen. It is estimated that 10 million people will die globally by 2050, if nothing is done about AMR. Currently, approximately 700,000 people are dying globally as a result of AMR. The increased burden of AMR, not only affects the affordability of healthcare on the national level, but also has a huge impact on national and individual healthcare expenditure. The ability to treat infections however is essential for good quality care. Maintaining or creating Universal Health Coverage (UHC), without addressing AMR, therefore becomes unfeasible or very complicated. AMR is a multi-sectoral challenge and requires work to be done on a very wide range of themes. In recent years, attention has focused on harnessing UHC reforms to accelerate AMR-related gains. Since AMR is a health-system problem, UHC provides the best enabling framework to tackle AMR.

Concurrently UHC, is a global agenda that is encompassed within the Sustainable Development Goals (SDGs), specifically SDG3. This goal seeks to enable all populations access health services that address the most significant causes of disease and death, which in our LMICs, majorly translates to infectious diseases. Enabling access here therefore translates to improved access to needed antimicrobials and infection prevention and control (IPC) services. While appropriate, equitable access to such services is the ultimate goal for UHC, excessive uncontrolled access to antimicrobials, with the aim of alleviating the financial burden that out-of-pocket health expenditure places on individuals and families, could paradoxically increase the AMR burden.

The ReAct Africa Annual Conference 2019 sought to address the connectedness of achieving Universal Health Coverage (UHC) and Antimicrobial Resistance (AMR) agendas. It addressed how the two influence or affect each other and how they link to the achievement of the SDGs. It sought to affirm that addressing AMR is a path to attaining UHC and thus bringing to light what country programs could leverage on.

Expected Conference Outcomes were:

1. Raising awareness on the urgency of addressing AMR
2. Building an understanding on the interconnected links between AMR and UHC.
3. Exchanging of experiences of AMR, SDGs and UHC, while identifying synergies and entry points.
4. Learning from exchange of experiences and challenges faced in implementation.
5. Promoting cross learning and fertilization from current country vertical programs.
6. Developing inputs for global AMR governance
ABOUT THE CONVENERS

ReAct
ReAct - Action on Antibiotic Resistance, is a global network, dedicated to the problem of antibiotic resistance. ReAct was initiated in 2005 with the goal to be a global catalyst, advocating and stimulating for global engagement on antibiotic resistance by collaborating with a broad range of organizations, individuals and stakeholders. It works with a multidisciplinary team, which includes microbiologists, physicians, veterinarians, communication experts and global health specialists. The ReAct vision is to create a world free from fear of untreatable infections. The mission is to enable collective action that ensures sustainable and equitable access to effective antibiotics for all. The objectives of ReAct are:

1. To support countries develop and implement National Action Plans on AMR.
2. To strengthen and extend coalitions, communities of practice and movements to address antibiotic resistance.
3. To advocate for globally coordinated governance on AMR.
4. To promote public health driven innovation

Over the years ReAct established nodes across the continents. These currently include ReAct Europe, ReAct North America, ReAct Latin America, ReAct Asia Pacific and ReAct Africa. ReAct Africa, formed in 2014, catalyzes African action on antibiotic resistance and engages Sub-Saharan African countries in the development and implementation of National Action Plans on AMR. ReAct Africa is hosted by the Ecumenical Pharmaceutical Network (EPN) in Nairobi Kenya.

Ecumenical Pharmaceutical Network (EPN)
The Ecumenical Pharmaceutical Network (EPN) is an International non-profit Christian member organization registered in Kenya. EPN is the only global church-based organization that works specifically to increase access to medicines and to strengthen pharmaceutical services. EPN’s vision is to be a valued global partner for just and compassionate quality pharmaceutical services for all. This is done by supporting churches and church health systems. EPN has a network of 118 members from 37 countries.

The South Centre
The South Centre is an inter-governmental policy research institution of developing countries. It currently has 54 developing country member States from Africa, Asia Pacific, Latin America and the Caribbean. The South Centre promotes more effective South-to-South cooperation and coordination. It supports developing countries in participating in and voicing their development interests and priorities more effectively in various multilateral and regional development policy related issues and fora, and also provides policy advice and technical assistance to governments on their national development-related policies.

The main activities of the Centre are policy research and analysis, convening of meetings and conferences for developing countries to share views and experiences, and technical assistance and capacity building activities. The issues taken up by the Centre include international and regional trade policy, global macroeconomic and finance issues, global public health, innovation and intellectual property policy, climate change, environment and sustainable development, international economic issues including tax policy, external debt and international investment policy; human rights policy; global governance for and North-South relations, South-South cooperation, and global governance for development. The South Centre has three major institutional pillars: The Council of Representatives in which the Member States are represented; the Board comprising a Chairperson and members who act in their individual capacities and provide guidance to the Secretariat; and the Secretariat headed by the Executive Director which implements the activities of the South Centre. The Secretariat is accountable to and works under the guidance of the Board and the Council.
### ABBREVIATIONS/ACRONYMS

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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AFRO</td>
<td>Africa Regional Office (WHO)</td>
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<tr>
<td>AWaRe</td>
<td>Access, Watch, Reserve</td>
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<td>AMR</td>
<td>Antimicrobial Resistance</td>
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<td>AMS</td>
<td>Antimicrobial Stewardship</td>
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<tr>
<td>ASP</td>
<td>Antimicrobial Stewardship Program</td>
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<td>DSP</td>
<td>Diagnostic Stewardship Program</td>
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<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<td>GAP</td>
<td>Global Action Plan</td>
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<td>GARGP</td>
<td>Global Antibiotic Research and Development Partnership</td>
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<td>GHSA</td>
<td>Global Health Security Agenda</td>
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<td>GLASS</td>
<td>Global AMR Surveillance System</td>
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<td>GLEWs</td>
<td>Global Early Warning and Surveillance</td>
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<td>GLOAN</td>
<td>Global Outbreak Alert and Response Network</td>
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<td>GPW</td>
<td>General Program of Work (for WHO)</td>
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<td>HAIs</td>
<td>Hospital Acquired Infections</td>
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<td>HEP</td>
<td>Health Extension Program</td>
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<td>HEWs</td>
<td>Health Extension Workers</td>
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<td>HLM</td>
<td>High Level Meetings</td>
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<td>HSTP</td>
<td>Health Sector Transformation Plan</td>
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<td>IACG</td>
<td>Inter-agency Coordination Group</td>
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<td>IPC</td>
<td>Infection Prevention and Control</td>
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<td>JEE</td>
<td>Joint External Evaluation</td>
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<td>LMICs</td>
<td>Low Middle Income Countries</td>
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<td>MDROs</td>
<td>Multi-drug Resistant Organisms</td>
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<td>MTaPS</td>
<td>Medicines, Technologies and Pharmaceutical Services</td>
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<td>NAPs</td>
<td>National Action Plans</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<td>OIE</td>
<td>World Organization for Animal Health</td>
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<td>OHS</td>
<td>Office of Health Systems</td>
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<td>PHC</td>
<td>Primary Health Care</td>
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<td>PHCU</td>
<td>Primary Health Care Units</td>
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<td>PPP</td>
<td>Public Private Partnership</td>
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<td>ReAct</td>
<td>Action on Antibiotic Resistance</td>
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<td>TPP</td>
<td>Target Product Profile</td>
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<td>UNGA</td>
<td>United Nations General Assembly</td>
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<td>USAID</td>
<td>US Agency for International Development.</td>
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<td>UHC</td>
<td>Universal Health Coverage</td>
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<td>USG</td>
<td>United States Government</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<th>Session</th>
<th>Details</th>
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<tr>
<td>07:30-08:30</td>
<td>Registration</td>
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<tr>
<td>08:30-09:30</td>
<td>Session 1</td>
<td>Welcome, Opening Remarks, Introductions, Conference Objectives and Overview</td>
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<td></td>
<td></td>
<td>- Mfin M. Mpundu - Head of ReAct Africa, Executive Director Ecumenical</td>
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<td>Pharmaceutical Network (EPN)</td>
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<td>- Viviana Muñoz Tellez - Coordinator, Health, Intellectual Property and Development Programme</td>
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<td>South Centre</td>
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<td>- Lastilla Gahimbare - World Health Organization, Africa Region</td>
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<td>- Marc Sprenger - AMR Director, World Health Organization HQ</td>
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<td>- Otto convention - ReAct Founder and Senior Advisor</td>
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<td></td>
<td>- Official Opening - Dr. Rashid Abdi Amin - Chief Administrative Secretary, Ministry of</td>
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<td>Health, Kenya</td>
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<td>09:30-11:00</td>
<td>Plenary</td>
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<td></td>
<td><strong>Session 2</strong></td>
<td>Part 1 - Setting the scene - A reflection of AMR, SDGs and UHC</td>
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<td><strong>Moderator: Mfin M. Mpundu</strong></td>
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<td></td>
<td>- AMR and National Action Plans - Marion Banda, Director of Pharmacetical Services Churches</td>
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<td>Health Association of Zambia &amp; Board Chairman EPN</td>
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<td>- Combating Antimicrobial Resistance to Achieve Sustainable Development Goals, South</td>
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<td>African perspective - Olga Perovic, AMR Lead, National Institute for Communicable Diseases</td>
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<td>- AMR and UHC - Andreas Sandgren, Deputy Head of Office, Policy Adviso</td>
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<td>ReAct Europe</td>
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<td>- Global Health Security Agenda - Francis Kofi Abagye-Anyan, Management Sciences for Health,</td>
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<td>MtaPs Program Director</td>
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<td>11:00-11:30</td>
<td>Tea Break</td>
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<td>11:30-13:00</td>
<td>Plenary</td>
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<td><strong>Session 2</strong></td>
<td>Part 2- Setting the Scene</td>
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<td>One Health- AMR- IACG Co-convener - Anthony So, ReAct North America (recording)</td>
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<td>AMR in the UN and related processes - Viviana Muñoz Tellez - Coordinator, Health, Intellectual</td>
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<td>Property and Development Programme, South Centre</td>
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<td>IACG Recommendations to the United Nations General Assembly - Marth Gyansu-Lutteroth,</td>
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<td>Director, Technical Coordination, MOH Ghana</td>
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<td>13:00-14:00</td>
<td>Lunch</td>
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<td>14:00-14:30</td>
<td><strong>Session 3</strong></td>
<td>How AMR is affecting people in your country and what is your country progress in</td>
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<td>implementing NAP from last conference?</td>
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<td><strong>Moderator - Mercy Korir, Medical Journalist, KTN</strong></td>
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<td><strong>Plenary - Panel Discussion</strong></td>
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<td>- Ghana – Boi Kikimoto - Head-Public Health &amp; Food Safety, AMR Focal Point</td>
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<td>- Malawi – Watipaso Kasambro – AMR Coordinator Malawi</td>
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<td>- Madagascar – Camren Rambananaambiso, Assistant Technique à la Direction de la Veille</td>
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<td>Sante, de la Surveillance Epidémiologique et Riposte</td>
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<td>- Sudan – Mrtomi Youss - Head, Medcation Safety Research</td>
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<td>14:30-15:10</td>
<td>Breakout Sessions</td>
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<td><strong>Group Discussions Chairs:</strong></td>
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<td>- Japhet Opinton - Senior Lecturer, University of Ghana</td>
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<td>- Yara Mohsen - Infectious disease Clinical Pharmacist in charge of the AMS Program- Joint</td>
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<td>Commission Accredited Hospital, Egypt</td>
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<td>- Steve Kizembo - Medical Director, Bethesda Hospital/CBCA, DRC</td>
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<td>- Kusu Ndina - Country Project Director, MSH/ MtaPs, Kenya</td>
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<td>15:10-15:30</td>
<td>Plenary</td>
<td>Feedback from group discussions</td>
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<td>15:30-16:00</td>
<td>Tea Break</td>
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<td>16:00-16:30</td>
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<td>Exploration and prioritization of AMR within UHC at country level</td>
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<td><strong>Moderator - Mercy Korir, Medical Journalist, KTN</strong></td>
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<td><strong>Plenary - Panel Discussion</strong></td>
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<td>- Cameroon – Delli Vardi, Director Department of Drugs, Pharmacy and Laboratories</td>
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<td>- Ghana – Peter Yeboah, Executive Director Churches Health Association of Ghana</td>
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<td>- Tanzania – Elizabeth Shikalage, Registrar Pharmacy Council</td>
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<td>- Kenya – Evelyn Wesangula, MOH Kenya, AMR Focal Point</td>
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<td>16:30-17:10</td>
<td>Breakout Sessions</td>
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<td>Group discussions: Chaired by presenters above</td>
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<td>17:10-17:30</td>
<td>Plenary</td>
<td>Feedback from group discussions</td>
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<td>17:30-19:00</td>
<td>Reception</td>
<td><strong>Welcome Trust</strong></td>
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Day 2  WEDNESDAY JULY 24TH 2019

08:30-08:50  Plenary
Recap of Day 1 & Highlights, ReAct Activities 2018 & 2019 – Tracy Muraya, ReAct Africa

08:50-09:20  Support from Agencies:
• Fleming Fund: Lucy Andrews, Head of Fleming Fund
• Wellcome Trust – Jeremy Knox, Policy & Advocacy Lead, AMR

09:20-10:05  Session 5
Plenary
Moderator – Julian Nyamupachuchi, ReAct Africa
• Diagnostics – Revathi Gunatilake, Head of Clinical Microbiology, Aga Khan University Hospital Nairobi
• Quality of medicines – Phillip Nguyen, Director, Quality Institute, US Pharmacopeial Convention (USP); Advisor, MedsWeCanTrust Campaign (MWOT)
• Experience of regulation of quality of medicines within the UHC context – Zivanai Anthony Makoni, Senior Regulatory Officer, Medicines Control Authority of Zimbabwe
• Developing empirical treatments for neonatal sepsis – Monique Wanauma, Director DNDI

10:05-11:00  Breakout Sessions - 3 Groups
(Diagnostics: Quality of medicines; Developing empirical treatments for neonatal sepsis)
Group discussions

11:00-11:30  Tea Break and Poster Presentations - Question & Answer Sessions

11:30-12:30  Plenary
Session 5
Part 2 - One Health -
Moderator – Anna Mawatari, Africa Health Editor, BBC Africa
• Are there any synergies within the One Health Concept and UHC – Emmanuel Kabali, AMR Coordinator, FAO, Zimbabwe
• Where are we and where should we be in the animal sector – Allan Aseige, Deputy Director Veterinary Services, AMR Focal Point, Ministry of Agriculture, Kenya
• AMR and the environment – Miria Alas, Programme Officer, Development, Innovation and Intellectual Property Programme, South Centre
• OIE Strategies, Activities and Best Practices on the One Health Agenda – Jane Lwuyero, Programme Officer, World Organization for Animal Health (OIE), Kenya

12:30-13:30  Lunch and Poster Presentations - Question & Answer Sessions

13:30-14:10  Session 6
Plenary - Case studies on UHC: Examples of UHC Implementation
Moderator – Tracy Muraya, ReAct Africa
• Thailand – Satya Sivaraman, Communications Coordinator, ReAct Asia Pacific
• Nigeria – Abubakar Aliyu JAFYA, Nigeria Centre for Disease Control
• Ethiopia – Yidnekochew Degelaw, Team Coordinator, MOH Ethiopia
• Kenya – Nancy Njeri, Officer, MSH Kenya, Department of Universal Health Coverage

14:10-1500  Breakout Sessions chaired by presenters above

15:00-15:30  Plenary - Feedback
Feedback from group discussions

16:00-17:10  Plenary
Session 7
Preventing and managing infections
Moderator – Oladipo Aboderin Professor / Honorary Consultant, Obafemi Awolowo University, Nigeria
• IPC, WASH, Immunization in UHC – Philip Mathew, ReAct Asia Pacific
• Implementing national antimicrobial stewardship programs in LMICs – Mrin Moundu
• Surveillance One Health – Ofidah Kapono, Laboratory Scientist, AMR National Focal Point & Coordinator, Zambia
• Role of training in UHC – Freddy Kitafu, Lecturer, Pharmacy Department, Makerere University Uganda

16:30-17:10  Breakout Sessions
Group discussions

17:10-17:30  Plenary - Feedback
Feedback from group discussions

17:30-19:30  Reception #MedsWeCanTrust Campaign
## Day 3

**THURSDAY JULY 25TH 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:30-08:45</td>
<td>Recap of Day 2 – Mirza Alas, Programme Officer, Development, Innovation and Intellectual Property Programme, South Centre.</td>
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| 08:45-09:30  | **Session 8**

**Sustainable financing / financing mechanisms for UHC – Mirza Alas**
- Financing model example – Andrew Muwya, Minister of Health, Makeni County
- Financing model from a Faith-based Hospital – Ken Muma, Director General, Kijabe Hospital Kenya

| 09:30-10:00 | Plenary
**Session 9**

**Country Updates/ Examples on One Health Approach**
**Moderator** - Ann Mawathe, Africa Health Editor, BBC Africa

**Panel Discussion**
- Sudan – Hassan Abdelrahman Ataelsed Abdelrahman, Secretary General, Sudan National Medicine & Poisons Board
- Kenya – Allan Azegele, Deputy Director Veterinary Services, AMR Focal Point, Ministry of Agriculture, Kenya
- Uganda – Denis Byaragaba, Professor, Makerere University

| 10:00-10:40 | Breakout Sessions

**Group discussions**

| 10:40-11:00 | Plenary-Feedback

**Feedback from group discussions**

| 11:00-11:30 | Tea Break

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| 11:30-12:10 | **Session 10**

**What are the commonalities and approaches to move forward**
**Moderator** - Mathew Phillip, ReAct Asia Pacific

**Breakout Sessions**

**Group discussions Chairs:**
- Borna Nyako-Anoke – Clinical Trial Manager, DNDi
- AMR and UHC – Andreas Sandgren, Deputy Head of Office, Policy Advisor ReAct Europe
- Christian Muga – Co-founder, Co-Chair and Country director International Students’ Partnership for Antibiotic Resistance Education (ISPAR), Rwanda
- Linus Ndegwa – Division of Global Health Protection, Centers for Disease Control and Prevention, Kenya

| 12:10-13:00 | Plenary

**Feedback from group discussions**

| 13:00-14:00 | Lunch

| 14:00-15:00 | Plenary

**Session 11**

**Beyond the conference what next?**

**Moderator** – Mercy Korir, Medical Journalist, KTN

**Panel Discussion**

- Mirza Alas – Programme Officer, Development, Innovation and Intellectual Property Programme, South Centre South Centre
- Mirfin Mpundu – ReAct Africa, Head of ReAct Africa, Executive Director Eculmenical Pharmaceutical Network (EPN)
- Martha Gyansu-Lutteroth – Director, Technical Coordination, MOH, Ghana
- Allan Azegele – Deputy Director Veterinary Services, AMR Focal Point, Ministry of Agriculture, Kenya
- Laetitia Gahimbare – World Health Organization, Africa Region
- Emmanuel Kabbai – AMR Coordinator, FAO, Zimbabwe

| 15:00-15:30 | Vote of thanks

**Official Closing** - Laetitia Gahimbare – World Health Organization, Africa Region

| 15:30-16:00 | Farewell Tea |
CONFERENCE PROCEEDINGS

DAY ONE – 23RD JULY 2019

Session 1- Welcome, Opening Remarks, Introductions, Conference Objectives and Overview

1.1 Mirfin M. Mpundu, Head of ReAct Africa, Executive Director Ecumenical Pharmaceutical Network (EPN)

The Head of ReAct Africa welcomed the participants to the 5th ReAct Conference. He acknowledged that the participants were drawn from 33 different countries namely Benin, Burkina Faso, Cameroon, Chad, Congo Brazzaville, Cote d’Ivoire, Democratic Republic of Congo, Egypt, Ethiopia, Ghana, Guinea, Guinea-Bissau, India, Kenya, Liberia, Lesotho, Madagascar, Malawi, Namibia, Niger, Nigeria, Rwanda, South Africa, Sudan, Sweden, Swaziland, Tanzania, Togo, Uganda, UK, USA, Zambia and Zimbabwe. He emphasized that the conference would look at AMR in light of UHC and the SDGs. The presenter gave a background of the conference and went on to discuss the conference outcomes, which are stated in the preface of this report. He talked briefly about ReAct Africa, and emphasized that it was established in 2014 and is hosted by EPN. Details on these organizations are given at the beginning of this report, where the conveners of the conference are introduced. He hoped that the discussions held would draw up lessons that would be useful for influencing and informing government decisions.

1.2. Viviana Munoz, Programme Coordinator, Development, Innovation and Intellectual Property Programme - South Centre

The presenter gave an overview of The South Centre. She emphasized that it has 54 member countries in Africa, Asia, and Latin America. It is an institution of developing countries and for developing countries. The headquarters are in Geneva for historical reasons. The details of the organization are given at the beginning of this report, where the conveners of the conference are introduced. She emphasized that The South Centre recognizes that AMR is a critical issue, particularly for the developing countries, and that UHC is the best enabling framework for ensuring AMR is addressed. AMR poses dual challenges, namely, that of lack of adequate drugs and the misuse of antibiotics. There is still a lot to do to achieve the SDGs by 2030. She then stated that the theme of the conference this year was therefore very relevant. She remarked that The South Centre is happy to partner with ReAct Africa, and also acknowledged the partnership with Wellcome Trust and the Fleming Fund.
The presenter began by introducing the 3 big impact agendas that WHO is focusing on, to be achieved by 2030. These include:

- **UHC coverage**—1 billion more people with health coverage
- **Health emergencies**—1 billion more people made safer
- **Health priorities**—1 billion lives improved

WHO is leading two health initiatives with big implications for the use of antimicrobials. These are SDG3 and Global Action Plan (GAP). The SDG3 includes a commitment to achieve UHC by 2030. This implies significant increase in access to healthcare, including treatment of infections. The GAP is aimed at ensuring continuity of successful treatment of infectious diseases and prevention of infectious diseases with effective and safe medicines. Neither of these initiatives is likely to succeed in isolation from the other. Action to address AMR should go hand in hand with measures to strengthen attributes of health systems that contribute to progress towards UHC such as: equity, quality, efficiency, accountability, sustainability and resilience. She explained that all countries in the WHO Africa Region have signed up to the SDGs and steps have been initiated in all countries towards selecting and implementing actions towards UHC and the SDGs. However, the UHC status in the different countries in the Africa Region shows some variation.

The WHO’s 13th General Program of Work (GPW) and AFRO’s Framework for Action for UHC, in alignment with WHO’s Global Action Plan on AMR, have strategies in place which aim to ensure that all countries in Africa have essential capacity to implement National Action Plans and monitor, prevent and reduce infections caused by AMR; that there is appropriate use and availability of antimicrobial medicines in human health and food production settings as a contribution to improving access to and maintaining effectiveness of treatment; that there is high level political commitment; and that there is sustained and effective coordination at the regional level to combat AMR in support of the SDGs.

**AMR achievements supporting AFRO framework for achieving UHC Health Governance:**

- AMR Situation analysis has been carried out, and 33 countries have National Action Plans (NAPs)
- There has been established/strengthened partnership and multi-sectoral collaboration with FAO, OIE, Africa CDC, UK; Canada; ReAct Africa, Academic institutions; other partners
- Links with International Health Regulation Joint External Evaluation and Global Health Security Agenda have been made.
- The strengthening of regulatory capacity
- Awareness campaigns with tailored messages to public, policy makers and the agricultural sector
Education of Health Workforce:
- Regional AMR workshops and trainings have been held
- WHO AMR Competency framework was developed

Health Information:
- Tools and guidelines for data collection: Global AMR Surveillance System (GLASS); Antimicrobial Consumption/use; Pricing and availability of medicines; research on AMR; monitoring-using existing systems and indicators where possible
- African prices and availability medicines platform (APRAMED), aiming to regularly monitor and inform decision-making for pricing regulation and scaling-up of medicines availability.
- Establishment/reinforcement of national surveillance systems, diagnostic and laboratory quality assurance capacities

Health Infrastructure:
- Tools and guidance implementation of Quality Management Systems; Training and dissemination of IPC tools and guidelines

Supply Chain of Medicines, Laboratory Equipment and Supplies:
- Development/review of National Essential Medicines/Diagnostics Lists; inclusion of AWaRe categories
- Pooled procurement in small islands
- Joint work plan with Association Africaine des Centrales d’achats de Médicaments Essentiels (ACAME)

Health Financing:
- Extensive support from AFRO

Specific actions that could be encouraged at country level to achieve UHC
- Equity
- Access and Quality
- Efficiency
- Accountability
- Sustainability and Resilience

She concluded that there are opportunities to achieve UHC while addressing AMR, and that investments for interventions with high impact, low complexity, low level of resources that build resilient systems should be prioritized, as well as interventions that lead to more robust data on AMR. There needs to be coordination, harmonization, convergence and joint efforts.
The presenter made a video presentation at the conference as he was unable to be physically present. He began with a quote that brought out the magnitude of the problem.

He asserted that AMR is one of the greatest threats to modern medicine. Despite the fact that there is no accurate data available, OECD predicts that 2.4 million people could die in Europe, North America and Australia due to superbug infections between 2015 and 2050. This he felt was a conservative figure and said that it is likely to be higher, especially in Africa, where the burden of infectious diseases are highest. In some countries more than 40% of infections are due to bacteria that are resistant to existing antibiotics, meaning that these cannot be treated. He went on to compare the economic damage of uncontrolled resistance to the 2008-2009 global financial crisis. There is an up to 3.5% fall in global GDP and a fall in Livestock production. The economic impact is between 4-10% in low-income countries and 2.5% in high-income countries. This could be due to infections being more difficult to treat, more deaths occurring, more chronic infection and longer hospital stays that then cost more.

He explained that AMR threatens the SDGs 1, 2, 3, 6, 8 and 12, and explained how food security could be affected due to infections in animals, and clean water due to antibiotic residues from pharmaceutical companies, factories, hospitals and also agriculture. AMR has many dimensions including human health, agriculture, environment and crop protection. In human health, he explained, we can distinguish between health-care based settings and community-based intervention. Most of the resistant gram-negative bacteria will appear in health care settings. Hand hygiene is therefore important and can reduce mortality due to these infections by 58%. We need to invest in stewardship programs and environmental hygiene.

"Left unchecked, antimicrobial resistance (AMR) will roll back a century of medical progress, damage the environment, interrupt food production, cause more people to fall into extreme poverty and imperil global health security" Dr, Tedros Adhanom Ghebreyesus, Director General, WHO.
The World Health Assembly has approved the Global Action Plan for AMR with 5 objectives. Every member state was asked to develop their own National Action Plans to translate the GAP into their own plans. 2018/2019 Tripartite Country Self-assessment Survey data showed that 73% of the world’s countries currently have NAPs in place. It was good to note that 68% of low-income countries recorded as having their NAPs in place.

In regards to UHC, it is important that everyone has access to good health services without facing financial hardship. At least half of the world’s population still do not have full coverage of essential health services, which means that people fall into extreme poverty each year due to health expense. 800 million people spend more than 10% of household budget on healthcare. In low-income countries, AMR could drive an additional 24 million people into extreme poverty by 2030. There should be improved access to health care providers, vaccines and quality medicines. Healthy people do not need antibiotics, so people need to pay attention to prevention. He went ahead to stress the key entry points for AMR in UHC as below:

- Public health is key. IPC is most important to prevent infections. In low income countries less than 50% have an IPC policy in place and that needs to improve
- Infectious diseases management – it is important that we have treatment guidelines in our hospitals and in Primary Healthcare settings
- Essential medicines need to have good quality antibiotics; we need to be able to quantify the consumption of antibiotics, so as to be able to develop good policies.
- A good health workforce is key. Nurses should be trained in the proper use of antibiotics and IPC.
- Finance, which includes the ability to reduce cost that people need to pay for treatment.
- Regulation in the pharmaceutical chain.
- Leadership and governance is key, particularly if there is a minister that supports the development of NAPs in a ‘one health’ setting.
- Monitoring and surveillance to set up systems to monitor the resistance Is helpful.

It is important to remember that AMR is not only a problem in humans. It is also a problem in agriculture and animals so it is important to approach the problem in a one health context.

Key Takeaways:

- AMR has consequences for human health global development agenda If left unchecked, AMR will hinder the achievement of UHC
- A lack of UHC will exacerbate AMR Invest in UHC and PHC
- One Health Approach, all sectors must collaborate for effective response

“You can make a difference!”
The presenter echoed that AMR is a serious public health concern with political implications. He stated that it has health, economic and social effects. There is therefore need to mitigate beyond the health agenda. There is a key linkage between AMR, UHC and SDGs. He lauded the theme of the conference, saying that it was timely and would inform the UN high level meeting, set to be held in September 2019. He said that the progress of AMR should be in tandem with UHC, addressing issues of equity, so that everyone can access quality medicines. Achieving UHC is one of the targets set by the various nations as part of SDGs. Kenya has great UHC aspirations set to be achieved by 2022, which provides an opportunity for AMR efforts. In sub-Saharan Africa, up to 50% of human fatality can be attributed to misuse of anti-microbial drugs. He emphasized that the misuse of anti-microbial drugs is a serious problem, and that the challenge goes beyond the traditional health system boundaries. Collaboration is needed between those who are responsible for health prevention and health provision. The presenter emphasized that the Government of Kenya is committed to the UHC agenda.
2.1 AMR and National Action Plans – Marlon Banda, Churches Health Association of Zambia, Director of Pharmaceutical Services & Board Chairman EPN

The presenter stated that the SDG3 includes a commitment to achieve UHC by the year 2030. This implies significant increases in access to healthcare, including treatment of infections. He explained that the health of people is connected to the health of animals and the environment. It is therefore not possible to discuss and deal with human health without discussing the animals and without reflecting on what is happening in the environment. This is the basis for the One Health approach, which should be considered in the development of NAPs, as all aspects are tackled together in one platform.

There has been progress of the AMR response, with 100 countries having prepared a NAP, while a further 67 had plans in progress. He emphasized the Global Action Plan objectives discussed earlier by the presenter from WHO HQ, as well as the statistics highlighted earlier. He concluded that there is need to raise awareness in the general public, advocate for policy and regulatory change and lead antimicrobial stewardship on the ground for the general public to understand and want to implement the NAP.

2.2. Combating Antimicrobial Resistance to Achieve Sustainable Development Goals, South African perspective – Olga Perovic, AMR Lead, National Institute for Communicable Diseases South Africa

The presenter began by explaining that AMR is not a new issue, but has been in existence for many years. It is related to SDGs, 1, 2, 3, 6, 8, 12 and 17. It is not only related to infectious diseases, but also to non-communicable diseases. The “One health” approach is important in tackling AMR. AMR is an urgent global threat with deep implications across low and high income settings for health security and sustainable global development. Recognizing the urgency and complexity of the AMR threat, the United Nations General Assembly (UNGA) held a high level meeting on AMR in 2016, which brought this issue to the highest political level and called for commitment to an integrated One Health approach response. Actions include alignment of efforts with the World Health Organization (WHO) Global Action Plan (GAP) on AMR adopted by the Member States in 2015. Member States were expected to develop and have multi-sectorial national action plans (NAP) on AMR in place by the 70th World Health Assembly in 2017.

The presenter explained the South African situation. Millions of South Africans lack healthcare cover. According to the 2015 General Household Survey (GHS) report, out of South Africa’s population of over 54 million people, only 17.4% are covered by a South African medical scheme. This means that only 9.5 million South Africans have access to private medical care while more than 44 million do not. The leading barrier to private healthcare in South Africa continues to be the cost. The millions of South Africans living without medical cover put increasing pressure on the public health system. Seven in every ten (70.5%) households opted to go to a public clinic or hospital as their first point of access if they felt ill or sustained an injury. Public health uses almost 11% of the government's total budget.
The South African journey on AMR:

- It began in 2011, with the publication of the Situation Analysis highlighting that South Africa had a quadruple burden of resistant infectious diseases – MDR TB, Drug resistant HIV, Resistant Malaria and antimicrobial resistance (AMR).
- In October 2014, the Minister for Health launched the National AMR Strategy Framework, which spans 10 years (2014-2024), and outlines the country’s plan for the management of AMR and the improvement of patient outcomes.
- Following on closely to the World Health Assembly endorsing the Global Action Plan in 2015, South Africa developed and published an Implementation Plan for the AMR Strategy Framework to guide the implementation of the strategy.
- Since then South Africa has been working actively with the animal health and environmental colleagues to update the AMR Strategy Framework, and incorporate more relevant interventions from these sectors and this will be published in the near future.

2.3 AMR and UHC - Dr. Andreas Sandgren, Deputy Head, ReAct Europe

The presenter began with an explanation on what UHC is and the objectives of UHC including equity, quality of health services and protection against financial risk. He explained that Primary Health Care (PHC) is an essential component of this. He explained the focus of The 1978 Declaration of Alma-Ata – ‘Health for All’ through PHC. Forty years later, in 2018, The Astana Declaration gave a renewed commitment to PHC to achieve UHC and the SDGs, including universal access to effective antibiotics as well as quality, access and care.

Key factors linking PHC and AMR:

- This reaffirmation of the importance of primary healthcare is timely, given the growing threat of AMR: high background rates of infectious diseases, rising incomes, coupled with easy over-the-counter access to antibiotics, driven in part by lack of access to good-quality primary healthcare, are exacerbating the problem of resistance in LMICs.
- LMICs are particularly vulnerable because the second-line antibiotics needed to combat most resistant infections are often unaffordable.
- Antibiotics are often used as a substitute for basic public health. When formal primary healthcare is missing, patients obtain antibiotics from pharmacists or lay providers.
- In poor regions with ineffective infection prevention and control and limited access to clean water and sanitation, health care has come to depend on cheap antibiotics.

Conclusions

- Sustainable access to effective antimicrobials is essential for the functioning of all health systems.
- AMR poses a risk for the financing of UHC programs
- Antimicrobial resistance is seriously undermining the essence and objective of UHC

Next Steps

- The IACG urges existing and future financing mechanisms including financing streams for UHC to give AMR greater priority in their resource allocations.
- UN General Assembly convenes in September – High-level meeting on UHC which will include reporting back on AMR political resolution
- UHC resolution – Need member states to argue for AMR to be included. Opportunities to address it in the strongest possible way.
- Need to act on IACG recommendations and ensure AMR remains high on global political agenda with strong governance and commitments by governments to act.
- WHO, FAO, OIE, UNEP Global Framework for Development & Stewardship to combat AMR.
- Member State obligations for following through this work might intersect with UHC.
- Dialogue with member states on a way forward to secure commitments and action.

**Question and Answer Session: (Panel: Olga, Laetitia, Andreas and Marlon)**

- *In what ways is WHO Africa Region supporting African countries in preparations of NAPs?*
  - Training and collaboration of the National Focal Points – trained 300 focal points from 44 countries, also support to monitor and elaborate plans. On UHC, a WHO methodology is in place and was adopted by member states, and has discussed this with them on priorities, which lead to a joint work plan for the countries. Helps also to finance the various support areas of the countries.

- *What actions is WHO taking to make UHC a reality?*
  - WHO provides practical guidelines on how to achieve/implement UHC, and has daily activities on support for all areas including MCH, service delivery, etc. with technical support to countries. WHO has a list of countries to be visited every year to discuss priorities within the framework of actions. WHO is supporting these as much as possible collaboratively with other players, with close monitoring.

- *Comment: UHC feels like the recycling of old policies, so there is need to highlight what is different to avoid going round in circles.*

- *Different bodies and organizations are involved in the development of NAPs. Is there a way that these can be consolidated especially in Africa?*
  - Coordination needs to be managed under a full time secretariat that manages all activities to enhance synergies. This has to be deliberate. It should take the form of a clearing-house, obligatory participation and reporting on AMR. This will lead to success.
  - Financing and accountability needs to be strengthened

- *Share experiences from South Africa (SA) on interventions, assessment and monitoring of surveillance program.*
  - We knew that surveillance is complicated and therefore went ahead to set up laboratories for reporting purposes, when interventions to address AMR started. Our AMR Champions monitor resistance trends and report on the AMR situation twice yearly.”
  - Trainings at two centers, are funded by government. In one year, 4 to 5 week long trainings done,. It’s intensive process.
  - On UHC, SA is tackling financing of UHC, and who is to fund it.

- *HIV: 40 million people are infected. Why is there not enough emphasis on AMR and HIV infection, backed up with data, especially since it is worst in Africa?*
  AMR features how to look at HIV populations. Investigations have proven that highly resistant organisms are not necessarily linked to HIV. However, other organisms such as fungi e.g. *Candida*, reflect a different scenario and research/investigations on this are ongoing.
2.4 Global Health Security Agenda – Management Sciences for Health, MTaPs - Program
Director Francis Kofi Aboagye-Nyame

The presenter began with an introduction to the International Health Regulations (IHRs). He noted that IHRs are necessary because health threats have no borders; travel and trade are made safer; global health security is enhanced; daily threats are kept under control; and ultimately all sectors benefit. He then proceeded to present The Global Health Security Agenda (GHSA). The GHSA was launched in February 2014 to advance a world safe and secure from infectious disease threats, to bring together nations from all over the world to make new, concrete commitments, and to elevate global health security as a national leaders-level priority. The G7 endorsed the GHSA in June 2014.

GHSA Objectives Include:
- Advancing a world safe and secure from infectious disease threats (prevent avoidable catastrophes);
- Bringing together nations from all over the world to make new, concrete commitments (detect threats early);
- Elevating global health security as a national leaders-level priority (respond rapidly and effectively).

GHSA is a shared responsibility that cannot be achieved by a single actor or sector of government. Its success depends upon collaboration among the health, security, environment, and agriculture sectors that aims to build capacity to prevent, detect, and respond to infectious disease threats (natural, accidental, or deliberate).

Progress:
- Growing partnership of over 60 nations
- Emphasizes multi-sectorial approach, One Health
- Support 19 technical areas and 11 action packages, including that on AMR to strengthen IHR
- Joint External Evaluation (JEE) tool to
USG Commitment to GHSA
Technical priorities include building partner countries’ capacities across 16 JEE technical areas, including AMR.

Goals
1. Strengthened partner country global health capacities
2. Increased international support for global health security
3. A homeland prepared and resilient against global health threats

The principal implementers are USAID and CDC. The Medicines, Technologies, and Pharmaceutical Services (MTaPS) and IDDS programs are under the USAID Office of Health Systems (OHS).

The MTaPS Program
The goal of MTaPS is to enable low and middle-income countries to strengthen their pharmaceutical systems to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medicines and medicine-related pharmaceutical services.

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<th>MTaPS Program Objectives:</th>
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<td>1. Pharmaceutical sector governance strengthened</td>
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<td>2. Institutional and human resource capacity for pharmaceutical management and services increased, including regulation of medical products</td>
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<td>3. Availability and use of pharmaceutical information for decision-making increased, and global learning agenda advanced</td>
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<td>4. Pharmaceutical sector financing, including resource allocation and use, optimized</td>
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<td>5. Pharmaceutical services including product availability and patient-centered care to achieve desired health outcomes improved</td>
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Key observations and lessons learnt
- Multi-sectorial (One Health) coordination
  - Such a platform exists in all countries
  - Need support with improving functionality and helping establish/strengthen AMS & IPC TWGs

- AMS
  - Policy, guidelines, and programs lacking in most countries
  - Need support with developing these first, then with implementation
  - Need to strengthen/establish DTCs

- IPC
  - Policy, guidelines mostly present
  - Need support with implementation, auditing, monitoring, and feedback
  - Need to strengthen IPC committees

Conclusions
- AMR, Ebola, MERS, AI, and other outbreaks remind us of the importance of the GHSA
- A focus on medicines use – human and animal – and not just on availability
- All hands on deck approach
- Focus on strengthening country capacity to progress towards next JEE/IHR level
Participants listen attentively to the presentations

2.5 UN discussions on access and innovation - Viviana Muñoz, Programme Coordinator, Development, Innovation and Intellectual Property Programme

The UN General Assembly (UNGA) and subsidiary bodies, i.e. third committee, is the main decision-making body of the UN, representing all 192 Member States. It is responsible for influencing Global Health Priorities. The membership include other UN agencies e.g. WHO, UNICEF, UNAIDS, UNFPA and Human Rights Council. It advocates for a multilateral and multi-sectorial approach to strengthen both the global capacity and nations’ capacity to prevent, detect, and respond to human and animal infectious disease threats, whether naturally occurring or accidentally or deliberately spread. The presenter emphasized the need to focus on the interlinkages between the national agenda and the global health agenda.

Global Action Plan for Healthy Lives and Well-being for all

The commitment follows a request from Chancellor Angela Merkel of Germany, President Nana Addo Dankwa Akufo-Addo of Ghana, and Prime Minister Erna Solberg of Norway, with support from United Nations Secretary General, Antonio Guterres, to develop a global action plan to define how global actors can better collaborate to accelerate progress towards the health-related targets of the of the 2030 Sustainable Development Goals Agenda.

Global Action Plan:
Launch of plan at UNGA in September 2019
To accelerate progress of SDG3
Coordinated by WHO – including 11 agencies
Common milestones 2023
2.6 One Health – AMR - IACG Co-convener – Anthony So, ReAct North America: Connecting Global to local and local to global (Video recording)

Dr. Anthony So made the presentation through an audio recording. For only the fourth time in history, the UN General Assembly (UNGA) addressed a global health issue, and it was antimicrobial resistance. In 2016, the UNGA adopted the UN Political Declaration on AMR, both embracing a One Health approach to AMR and acknowledging the need to strike a balance between affordable access and stewardship for life-saving antibiotics. The Declaration called for the creation of the UN Interagency Coordination Group (IACG) on AMR. This advisory group was half comprised of intergovernmental agencies ranging from the Tripartite agencies to UN Environment, UNICEF, the Global Fund and UNITAID, and the other half comprised of independent experts. Two years later, in April 2019, the IACG delivered its recommendations to the UN Secretary General.

Selected Highlights from the IACG Recommendations and Considerations:

- Greater public purchase over antibiotic chain, especially antimicrobial production facilities and pooled procurement mechanisms;
- Building on and extending PDPs in human, animal, and plant health;
- A call for the provision of political, financial, and technical support of civil society; and
- Private sector to test innovative approaches, realign economic incentives and engage in environmentally sustainable production

Why must universal health care (UHC) address AMR?

Noting how central a role AMR plays in achieving UHC, Dr. So began by drawing connection between drug-resistant infections and preventable mortality. The higher costs of second-line antibiotics might also be averted in the face of drug resistance. As the background drug resistance rates mount, so might the need to place microbiological lab capacity in level I or II healthcare facilities to carry out antimicrobial susceptibility testing of patients with possible bacterial infections. Importantly, the missions of addressing AMR and of achieving UHC are aligned. Antibiotics are essential to effective healthcare delivery, and effective healthcare delivery provides...
the necessary infrastructure for enabling sustainable access to antibiotics and their continued usefulness in saving lives.

**Addressing AMR as part of UHC**

Dr. So emphasized the need for AMR to be addressed as part of the UHC agenda, encompassing the following:

- **Coverage versus Care.** When discussing how to address AMR, clearly care, not just coverage, matters. This includes therapeutic, financial and structural access to antibiotics.
- **Access but not excess.** Equitable and affordable access, but responsible and prudent use—Striking the balance between access but not excess is at the heart of addressing AMR.
- **Quality of care.** Effective stewardship of these antibiotics will depend on supporting behavior change through effective awareness creation, communication, and appropriate incentives – all measures related to quality of care, not just access.
- **NAPs within the context of SDGs.** The enabling environment for delivering quality care is rooted in the strength of key national systems for vaccination, infection prevention, and hygiene, as well as laboratory services.

**How to connect global to local and local to global**

*Several different governance structures connecting the global to the local have been proposed.* The IACG recommendations call for the creation of a Global Leadership Group and an Independent Panel on Evidence for Action Against Antimicrobial Evidence, both supported by a Tripartite Secretariat that appears to be housed at WHO within the AMR department. In calling for the creation of an Independent Panel, the IACG recognized the need to resolve differences across the expert processes at the Tripartite agencies and also to bridge the intersectoral gaps in laying out guidance for AMR. It would be charged to “report on progress and gaps, provide recommendations for adaptation and mitigation and advocate for action.” Are there lessons to be drawn from efforts like the Intergovernmental Panel on Climate Change, or IPCC?

Importantly, there was also the call for a Multi-stakeholder Partnership Platform through which key stakeholders—and notably public interest NGOs—might have voice into the policymaking process. Low- and middle-income countries must actively engage in the process of shaping these governance structures and ensure that they have voice, if not leadership roles, in these bodies.

*Perhaps more important than global governance structures are how to ensure at the national and local levels our communications lead to collective action and change.* Ensuring that the communications at the national and local levels lead to collective action and change involves a cycle of change including targeting priorities, raising awareness, supporting behavior change, enabling collective action, and monitoring for accountability, which then circles back to targeting priorities. Several approaches can advance this cycle by identifying “hotspots” for priority intervention and communications, providing modeling for predicting the impact of different intervention options, organizing campaigns that mobilize healthcare workers and motivates the public, making competency in antimicrobial stewardship a professional credentialing requirement, and creating collaborations for peer-to-peer learning.

*Investing through a One Health lens is vital in mitigating the impacts of AMR.* If we do not make investments in a package of AMR containment measures, specifically in low- and middle-income
countries, up to 24 million more people could be forced into extreme poverty by 2030. The IACG describes two buckets of financing for AMR – existing funding and the need for additional and increased future investment. One important pool of existing monies may well be the billions of dollars that we spend today for addressing drug-resistant infections, but the key question is how to redeploy such monies in a way that better averts future costs of AMR. Regardless, the choice is clear: pay now to address AMR or pay much more later.

In connecting global to local, monitoring for accountability will play a key role. The Tripartite Monitoring and Evaluation Framework for the GAP on AMR puts forward key measures for monitoring for accountability, countries have reported on their progress on addressing AMR in self-assessment reports, the Global Antimicrobial Resistance Surveillance System (GLASS) represents an ambitious effort to support global surveillance efforts, and the WHO Global Observatory on Health R&D tracks global health R&D activities, including the R&D pipeline for new antibiotics. However, it is vital that the underuse of antibiotics is monitored, and more importantly, it is vital that civil society continue to be a part of the global efforts to serve as an AMR Watch and hold governments accountable. While Tripartite agencies and healthcare delivery systems are responsible for making progress to address AMR, civil society can go where intergovernmental agencies might not.

2.7 IACG Recommendations to the United Nations General Assembly – Martha Gyansa-Lutterodt (video recording)

This session was presented through a video recording. The presentation was about IACG’s recommendations to the UNGA. She noted that the drivers of microbial resistance have everything to do with UHC, and hence if not handled properly, the goal of leaving no one behind may become a mirage, even as antimicrobial resistance wipes out all achievements made over the years. She further observed that 8 SDGs will not be achieved if AMR is not addressed. These drivers are diverse in nature. These include:

- Human driving the misuse of antibiotics;
- Improper water, sanitation and hygiene;
- Environmental discharge of waste of healthcare products through manufacturing firms;
- Foods and feeds that are subjected to poor infection and disease prevention and control programs.
- Terrestrial and aquatic animals e.g. foods and fishes exposed to growth hormones.

**Recommendations:**

| a) AMR is about people and settings – progress is more than having an action plan. |
| b) Innovation to secure the future – This means that we need diagnostics to secure the future. |
| c) Collaboration – with all stakeholder in research and development |
| d) Investment for a sustainable response – Countries need to do domestic financing mobilizing. |
| e) Strengthening accountability and global governance (this is missing in the GAP) - for AMR and “One Health” |

IACG’s Recommendations:

- **Accelerate progress in countries** through effective and tailored national response plans, political commitment and coordinated multi-sectorial efforts. This must go beyond development of NAPs and be custom made to African needs.
Innovate to secure the future through research and development of new antimicrobials, diagnostics, vaccines, waste management tools and other technologies that we can use to get value for money and to secure the future.

Collaborate for more effective action. Collaborate using a multi-sectorial one-health approach, with civil societies, the private sector, national governments, academics and funders, for more effective action.

Invest for a sustainable response. Invest in innovative approaches to AMR control with a focus on sustainable domestic financing commitments by national governments.

Strengthen accountability and global governance. Strengthen accountability, surveillance and global governance to raise the profile and urgency of AMR. There is currently no overarching body which can demand accountability from WHO, OIE etc. There is need to put in place governance mechanisms.

Session 3 – How is AMR affecting people in your country and what is your country progress in implementing NAP from last conference? – Moderator Mercy Korir – Medical Journalist, KTN.

3.1 Plenary - Panel discussion
This was a panel discussion involving representatives from 4 countries namely Ghana, Malawi, Madagascar and Sudan. The Moderator, Mercy Korir posed the following questions to the panelists:

Question 1- How is AMR affecting people in your country and what is your country progress in implementing NAP from last conference?

Q1 - Ghana – Boi Kikimoto - Head-Public Health & Food Safety-, AMR Focal Point
Ghana was one of the first countries to have finished their NAPs. Since the last conference, they had put down all protocols, standard operating procedures (SOPs) in accordance with the NAP to ensure that a system for surveillance was in place. Ghana has harmonized all protocols for the human sector, animals and the environment. Ghana had also been able to assess the various laboratories that were going to carry out AMR surveillance. Ghana is trying to do a world health assessment of all the referral laboratories for both the human and the animal sector. This includes all regional hospitals, and public health laboratories that are going to be involved in AMR surveillance system. Ghana has also been able to carry out a progressive improvement pathway of effort to assess the NAP. Ghana has over 70% achievement, just because of political will and support from the presidency up to the senior level of the technical working groups. They have also carried out a KAP study in the poultry producing areas, hence have been able to follow through certain tasks in the NAP. All partners are required to align with the NAP if they have to work in the health, animal and environment sector.

Q1 - Malawi – Watipaso Kasambara – AMR Coordinator Malawi
Malawi had not launched its NAP, although it is finalized. It got approved and there has been momentum building with the ministry, because of the strong will of the national coordinating
members, some of whom were present at the conference. These members have shown strong commitment in driving the AMR agenda in Malawi. Malawi has done assessment of labs, and with help from The Fleming Fund, built momentum in the country for the road map of country progress. The greatest achievement has been the mainstreaming of AMR into the existing government framework. She noted,

“What has stood out, which is a great achievement and which needs emphasis is the mainstreaming of AMR into the existing government framework. Malawi has managed to do that – to mainstream AMR to become a priority. We are called for meetings even for HIV and for many programs, because they critically understand that AMR is a challenge and the program can be incorporated into the system, and we can align resources together.”

Malawi has been working with the research unit to ensure that AMR is included. AMR has become a priority and the program has been incorporated into the system. She further mentioned that Malawi was one of the countries selected by WHO as a pilot to test the AMR stewardship tool kit. Malawi has finalized the study and the report, which has given a lot of recommendations is out.

Q1 - Madagascar – Carmen Randriamanampisoa, Assistante Technique à la Direction de la Veille Sanitaire, de la Surveillance Épidémiologique et Riposte

The panelist reported that Madagascar finished the inauguration of NAP in 2018, and that the country has a multi-sectoral AMR Coordination Control Committee. Integrated disease surveillance and response is given through the MoH, where data for GLASS has been presented since 2017/2018. Surveillance is helping laboratories in six regions, where there has been repeated advocacy with ministers. The NAP was adopted and has been integrated as a government program since April 2019. The launch ceremony was set for August 8, 2019 spelling out commitment in the fight against AMR. It is expected to be implemented in 5 years and the project would cost, approximately 30 million dollars.

Q1 - Sudan – Mirghani Yousif - Head, Medication Safety Research Chair

Dr. Mirghani noted that for the last 6 months, Sudan has been struggling with political instability. With regard to the human sector, he observed that Sudan was in the process of completing the plans for its priority interventions. Overall, the plans were for interventions around behavior change. The country was also in the process of collecting data on the different interventions as well as doing auditing for the interventions, including the standard analysis. They were also doing surveillance on antibiotic consumption.

Question 2 - One of the big issues that came out from the conference last year (2018) was that awareness to the public was still a challenge. The moderator then sought to find out from the four panelists if, in their countries, they had made any significant progress in involving the public to know about AMR. The panelists responded as follows:

Q2 - Sudan: The panelist noted that, in Sudan, like any other African countries, patients are paying for their own medication and are often looking for self-medication, hence contributing to AMR. The challenge is therefore to change the behavior of the public and to increase awareness about AMR. To this response, Dr. Korir sought to understand the notable change from the public owing to this awareness. Dr. Mirghani confirmed in the affirmative that there is a change. He mentioned
that these efforts have led to the establishment of a new collaboration between the universities, which are increasing the awareness on irrational use of antibiotics.

**Q2 - Ghana:** Boi Kikimoto reported that there is some improvement in Ghana as far as awareness was concerned. Part of this involved carrying out a KAP study which indicated that awareness needed to be targeted to different groups and with different messaging. Consequently, the country developed some materials targeted at various segments including the prescribers, physicians and pharmacist and those who sell the drugs. The KAP study interviewed around 112 farmers and realized that 53% had been using antibiotics just for prophylaxis alone not any treatment. 35% were using antibiotics to increase production and 8% using them as growth promoters knowingly. Following this revelation, the country has now developed measures to educate them again.

**Q2 - Malawi:** Malawi has made progress in awareness. Malawi realized the need for the public to know the real life stories. They are thus focusing on telling stories so that people begin to know that there is a challenge. Malawi uses the media a lot, e.g. investigative journalism on real life. This is helping the public to know what AMR is about. They have two journalists in the country who keep telling the story. They are currently putting effort to ensure that there is visibility in the radio and TV, and will continue raising awareness with the stakeholders through the different platforms. They intend to develop print materials that could be sent to different stakeholders, and also raise awareness using conferences.

**Q2 - Madagascar:** Madagascar has begun to sensitize the MoH using Facebook to send messages, but only a few people have access to Facebook. The messages are in French. This is however undermined by the political instability. The country hopes to intensify awareness after the upcoming official launch of NAP. The issue of political instability and interference was also highlighted in the 2018 conference.

After the panelist presented their perspectives on progress across the different countries they represented, the moderator extended the invitation to any other country, which was not represented in the panel to share their countries’ progress on their NAPs since the last conference. Representatives from 2 countries, Togo and Zimbabwe shared the following updates:

**Q2 - Zimbabwe (Tapiwanashe Kujinga – Director, Pan- African Treatment Access Movement [PATAM]):** The NAP was approved in 2017. The country started working on the implementation of surveillance strategy, and it is across the different sectors. Within surveillance, the country has been working through the GLASS and the ATLASS systems, which assess the capacity of the laboratory centers. The Fleming Fund has also come through, investing in capacity building of a number of laboratories which are part of the surveillance system. There is a consortium that was started by the Fleming Fund, which will also be collecting data. A number of stakeholders, including the hospital doctors have been sensitized in terms of Antimicrobial use; and irrational use of medicine. Zimbabwe is also coming up with a framework for AMR research and development. This will help in mainstreaming AMR agenda. The country is also in the process of coming up with communication strategy, which will help to frame/craft the AMR agenda.

**Q2 - Togo (Prof. Salou Mounerou, AMR Focal Point, University of Lomé):** The country started the implementation of the NAP in 2018. In March 2019, the MoH did a campaign on the One Health Approach, bringing together different sectors. Through the campaign, other sectors
including the animal sector, understood the danger of their activities. There is currently a partnership with the national TV aimed at creating awareness on one health.

### Commitments by Panelists to be reported in the next conference in 2020:

- **Sudan:** Looking to complete what they have begun; complete the analysis and also to acquire what they are missing with regard to some facilities. They are also looking forward to a stable country
- **Ghana:** By next year Ghana will be coming back with data - real data.
- **Malawi:** Expects to see real action. The observed that most member states make political statements, but no real action, and no financial commitment. Answers to the following questions should be pursued: What is the government doing? Is it investing into AMR? Is the government really committed? She argued that, if this is not made sustainable, then, we cannot win this war.
- **Malaysia:** Madagascar will make efforts to involve the Ministry of Environment and Ministry of Livestock. Most of the partners involved for now come from human health. The panelist hoped that, come next year, many partners from agriculture and other ministries will come in. She also hoped that, after the official launch of the NAP, resources would be mobilized to implement a campaign to raise the awareness.

### 3.2 Breakout Session One

The Moderator explained the breakout sessions activities to the participants before releasing them to their respective groups. The Group chairs were: Japhet Opintan – Senior Lecturer, University of Ghana; Yara Mohsen – Infectious disease Clinical Pharmacist in charge of the AMS Program – Joint Commission Accredited Hospital, Egypt; Steve Kisembo – Medical Director – Bethesda Hospital/CBCA, DRC; and Kusu Ndinda – Country Project Director, MSH/MTaPS, Kenya.

In all the groups, participants were asked to describe how AMR was affecting people in their respective countries and what the progress was in implementing NAPs from the last conference held in 2018. The objective of the sessions was to steer a discussion into letting the participants identify how AMR is connected with many aspects of UHC and making them aware of the impact AMR is having, and will have on achieving the goals of UHC. The questions explored included:

- What programs are there in your country that address UHC?
- Does your country have an AMR national action plan?
- How is AMR affecting your country?
- Where are you in your NAP implementation process?
- How will AMR affect the achievement of UHC in your country?
- What areas are affected in your country for UHC because of AMR? What are the consequences at different levels of the national health system?
- How is AMR affecting your health systems?
The 40-minute session within the 4 groups generated the following ideas:

**Key Take Home Messages:**

- To some degree, systems for subsidized medical cover is available in all countries, but grossly insufficient and does not cover the whole spectrum of healthcare demand.
- New UHC initiatives are in the pipeline in most of the countries, but financing is still a concern.
- NAPs are there in most of the countries, but there are a lot of challenges in the implementation.
- There is a lack of ownership of NAPs among various stakeholders, as the process of development was not optimal. More countries to enroll in GLASS as few countries are currently enrolled.
- There is a need for localized plans of action, which can be achieved by breaking down NAP into smaller packets.
- Addressing AMR is an essential part of UHC initiatives, as AMR can affect the timeline/costs needed for UHC. But we need to explore issues like malnutrition, IPC, access/excess etc. more carefully.
- We have unrealistic expectations in the NAPs. The solutions have to be tailored to the local contexts; and should have extensive involvement of the local communities and community health workers.

Session 4 – Perspectives on context of issue: Exploration and prioritization of AMR within UHC at country level - Moderator Dr. Mercy Korir, Medical Journalist

4.1 Plenary- Panel Discussions

This was a panel discussion with representatives from Cameroon (Deli Vandi, Director Department of Drugs, Pharmacy and Laboratories; Ghana (Peter Yeboah, Executive Director Churches Health Association of Ghana); Tanzania (Elizabeth Shekalaghe, Registrar Pharmacy Council); and Kenya (Evelyn Wesangula, MOH Kenya, AMR Focal Point). Questions were posed by the moderator and the panelists expected to respond in turns. The questions and the respondents perspectives are highlighted below.

**Question 1: Is it possible to prioritize AMR within UHC?**

**Q1 - Cameroon:** The panelist noted that it is possible to prioritize AMR within UHC. For Cameroon, NAP for AMR was endorsed in 2018. While AMR is their top priority they are not letting UHC. They intend to move with the two programmes together. According to Cameroon’s government agenda, UHC begins in 2020.

**Q1 - Ghana:** This year (2019) the country developed a road map for UHC. That road map is to look at where Ghana is in terms of UHC, where they want to go and strategies required to achieve the desired results. There are seven key areas in the roadmap, and AMR is part of it. There is a strong political goodwill – the President launched the policy. Ghana came up with 20 action points. Out of these 20, AMR features under research and development on how to address AMR. The government looks at it as an opportunity to promote this as part of UHC. The Government considers this as relevant since 40% of the national health budget is on medicine.

**Q1 - Tanzania:** Expects UHC bill to be tabled in parliament in September 2019. Currently have community health fund and national health insurance as a show of commitment to UHC and AMR
agenda. The current priority is to move towards the enforcement of NAP for AMR. Before the action plan for AMR, all their legal framework had already mentioned the need to prioritize on AMR. They are hoping that, come 2020, everything would be in place.

**Q1 - Kenya:** After piloting UHC in 4 counties over the last 2 years, the country has learnt key lessons that has convinced them that it is possible to implement UHC. Four key results areas that have brought the conviction include:

i. **Strengthening of health work force as a result of UHC;**
ii. **Strengthening of the medicines and commodities** (one of the challenges has been interrupted supply of lab reagents) - looking at medicines;
iii. **Strengthening the review of medicines.** AMR secretariat is represented in the National Essential Medicine Committee. There are many opportunities that can be plugged into;
iv. **Strengthening of PHC and engagement of communities.**

The panelist underscored the importance of community engagement, noting that without it, there would be very little that can be achieved on the AMR issues. All these components will be financed by the government.

**Question 2:** One of the issues that came across in the last year’s conference is financing. What more can countries do to make UHC a reality and also AMR conspicuously visible?

**Q2 - Kenya:** Identified opportunity in increasing taxes on beverages that contribute to communicable diseases, but the financing model is still being discussed. The other thing is reframing the AMR story. This has to do with, looking at the cost of infection and modeling what that would mean in terms of financing AMR and UHC. Generating data that can speak to financial modeling. Even just demonstrating the percent of funding towards antibiotics.

**Q2 - Tanzania:** Recognizes that finances cannot be enough. Hence, argues that AMR should be integrated within the existing government health management system. Once it is integrated into the existing programmes then it is possible to sustain the momentum. They also advised for the need to educate the public so that they can be prevented from unnecessary infections and diseases.

**Q2 - Ghana:** Ghana adopts partnerships as a strategy for sustained financing. In developing the UHC framework, all stakeholders/agencies came together. It is out of this framework that each agency takes their plans. They also appreciate the untapped opportunity within the churches and the mosques. Since Christians and Muslims constitute 80%, churches and mosques can be used as a platform for continuous awareness. Ghana has placed AMR under training and research department. One of the recommendations is that the issues of AMR should be incorporated in the curriculum of the institutions.

**Q2 - Cameroon:** Reiterated the fact that financing is a key issue. The country is only sure of just about 35% of finances of what is needed to implement UHC. They would continue promoting good prescription practices, good quality assessment, as well as good treatment policy so that they can have good AMR and UHC programmes.
4.2 Breakout Session Two

This was the second breakaway session of the day. The aim of the session was to find out the priorities of countries when it comes to implementing UHC actions. This exercise was to help the participants rank the aspects of the work within UHC that they would prioritize. In each group, the participants were to capture an overall agreed ranking of prioritization (the common view), and capture specific national differences and disagreements if there was lack of consensus. They were also expected to capture the opportunities, relevance, acceptability and feasibility of incorporating AMR perspectives into each of the UHC activity areas. Through the group chairs the participants explored a number of questions, including:

- How is prioritizing done?
- What factors are normally considered while prioritizing health topics?
- Are they prioritized per department or in general?
- Is prioritization done per disease or per part of the health system?
- Is there a specific/separate process for AMR?
- What role does the Ministry of Finance or National Treasury play in prioritization?
- How do they think AMR interventions could fit within current priorities?
- What would be the most feasible and low-cost intervention on AMR?

The highlights by group are discussed below.

Key Takeaways from Session 4 Breakout

- NAP implementation has to happen in a truly ‘one health’ manner for it to be successful
- AMR should be placed as a priority not just a plan.
- Convince Administrators that AMR can waste away valuable public resources spent on other health domains if not addressed.
- Need for a feedback system for the data collected, and a need to incentivize reporting of data.
- Using existing systems can become cost-effective and administrators become amenable.
- The NAPs can be aligned with the National Health Plans, so financing becomes easier.
- Parliamentary (National Assembly) interventions can be considered, rather than approaching Finance Ministries directly.
- Opportunities should be used effectively and teams should place themselves as helping out the government to achieve its commitments to international community
- Use the political commitment when its available or where it is available
- Link to essential needs that go to development of SDGs and UHC— e.g. if issues of mother and child protection are linked to AMR, then the policy makers will listen
- Mapping UHC gaps in each country because each country is different. Unless they are mapped, gaps cannot be identified, and they cannot be prioritized effectively.
- Map capacity at the country level - diagnostics, human resources, built environment, etc.
- Increase communication on AMR in financial terms e.g. figures and impact on the economy.
- Package the AMR story into strong messages, which can help the decision makers to make a commitment
Reception by Wellcome Trust

A reception to welcome the participants to the conference was held after the sessions on day one, hosted by Wellcome Trust. There was a celebration of the 5th Anniversary of ReAct Africa.

Conference participants at the Wellcome reception

The cutting of the cake by selected conference participants led by the ReAct Africa Director, Dr. Miefin Mpundu (on the right)

Participants at the reception look on
DAY TWO – 24TH JULY 2019

The day began with a recap of day one discussions done by Tracy Muraya (ReAct, Africa). This was followed by presentations were made by two funding agencies.

Introductory Session: Support from Funding Agencies

Fleming Fund- Lucy Andrews, Head of Fleming Fund
The presenter introduced The Fleming Fund as a 265 million UK government commitment to building partnerships in Africa and Asia to help generate and share AMR data always through one health approach. She then explained why AMR is important to The Fleming Fund. “If left unchecked estimates are that 10 million people will die annually from 2050 and the majority of those will be from low-income countries where the burden of disease is greater.” The Fleming Fund is keen on seeing the implementation of the NAPs, and supports the surveillance aspects of the same. The Fleming Fund aims to improve the surveillance of AMR and generate relevant data that is shared nationally and globally. The presenter shared some of the key milestones achieved by the fund.

Wellcome Trust – Jeremy Knox, Policy & Advocacy Lead, AMR
Wellcome is a global charitable foundation, both politically and financially independent. Its charitable activities have supported 14,000 people in 70 countries. It has an expected commitment of £5 billion between 2016 and 2021. Wellcome works in three ways, namely:

- Advancing ideas through supporting great ideas and inspired thinking
- Seizing opportunities by bringing ideas together to make a difference
- Driving reform, to change ways of working so more ideas can flourish

AMR was one of the first challenges that Wellcome decided to take in 2017.

Next steps include:
- Opportunities for a second phase after the initial programme that runs between 2017-2022
- Scoping new opportunities over the coming year.

Presenters respond to questions from the audience
Participant asks a question to the panellists
Session 5: Plenary Moderator – Julian Nyamupachitu, ReAct Africa

5.1 Diagnostics – Revathi Gunturu, Head of Clinical Microbiology, Aga Khan University Hospital Nairobi

The presenter made a presentation of the Aga Khan University Hospital in Nairobi. She spoke of the need to access diagnostics and rapid point-of-care testing to help combat AMR as discussed at the World Economic Forum in Switzerland earlier in the year. She raised concern over misdiagnosis in hospitals that put people at risk of AMR. She explained the current scenario in developing countries for AMR surveillance AMS implementation:

- Poor and broken-down infrastructure of public health care system
- Lack of expertise in special clinical fields like neurology, cardiology and infectious diseases, intensive care, neonatology
- Incompetent or frustrated HCWs due to lack of basic amenities like running water.
- Irrational use of antibiotics and subsequent skyrocketing AMR due to syndromic approach
- Scanty diagnostics

She explained the ideal situation as:

- Reducing mortality, decreasing the use of antibiotics and improving prescriptions.
- Maximising the use of diagnostic technology to foster standard AMS practices and Control, to tackle AMR.

5.2 Quality of medicines – Philip Nguyen, Director, Quality Institute, US Pharmacopeial Convention (USP); Advisor, MedsWeCanTrust Campaign (MWCT)

The presenter introduced the organization as an NGO and standard setting body for the United States for medicines quality, whose standards are used in over 140 countries globally. It is a development partner, especially in Africa to support regulatory systems strengthening for over 20 years, with the previous 10 years through the USAID funded Promoting the Quality of Medicines program (PQM), which helps low- and middle-income countries strengthen health systems by building their capacity for regulating and manufacturing medicines. The organization is a member of the “Medicines we can trust” campaign, the new civil society campaign to advocate for safe, quality assured medicines access everywhere.
He explained that there are many drivers of AMR, including:

- The overuse of antibiotics
- Overuse of antibiotics for growth promotion, and other practices
- Low patient adherence to their treatment regimens.
- Use of poor quality medicines which undermine our stewardship strategies in AMR.
- This “low quality facet” has not, until recently, been explored.
- 1 in 10 medicines circulating in lower/lower-middle income countries on average are substandard or falsified

Antibiotics and anti-malarials, he explained, make up the two largest sub-groups of antimicrobials, and essentially 40% of the reported sub-standard and falsified medicines to WHO Global Surveillance and Monitoring Systems involved either antibiotics or antimalarials. The WHO estimates that globally the world wastes 30 Billion US dollars per year buying, distributing, and using medicines that do not work.

At the May 2019 World Health Assembly, Member States committed to several actions including to:

- Conduct antimicrobial post market surveillance, and take appropriate action to eliminate substandard and falsified antimicrobials
- Enhance cooperation at all levels for concrete action

**Conclusion:** In order to improve our chances to realize meaningful UHC, we need to secure medicine quality with Regulatory Systems Strengthening efforts through AMR NAPs.

5.3 Experience of regulation of quality of medicines within the UHC context- Zivanai Anthony Makoni, Senior Regulatory Officer, Medicines Control Authority of Zimbabwe

Experience of regulation of quality of medicines within the UHC context. The idea is to protect and promote public health by assuring that medicines marketed in the country are safe, effective and of good quality. Scope of prequalification includes:

- Limited to priority medicines as published
  - Special authorizations ‘exemption to registration requirements’
Global Antibiotic Research & Development Partnership (GARDP) is focusing on drug resistant bacterial infections on WHO priority pathogen lists with an objective to deliver 4 improved treatments by 2023 while maintaining a robust pipeline. Appropriate antibiotic use as well as access are also very important areas that will be addressed. There are two founding partners for GARDP, which are WHO as well as DNDi. GARDP has four main programmes:

i. Neonatal sepsis,
ii. Pediatric antibiotics,
iii. Sexually-transmitted infections
iv. Memory recovery and exploratory including adults with serious bacterial infections.

**Key Successes:**

**a) Neonatal Sepsis**
- Started trials to understand correct dosage and safety of Fosfomycin.
- Launched a Global observation study to understand prescribing practices in 19 sites in 11 countries in partnership with St. George’s University of London, Penta and hospitals across the world.

**b) Pediatrics**
- Developed an international clinical trial network
- Support the update of pediatric evidence-based guidelines
- Design and conduct Pediatric plans acceptable to regulatory authorities e.g. polymyxin B.

**c) Sexually transmitted infections**
- Leading the pharmaceutical development of an antibiotic for drug-resistant gonorrhea.
- On track to start phase III clinical trial in Africa, Asia, EU and USA later this year.

**d) Memory recovery, asset evaluation and exploratory**
- REVIVE: website has 120 experts registered; 755 participants have joined the 5 webinars organized to date; and published 6 blogs.
- Reviewed over 80 new chemical entities, new and ‘recovered’ drugs.
- Initiated projects to identify effective combinations to treat bacterial sepsis.

Since inception, GARDP has been successfully operating and delivery on its stated mandates. And has also now been registered as a Swiss Foundation whose board comprises of leading international figures in global health.

**Part 2 - One Health Moderator – Ann Mawathe, Africa Health Editor, BBC Africa**

**5.5 Are there any synergies within the One Health Concept and UHC – Emmanuel Kabali, AMR Coordinator, FAO, Zimbabwe**

“One Health” means different things to different people. There is no clear definition. It is about all the things that impact on human health. Is it everything else other than human health or also vice versa, the impacts on animal health and environment. It recognizes that the health of humans, animals and ecosystems are interconnected and so there is a need for a multi-sectoral and collaborative approach. When viewed correctly in a UHC context, one Health concept is relevant to disease prevention, health promotion and effective treatment.
5.6 Where are we and where should we be in the animal sector – Allan Azegele, Deputy Director Veterinary Services, AMR Focal Point, Ministry of Agriculture, Kenya

AMR threatens sustainable growth of the agricultural sector and in ensuring food security and trade across different economies. The impact of AMR in animal health includes:

- Loss of livelihoods
- Loss of productivity
- Loss of lives
- Expensive and prolonged hospitalization

Major gaps and challenges:

- Governance and multi-sectoral coordination due to multiple players
- Partner coordination and support is not well streamlined
- Economic investment and outcomes are not well described
- Political will
- Financing of programs, budget allocations, advocacy
- Human capacity/skills are inadequate to fully support the process

In conclusion therefore, it means that achieving UHC in public health is directly linked to animal, plant and environment health.

5.7 AMR and the environment – Mirza Alas, Programme Officer, Development, Innovation and Intellectual Property Programme, South Centre

Some considerations on AMR and the environment include risks of environmental exposure. The Global Action Plan (adopted in 2015) brought out that AMR could circulate between humans, animals and the environment. This could happen through trade, travel, and migration. Genes and some resistance can be found from circulating pathogens in the environment. Others include:

Aquaculture

- Antibiotics are generally added to the feed that goes directly into the water
- Exposure of a broader variety of bacteria to antimicrobials and this can generate resistance

Other environmental exposure routes

- Discharge from hospitals
- Runoffs from farms
- The discharge from pharmaceutical manufacturing facilities
- Waste management

- Antibiotics, biocides and metals
  - Use routinely through society because they kill/inhibit bacteria – they drive resistance
Challenges for developing countries:

- Phase out antibiotics as growth promoters and eliminate the use of medically important antibiotics in agriculture and aquaculture while ensuring productivity and retaining livelihoods.
- Increase research, and knowledge of how the environment facilitates the emergence, persistence and transmission of antimicrobial resistance and find ways in which these can be mitigated.
  - Develop laboratory capacity.

5.8 OIE Strategies, Activities and Best Practices on the One Health Agenda- Jane Lwoyero, Programme Officer, World Organization for Animal Health (OIE), Kenya

The presenter began by explaining the one health approach. OIE has had strong collaboration based on shared principles:

- Prevent and control emerging infections
- Strong collaboration based on shared principles (8 years on):
  - Involved in the IHR – 2005 Monitoring Framework (JEE)
  - IHR – PVS Bridging capacity-building (NBW)

OIE Global database on antimicrobial agents intended for use in animals. So far three reports have been produced. OIE contributes to communication materials. Other projects include:

- Disease surveillance programs in Africa
- Rabies elimination
- Vaccine bank
- Has authored books on one Health
- Involved in the Global HEALTH Security agenda (GHSA)
- Platform for early warning system (GLEW)

In conclusion, there is need for a multi-sectoral collaboration in controlling and managing health risks, which is well-structured
Session 6: Plenary- Case studies on UHC: Examples of UHC Implementation Moderator – Tracy Muraya, ReAct Africa

This was a plenary session where four panelists presented case studies related to UHC implementation in different country contexts. The session looked at the milestones of the different countries, their experiences and challenges, as they implement UHC. The following are the highlights from the four countries:

6.1 Universal Health Coverage in Thailand: – Satya Sivaraman, Communications Coordinator, ReAct Asia Pacific – Presented Philip Mathews Communications Coordinator, ReAct Asia Pacific

Thailand is among few middle income countries globally that has a well-functioning UHC system. The main driver behind the Thailand’s UHC has been the idea that access to free health is a fundamental right, an entitlement and the governments must take full responsibility. In Thailand, UHC has been implemented over several decades, being championed by civil society groups, health professionals and also key political parties. Currently the UHC policy provides a comprehensive benefit package, free at point of service for up to 98% of the Thai’s population. The citizens have access through a geographically extensive network of primary, secondary and tertiary facilities. In 2015, public hospitals accounted for 75% and 79% of total hospitals and beds respectively in the country. And since 2002, out-of-pocket expenditure in the country has reduced from 27.2% to the current 12.4%. The UHC system has brought about several benefits including reduced infant and child mortality, HIV infections, and workers’ sick days, along with other benefits. With UHC in place, Thailand has also been able to achieve all health related Millennium Development Goals.

In order to ensure adequate service to rural populations, Thailand’s strategy has included recruitment of students from rural backgrounds; medical curriculum reflecting rural health problems; mandatory rural services by all doctors, nurses, pharmacists and dentists graduated since 1972; and financial and non-financial incentives such as social recognition for doctors serving in rural areas. They thus systematically eliminated all the changes that would have undermined the UHC rollout.

In 2010, the burden of AMR in Thailand was estimated to result in 3.24 million day of hospitalization and 38,481 deaths per year, and to cost 0.6% of the national GDP. AMR is also emerging as an important concern in the food-animal farming sector. In responding to AMR, the health authorities have been working on the AMR’s driving factors such as nutrition, burden of infectious diseases, WASH, health literacy etc. for long. Over the decades, Thailand has successfully tackled the problems of malnutrition, ensuring clean drinking water and access to sanitation facilities. The country has also established efficient vaccination programs covering the biggest proportion of its population. Additionally, Thailand has created a network of over a million trained health volunteers who play a critical role in many public health initiatives.
The Antibiotic Smart Use (ASU) project, which started in 2006, was the first major initiative on AMR in Thailand. The project’s objective to reduce unnecessary prescriptions of antibiotics for upper respiratory tract infections (URIs), acute diarrhea, and simple wounds. It used a combination of community mobilization, and policy level initiatives to tackle the problem. In 2009, ASU was adopted into the Thai UHC system’s Pay-for-Performance (P4P policy), an initiative to incentivize health professionals to lower antibiotic use. The policy specified that the rate of antibiotic use for URI, acute diarrhea and simple wounds should not exceed 20%.

**Key Takeaways:**
- UHC and AMR are complementary
- Focus needs shift from access to quality of care and services.
- Moving towards firmer foundation for long-term AMR-related work in the national health system, necessary.
- We need accountability systems and so need to integrate everything. Changing the narrative to catapult our fight against AMR; health is a fundamental right to all citizens.

### 6.2 Universal Health Coverage in Nigeria - Abubakar Aliyu JAFIYA, Nigeria Centre for Disease Control, Assistant Director Surveillance

Nigeria is a lower middle-income country with a population of approximately 180 million people and a GDP of $522 billion. The health care system is largely driven from the public sector, but there is a substantial private sector involvement in the provision of health services. The country has over 34,000 health facilities. The primary care facilities are being supported by the local governments.

The goal of UHC adapted for Nigeria is to improve health status and health outcomes with the specific objectives to ensure adequate access to health care needs for all, financial risk protection for vulnerable women and children, quality assurance and citizen satisfaction with health services. To achieve these objectives, Nigeria monitors some target UHC indicators including:
- Total health expenditure should be at least 4%-5% of GDP; out-of-pocket spending should not exceed 30-40% of total health expenditure; over 90% of the population is covered by pre-payment and risk pooling schemes; close to 100% coverage of vulnerable population groups with social assistance and safety-net programmes; and at least, 80% of the poorest 40% of the population have effective coverage to quality health services. Performance indicators show that currently, the total health expenditure is at 3.7%, total expenditure as a percentage of total health expenditure is at 25%, life expectancy at 53, under 5 mortality per 1000 live birth is 109 and maternal mortality ration per 100,000 live births is 576; and less than 5% of the population are covered by any form of insurance. The country has however recorded some successes including that the country is at the verge of being declared polio free; the growing trend in ownership and use of insecticides treated mosquito nets – this is going to free a lot of resources; and there is increase in the fiscal space for getting money to do some of the UHC activities. For example, the government has earmarked 1% of all the consolidated revenue for the health sector (general tax/revenue; specific taxes, telecom levies, taxes on tobacco and alcohol etc.). The sector is also leveraging the private sector (PPPs, use of tax breaks and harnessing philanthropic interest – trust funds, matching grants, and social impact bonds).
Nigeria has been facing a lot of challenges towards UHC. The first challenge is structural in nature. The health system comprises of three independent tiers with no levers for accountability among the tiers. Consequently, functions of each tier are not clearly defined and the constitution is silent on the roles of different levels of government in health services provision. Other challenges include emphasis on curative care with little focus on preventive care services as well as weak system levers; dearth of human resources especially in rural areas; fragmentation of programs due to multiplicity of implementing partners and development partners; funding gaps; poor coordination and insecurity.

The key levers towards UHC in Nigeria through the government include the National Health Act (2014); the National Health Policy (2016); the Basic Health Care Provision Fund (BHCPF); and 2\textsuperscript{nd} National Strategic Health Development Plan 2018-2022 (NSHDP II). The NSHDP has 5 strategic pillars and 15 priority areas with the goal of reduced morbidity and mortality.

Basic Health Care Provision Fund (BHCPF) is administered through the provisions in the National Health Act 2014 with the main sources of fund being Federal Government Grant, donor funding and other sources including the private sector. The fund is distributed such that 50\% is for BMHCP through insurance, 45\% for primary healthcare and 5\% emergency care. The services supported include ante-natal care; labour and delivery care including caesarian sections and emergency obstetric and neonatal care; family planning services; treatment of childhood illnesses; screening and referrals for non-communicable diseases such hypertension and diabetes; and malaria and TB treatment for adults.

6.3 Universal Health Coverage in Ethiopia – Yidnekachew Degefaw, Team Coordinator, MOH Ethiopia

The country has a total of population of over 100 million people, with 83\% being a rural population. It is divided into 9 regional states and 2 City Administrations. Ethiopia follows a three tier healthcare delivery structure: primary, secondary and tertiary levels. The primary health care is composed of health posts (HPs) responsible for a population of 3,000-5,000 people; and health centers (HCs), which serves a population in the range of 15,000 to 25,000 persons, in the rural areas, and up to 40,000 people in the urban HCs. The country envisions to provide universal health coverage by 2035 through strengthening of primary health care. The objective is therefore to provide accessible, quality, affordable and equitable health care service to the people. In order to implement this, Ethiopia developed Health Sector Transformation Plan (HSTP), which is the first phase of envisioning Ethiopia’s path towards UHC. The major successes this far include progress on the improvement of many health indicators which measure UHC from HSTP; maternal mortality has been decreasing; remarkable achievement on under-five, and infant mortality; maternal health indicators performance from routine HMIS (contraceptive acceptance rate, antenatal care coverage, percentage of deliveries attended by skilled health personnel etc. are all improving); and increased number of skilled delivery attendance. These achievements have been made possible mainly due to the implementation of health extension program; expansion of the health centers; and introduction of the health insurance system.
The health extension program (HEP) was designed to achieve universal coverage of primary health care particularly among the rural population and less privileged communities. HEP improves the utilization of health services through linking community and health facilities, particularly health centers. The components of HEP are family health, hygiene and sanitation and disease prevention and control as well as health education and communication. Currently, the MOH has established the Ethiopian Health Insurance Agency to plan, implement provide Community Based Health Insurance (CBHI) and Social Health Insurance (SHI) Program. The enrollment rate in CBHI currently stands at 38%. Some of the challenges facing the Ethiopian health sector include shortage of health workforce; poor inter-sectoral collaboration during expansion of health facilities; limited engagement of private sector in the provision of primary healthcare, inadequate funding; health extension workers turnover; and issues of services covered by CBHI.

There is support from the Africa governments but not adequate. For example South African Government is already involved in GARDP activities

Session 7: Plenary - Preventing and managing infections Moderator - Oladipo Aboderin Professor/ Honorary Consultant, Obafemi Awolowo University, Nigeria

This was a plenary session. The session involved presentations from four presenters on various topical areas related to IPC. These are highlighted below.

**Key Takeaways:**
- **Expansion of health centers plays a pivotal role for the achievement of UHC.**
- **CBHI is a promising pathway to UHC**
- **CBHI enhance health services utilization and creates pressure on providers for quality care Ethiopia has empowered communities to demand quality health services.**
Hospital Acquired Infections (HAIs) are infections acquired while in the health care setting with a lack of evidence that the infection was present or incubating at the time of entry into the health care setting. Poor IPC as well as increase in invasive procedures and AMR are blamed for the increase in HAIs. Between 5% and 10% of patients get admitted to acute-care centres per year in the United States acquire a HAI. At least 90,000 deaths per year are a result, making HAIs the fifth leading cause of death in hospital. The infections add an extra $4.5 billion to $5.7 billion per year to the cost of patient care in United States alone. Such conclusive data are however not available from many developing countries, but the disease burden is estimated to be higher.

AMR levels have been worse in isolates from HAIs, as compared to community acquired ones. Most of the highly resistant strains like MRSA, VRSA and ESBL, emerged from healthcare facilities and were first isolated in HAIs.

7.2 Implementing National Antimicrobial Stewardship Programs in LMICs – Mirfin Mpundu

One of the major drivers of AMR is the use of antimicrobial agents. Promotion of prudent use of these agents is therefore necessary in prolonging the efficacy and curtailing acceleration of AMR. This involves ensuring access and appropriate use of safe and effective antimicrobials in the human, animal, agriculture and environment sectors. Antimicrobial Stewardship Programmes (ASP) involved coordinated interventions designed to measure and improve the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, including dose, duration of therapy and route of administration. The expected benefits of ASP include improved patient outcomes; optimized selection, does and duration of Rx; reduced adverse drug events including secondary infections; reduced morbidity and mortality; limited emergence of AMR; reduced length of stay; reduced health care expenditures; and promote equitable access.

Some of the factors undermining AMS include lack of awareness, diagnostic challenges, lack of access to quality-assured antimicrobials, lack of policies and framework on AMS and economical and political challenges. To address these challenges, AMS interventions should focus on prescribers, patients, drug providers and general public. For successful implementation, AMS will therefore need to develop an AMS national framework for implementation; anchor the framework into policy; engage key stakeholders; put in place treatment guidelines and tools; and develop M&E tools.
Antimicrobial Stewardship – Yara Khalaf, Infectious Disease Clinical Pharmacist in charge of the Antimicrobial Stewardship Program, International Medical Center Hospital

The presentation was on implementing Antimicrobial Stewardship Program – case of International Medical Center Hospital, Egypt. The hospital applies the CDC core elements for antimicrobial stewardship including leadership commitment; accountability and drug expertise; implement policies and interventions to improve antibiotic use; tracking and reporting Antibiotic use and outcomes; and education. The hospital carries out continuous performance measures in order to track progress. The measures include percentage of Antimicrobial (monthly); percentage of IV to PO compliance (monthly); percentage of surgical prophylaxis antibiotic compliance (random sample measured by infection control team on monthly basis); percentage of Antibiotics medication errors to total medication error (monthly); percentage of acceptance of antimicrobial related recommendations by the physicians from the clinical pharmacists (monthly); defined daily dosing (DDD) of antimicrobials (including restricted antimicrobials that require prior reauthorization from the clinical pharmacist (monthly); and percentage of resistance (annually).

7.3 Surveillance One Health – Otridah Kapona, Laboratory Scientist, AMR National Focal Point & Coordinator, Zambia

Presented the Zambia’s understanding of one health surveillance. Zambia’s One Health agenda focuses on awareness and education, surveillance and research, IPC and Biosecurity, optimizing drug use and investment in research and development. Surveillance is strategic number 2 which is to strengthen the knowledge and evidence base through surveillance and research. This objective is achieved through routine AMR surveillance mostly in human health and programmatic (mostly bacterial pathogens); GLASS enrolment (4 labs enrolled); Lab assessment/ATLASS assessment mission; laboratory training at KEMRI – 13 trained from all sectors (FAO/WHO supported); onsite microbiology/QMS mentorship; and honey residue control plan being implemented for honey exports to EU. Zambia has an integrated AMR surveillance strategy which focuses on AMR surveillance in AH, HH, PH and environment, build on past experiences, phased, leverage low hanging fruits, integrate data management system (FIND) and responds to draft SOPs for priority pathogens (FAO).

7.4 Role of Academia in UHC – Freddy Kitutu, Lecturer, Pharmacy Department, Makerere University Uganda

The role of academia has to do with innovative teaching, learning, research and analyzing what is to be achieved. In research the academia is expected to generate knowledge around the unresolved research areas. Some of the unresolved research areas include: Essential health services (constituents, delivery arrangements, intended and unintended effects); care-seeking choice (public versus private ownership; mixed health system);
utilization of health services versus effective demand; effective coverage; and economic evaluations (for example, what is the actual cost of intervening versus non-intervention?).

According to The Lancet Global Health Commission (2018), in 2015, 8.6 million deaths were recorded in 137 LMICs due to inadequate access to quality care. Out of these, 3.6 million did not access the health system, and 5.0 million sought care but received poor quality care. Poor quality care resulted in 82 deaths per 100,000 people in LMICs. These deaths led to USD 6 trillion in economic losses. Some of the driving factors to these health challenges include inadequate adherence to evidence-based care, negative patient experiences, unequal treatment and access to health services, and deficiencies in safety, prevention, continuity, and timeliness, leading to poor health, adverse economic outcomes, and loss of trust and confidence in health systems. The poor and the vulnerable groups appear to experience worse quality care.

Key Takeaways:

- Systems thinking can help our understanding of the dynamic complexity that characterizes our health systems.
- AMR is not a single entity; it is a cluster of problems.
- While health systems as adaptive systems are complex, their understanding informed by systems thinking need not be complicated.

Depending on the contexts, restricting access to AM might be a good thing but may not be the best strategy for some countries. This may not be what we are looking at especially for the children and mothers who suffer sepsis. We need to acknowledge that it will be a combination three or four strategies; if you are looking at treating malaria, you need to make sure you take the rapid diagnostic test and there after administer the prescriptions. Care seeking is from the private sector; the proportion of people who seek care some of them genuinely seek assistance and as such access the antimicrobials. A number of interventions to address this problem...
Reception held after the sessions to explain the #MedsWeCanTrust Campaign
DAY THREE – 25TH JULY 2019

Session 8: Sustainable financing / financing mechanisms for UHC – Moderated by Mirza Alas, Programme Officer, Innovation and Intellectual Property Programme, South Centre.

This was a plenary session with two presenters.

8.1 Financing model from a Faith-based Hospital – Ken Muma, Director General, Kijabe Hospital Kenya (Presented by Salome Gathoni)

Kijabe Hospital was started in 1915, driven by the need for evangelism, with ‘a healing touch.’ The hospital is based on three key pillars:

- Provision of compassionate healthcare,
- Medical training
- Spiritual ministry of Jesus Christ.

Its core revenue sources include compassionate healthcare through affordable inpatient and outpatient services; as well as non-core revenue sources, e.g. premium services through outpatient clinics in the Nairobi Satellite Clinic and catering services. The strategy is to have a little bit more income from things that are not necessary to the hospital’s core business. If a patient is not able to afford quality healthcare, there are alternatives. Kijabe has partnered with African Mission Healthcare, Watsi and Safaricom Foundation.

The hospital is driven by its philosophy, brand identity, cost centering and aligning systems so that it can become sustainable. Although the hospital works with partners, they have to be like minded. Partnership is therefore only with organizations that share the philosophy. Strategies for partnerships include identifying partners, shared visions, strategic plans and alignment, robust accountability, and communication – appreciation and sharing successes. The hospital is also working through public private-sector partnerships. The County Government of Kiambu, for example has provided the hospital with a fully equipped ambulance. The hospital has also received a CT-scan from a private company.

8.2 Financing model example – Andrew Mulwa, Minister of Health, Makueni County, Kenya.

Makueni is a rural county in Kenya, with a population of about 1 million people. Makueni County, one of the Kenya’s 47 counties, has been a pioneer county to pilot the UHC. From 2013, health in the country was devolved. As most of other places, the county faces the burden of non-communicable diseases. The healthcare in Makueni is aligned to Kenya’s vision 2030, Kenya’s Health Policy 2014 – 2030 and the County’s vision 2025. Devolution created opportunity for equitable development in the country. The county has made significant investments in the healthcare system by allocating over 30% of its
annual budget since FY 2013/14. The health budget for 2018/2019 is 34% of the county’s budget, which is approximately 2.3 billion.

The health approach in the county is based on the WHO’s health system building blocks.

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<td><strong>Human resource for health</strong> - there were only 977 Health Officers, but this has increased to 1,505, since the introduction of devolution in 2013. The county has never had a Makueni-specific health workers strikes/industrial action. There are initiatives to increase staff morale including available and fair training opportunities; promotions and timely salary payment; timely remittance of all statutory deductions; improved and safe work environment; locums for staff off duty (an innovation, giving doctors and nurses opportunity for locums to bridge the staffing gaps); uninterrupted supply of health commodities; improved staffing levels to match workload; and improved infrastructure/equipment. The County also gives awards to best performing healthcare workers.</td>
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<td><strong>Medical products, vaccines and technologies</strong> – Makueni is the first County to have a Directorate of Health Commodities and Supply Chain. The County has 99.9% supply of essential commodities throughout the year. The commodities are only sourced from MEDS and KEMSA. There is an uninterrupted supply of health commodities.</td>
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<td><strong>Leadership &amp; governance</strong> - The Governor is a health champion.</td>
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<td><strong>Healthcare financing</strong> - Before devolution the county health budget was around 12 million Kenya shillings. This has since increased to 300 million Kenya Shillings. Thirty four percent of the overall county budget is allocated to health. All revenue generated in the county hospitals is ploughed back to improve service delivery.</td>
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<td><strong>Service delivery</strong> - the county is keen on quality improvement models. There are SOPs that are strictly followed. Makueni is famous for Universal Healthcare Scheme. Members of the scheme get services without paying, and the UHC Fund is charged. Most of the inpatient and outpatient services are covered in this scheme. All bills incurred by patients at the county hospitals are reimbursed by the Government of Makueni County.</td>
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<td><strong>Infrastructure</strong>: In 2013, the County had 109 health facilities. This has increased to 235 facilities, with 233 of them able to carry out deliveries. There are 14 functional theatres, up from three in 2013. Other facilities include an ultra-modern NBU with a pediatric ICU, Aqua-birthing facility, post-surgical wards, labor ward with private rooms, twin operating theatres with capacity for laparoscopic surgeries, ICU/HDU and pediatric wards and a Trauma Centre, conveniently located to serve the Mombasa-Nairobi Highway trauma/accident patients. Other initiatives include upgrading of satellite facilities, new rural health facilities, county medical waste management at Makindu Sub-county Hospital with a modern incinerator, county ambulance system and construction of staff houses in new health facilities as another strategic intervention.</td>
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This was a panel discussion intended to bring out the progress in the one health approach as applied by the selected countries.

9.1 Sudan – Hassan Abdelrahman Ataelseed Abdelrahman, Secretary General, Sudan National Medicine & Poisons Board
Adopted one health approach in the development of NAP. The NAP was endorsed by the secretary. Implementation of the NAP - behavior change and raising awareness was conducted, as well as surveillance including with the veterinary. There is collaboration between Sudan and many programmes including the tripartite collaboration between WHO, IOE and FAO. At a higher level, there is a Health Coordination Council which coordinates health issues. There is also a coordination forum under the secretariat council with other ministries.

9.2 Kenya – Allan Azegele, Deputy Director Veterinary Services, AMR Focal Point, Ministry of Agriculture, Kenya
Launched NAP in 2017. From then on has had implementation activities including the establishment of the National AMR Stewardship Committee, which has been very instrumental in driving this process. Currently setting up the various Technical Working Groups (TWGs). There is the establishment of County inter-agencies Antimicrobial Committees. On awareness creation, they have observed the World AMR awareness week. There was a 2-day symposium, farmer field days, interaction with the media and interviews. In surveillance have launched the national surveillance strategy on AMR, which covers human and animal health. There are two pilot sites that are being pre-tested, both in human and animal health, and they are now enrolled in GLASS. In IPC, there is a National IPC programme that has policy and the guidelines, and there are TOTs. There has been capacity building on farm bio-security and practices informed by KAP studies.
undertaken with support of FAO. In optimization of use of antimicrobials, currently there is development of guidelines for antimicrobials use in humans. There are also several point prevalence surveys.

9.3 Uganda – Denis Byarugaba, Professor, Makerere University
Uganda has had ‘one health’ kind of issues before and working ad hoc, dealing with a number of diseases e.g. the Anthrax outbreak some years back. To address AMR a NAP was launched in 2018 with an agreement between the MOH, agriculture and fisheries. What is missing is the crop sector. This is an important element that is driving AMR because of the massive use of pesticides and other chemicals which drive resistance. Uganda has made significant progress in the following areas:

In surveillance, in research and innovation and AMR with support from partners. The surveillance is supported by Fleming Fund, this addresses AMR, but is weak on the crop component. With regard to research and innovation, Uganda has a number of programmes, including CDC improvement security programme, Makerere University and drivers of resistant drugs addressing how human behavior affect AMR. For a long time, researchers have focused more on the organisms than the factors driving them (actions of humans); and AMIS (Anti-AMR in society) etc. The country is still grappling with the other parts of the NAPs e.g. the awareness. One fundamental element that has not been addressed is the IPC. There is a lot of work that is still there to be done.

Panel discussion

Breakout Sessions/Group Discussion

**Question 1:** Experiences are so broad about how we have approached NAP in our various countries. What approach the countries took and what one success story?

**Ivory Coast:** Have a one health platform with an Executive Secretariat which gathers many sectors including human and animal. The same institution governs the AMS. The country has a multi-
sectoral group, human, animal and environment. A committee that gathers all experts and work together with synergy. Have activities and report to the AMS secretariat and shared with the coordination of the team, which is more political.

Chad: Have a multi-sectoral institution that was put in place in 2016 and is linked with the PH ministry. In 2017 drafted a work plan, which was validated in 2018.

Madagascar: In the MoH have put in place multi-sectoral committee for coordination of fight against AMR. Also have expert from each sector in the committee. Started elaborating the NAP, but what made the process delay was the change of government. Now there is a new government in place. Did an official launch on 8th August. Benefitting from the experience from Ivory Coast. Have learnt so much experience from other countries, for example, Uganda, Kenya.

Liberia: Have one health platform chaired by the Vice President of Liberia. Liberia also have a coordinated Technical Committee that has 5 pillars, with AMR as one of them. The NAP was developed by different agencies. The person who is chairing the technical working group ensures there are AMR related updates every month. All the sectors are involved in the implementation of NAP in Liberia. There are two Liaison Officers for animals and the other technical working group has a strong One Health Coordinator.

Cameroon: Have multi-sectoral committees including AMR and the one health approach. The committee is working very well. There is one focal person in all the relevant ministries. Cameroon has an approach to establish laboratory networks led by the National Public Health Laboratory. In order to detect resistance, they have acquired new equipment for bio-molecular equipment. One of the key problems is financing. When there is a collaborative platform, then it is possible to have a well-coordinated approach.

Zimbabwe: Received funds from WHO, managed to engage the food sector, the animal sector, the human sector, but agriculture was missing. Because of the funding, it was easy to establish a one-health platform. Zimbabwe engaged the referral labs in all the sectors, beginning with the main labs and later adding a few provincial labs. This started in 2017 and managed to isolate the organisms. The Country has managed to investigate MDR typhoid outbreak in Zimbabwe and discovered its source, which was Harare. Starting with the top, it is easy to spread it to the other levels. Although the teams are able to communicate, there is no communication strategy, which then affects AMR. Having the strategy would help to curb the feeling that there is fragmentation.

Tanzania: Has been able to scale up activities in AMR. Able to come to organize awareness activities in all the sector, however the environment sector is still lagging behind. Tanzania has conducted a few symposiums in addressing the AMR, however more still needs to be done. There are AMR Focal persons from the MoH and MoA. However, not all players have been involved. There is need to also incorporate the professional bodies, apart from the ministries. There is need to engage other stakeholders so that we can move together e.g. from the animal health, little is moving.

Zambia: Started by drafting a Communication Strategy. They got feedback from all the stakeholders and got idea on how best to communicate. The secretariat is not from one sector. It includes the department of veterinary and the National Health Institute. They have meetings on
how best to coordinate. In most of the cases the coordinator is comes from one sector, and time and again there is a bias. There is need to separate from ones sector, and play the one health role. Everyone would want to feel represented this person regardless of the sector he or she is from. There is need to establish a mechanism that is autonomous, just lie it works with the HIV response. The one health system is supposed to introduce a mechanism for cross-accountability from one partner to another. There is need to move away from project mode, into mainstreaming. Coordinators should then be released from their core role, and seconded to the autonomous unit.

**Ghana:** The issue of a secretariat was stressed. In Ghana the secretariat is hosted in MoH, but still has the inter-ministerial committee. However, it is still difficult to get all the ministries together (high level). Through the Fleming Fund, there has been some improvement in bringing the ministries to meet together. Advice was given for the secretariat to consider using the support to fund the autonomous operation of the secretariat.

**Session 10: What are the commonalities and approaches to move forward?** Moderator - Mathew Philip, ReAct Asia Pacific

The session began with a presentation from the Moderator, who highlighted the themes to be discussed and the expected outcomes from the breakout sessions. The participants were organized into 4 groups. He laid down the expectations to include:

- Consensus regarding approaches and targets
- Decide on a common pan-African Agenda
- Define actionable points and timeline.

The discussions revolved around several themes including increasing quality of IPC in healthcare facilities, improving antibiotic prescribing competency of medical professionals, phasing out highest priority, critically important antibiotics from agriculture; regulating pharma promotions and delinking prescriber/dispenser income from antibiotic volumes sold; financial access to essential (appropriate) antibiotics; improving quality of animal feeds and better labelling practices for feeds; addressing shortages of antibiotics and strengthening supply chain for antibiotics, LMICs compete with HICs for antibiotic procurement; ensuring quality of antibiotics at country level without limiting access; incentives to farmers to phase out use of antibiotics in agriculture; investments for strengthening lab capacity and surveillance systems; financing of Universal Health Coverage initiatives at country level; and partnerships and Coalition building for AMR and UHC.
**Breakout sessions**

The breakout sessions were aimed at arriving at consensus regarding approaches and targets; and deciding on a common agenda.

**10.1 Group One Chair: Borna Nyaoke-Anoke – Clinical Trial Manager, DNDi**

**Theme:** Increasing quality of IPC in healthcare

**Question 1:** What is the best approach in LMIC setting?

Hand hygiene – by providing the facilities, awareness, including the nursing, making hand hygiene critical. There is need to have protocol on IPC implemented, by having SOPs for IPC and then rewarding those who comply with those SOPs. Lesotho, for example has a Quality Assurance Department which seeks to ensure the SOPs are adhered to.

**Question 2:** What should be the core messages framed around this issue?

We need to do a lot on prevention. Messages should work towards making people understand the impact of prevention. Message to the health workers should include messages like “Protect yourself and others”; “Prevention is better than cure”. There is need to remind people that AMR is happening now, and that hands are the main route of pathogen transmission. There is need to carry the message to animal world, so that the sickness is not transmitted to others.

**Question 3:** Who should be the stakeholders involved?

The stakeholders should include infection control teams, mainly physicians, nurses and pharmacy staff, working in the hospital. The top management should be involved to ensure that everybody is complying. There is need to talk about the external stakeholders, for example, in Kenya, there is a brands of soap known as Lifebuoy, that uses a celebrity to remind the public of the need to hand wash.

**Question 4:** Is there a way we can work on infection control in the Pan-African context? How can we try and work around infection control?

Work on harmonizing policies in IPC and sharing information. A meeting like the ReAct Conference is what can be done regularly to share information that can influence policy. The purpose is for all to move as a group.

**Question 5:** What joint collaboration can be undertaken?

There is an Ebola situation in DRC and Rwanda. The two countries try to share information at the border posts, so that no infected person finds themselves on the other side of the border. The same is being done in Uganda. Information is shared online and always updated so that people can take the necessary measures. The mentioned countries have hygiene programmes at every border point, and if a case is identified, the person is not allowed to cross the border. A suspected case is contained. In Madagascar, communication happens over the phone, and through emails within the
Indian Ocean area. There are weekly meetings, e.g. concerning ebola. That have been going on for months now, assessing everyone coming from DRC and taking their contacts and asking them to alert the MoH, in case of suspected infection.

**Theme 2: Prescribing competency of medical professionals**

**Question 1:** How can this be improved?

Begin with education, and by having the basic diagnostic criteria. Also by implementing antibiotic policies, starting an empiric antibiotics, carrying out initial training and continuous training. By improving surveillance a major problem now as few countries do ASTs and report into GLASS.

**Question 2:** What are the messages that should be framed?

“Antibiotics are not automatic”. This needs to be framed in a way that patients understand that one does not always need antibiotics to get better. There are other forms of treatment. There needs to be rational use of medicine, prescribing only what is necessary. Guidelines and tools for the prescribers need to be in place, and strictly followed. Use of mass media as an education tool to the public, such as radio and TV, to communicate that not every fever requires an antibiotic. Capture stories from people to evaluate adequacy and experiences from the use of antibiotics.

**Question 3:** Who are the stakeholders?

Development partners, MoH, distributers and private sector. Other stakeholders include the patients, and they should be targeted for public- awareness. Everybody is a stakeholder e.g. in Cameroon, The Ministry of Works is a stakeholder, and so is the energy supply and education sector. Regulatory bodies and medicine therapeutic committees should enforce the relevant policies and SOPs. There is also need to talk business sense with the pharmaceuticals.

**Question 4:** Is there a Pan-African context on this?

Regulatory bodies have a mandate to regulate how the private hospitals are using the antibiotics. At the regional level, there are networks for professionals, such as Africa Regulatory Medicine Agency (ARMS). There can be regional regulatory bodies, regulating the use of antimicrobials. Countries which are complying should be given some incentives. Africa has regional harmonization blocks like ECOWAS and EAC. These should be utilized, especially in the pharmacovigilance space.

**Theme 3: Phasing out highest priority critically important antibiotic use in Agriculture**

**Question 1:** What is the best way LMICs can use to address these issues?

Some like WHO, OIE and FAO have guidelines. Countries should be advised to use these global guidelines as well. Having regulations which stipulate what should and/or should not be done is important, but caution should be exercised to ensure there is compliance. There is need to get the users to a level where they understand the importance of adherence to the guidelines. There is need to bring the message to a personal level. That way, it will be easy for the users to comply. Sharing examples and experiences, such as the army worm cases, where antimicrobials are now not working because of the resistance. Use of the present examples creates a practical understanding
of what is happening here and now. Use multiple approaches - there is a discussion around access versus accessibility; professionals should do their work; farmers should seek advice; the pharmacist should only give critically important drugs based on prescriptions.

**Question 2: Messaging**

Share what is happening currently. For instance, Malawi is a success story in HIV, because of targeted awareness. With behaviour change, some of the interventions will not be a problem. There is need to carry out awareness, even on animal well-being.

**Question 3: Who are the stakeholders?**

Everyone is a stakeholder. The one health platform – CSOs, chiefs, politicians, industries which are making medicines – all need to be targeted. Pharmaceutical industries have to be involved to prevent them from pushing the irrational prescriptions. Under the guidance of IOE, stakeholders have been identified, and different messages crafted. These need to be adapted to the different groups.

**Question 4: In a Pan-African context, what joint collaborations exist?**

In the animal sector there is the cattle movement permit, which is given based on the disease status, implemented in Uganda by the MOA. Branding of animals. In some countries, birth certificates are issued for cows! Tanzania and Kenya launched the joint project for controlling livestock diseases last month in the Namanga boarder post, and it is a joint venture. There is need to tailor all these messages for the different stakeholders.

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10.2 AMR and UHC. Group Two Chair: Andreas Sandgren, Deputy Head of Office, Policy Advisor ReAct Europe

**Theme 1: Awareness raising strategies**

Came up with some strategies, starting with awareness raising. One part of the strategy is to push for the self-regulation of the agencies. There is need to ensure that the regulations are followed. There is need to include it as part of implementing low-cost stewardship program. Need unbiased source of information on how the drugs are used and not necessarily what the MED reps. peddle.

**Theme 2: Affordable access to essential antibiotics**

Action is needed at various levels. At the local level, the role of the HCWs in the development of treatment protocols and guidelines, and the prescription of generic drugs is encouraged instead of the branded. There is need to establish regulations in instructing on the prescription of drugs. It should include a list of essential medicines that can be used, and which the government should take responsibility for. The role of procurement, the supply chain management needs to be informed by what the hospitals need, acknowledging also that the appropriate drugs may not be the same across the various care levels. The issue of quality should not be forgotten in the access narrative.
Theme 3: Improving quality of animal feeds

The strategy is at the different levels. It should begin at the consumer level. There is a role for NGOs, e.g. the consume watch in Ghana puts pressure on the professional groups and the farmers. Farmers are encouraged to procure feeds from accredited sources. There is need to target pharmaceuticals that provide antibiotics to the feeds. Regulation of animal feeds is generally weak and should be instituted and strengthened, where they exist.

10.3 Group Three Chair: Christian Mugabo – Co-founder, Co-Chair and Country director
International Students’ Partnership for Antibiotic Resistance Education (ISPARÉ), Rwanda

Theme 1: Addressing shortages of Antibiotics/Quality

There has been a push system, which is not refined enough for one to know what will be required. There is need to create a balanced system between the push and pull model for distribution of antibiotics. There is also need to create incentives for farmers, as well as strengthening the generation of data, in order to build this case. The long-term effects of the antibiotics should be investigated, and the use of both punitive measures and incentives put in place. The down side effects of antibiotics need to be explained to the public. Awareness raising is important. There is an need to engage across sectors on data collection to address shortages.

10.4 Group Four Chair: Linus Ndegwa – Division of Global Health Protection, Centers for Disease Control and Prevention, Kenya

Theme 1: Investment for strengthening lab capacity

There is need to clearly define the type of services required at each level, the kind of requirement for the services and then the type of lab required. The issues cut across animal, human and environment. Having determined the services required, then plan the appropriate labs.

Theme 2: Surveillance

The core message is to map services at the various levels, provide the appropriate labs and equip them. The stakeholders will include the government, CSOs, professional bodies, consumers, communities and the regulators. CDC is coming up in Africa, and will support these services. Collaborative actions to be taken will include converging the health systems. On financing, the UHC initiative needs to consider multiple streams of funding, pull all the resources together and allocate them based on the priorities provided for UHC. On partnership, the best approach will to work with all partners, and professional bodies, and encourage them to invest more on preventive health.
Plenary: Key Takeaways:

- Engaging professional bodies
- Engagement of regional groupings which focus on various things
- There are feasible and practical examples in Africa, but unfortunately these are limited to the specific countries. Encourage the formation of a platform e.g. Community of practice (COP) to highlight and share best practices, such as what the logisticians have done in putting up a COP.
- Need for a better forecasting system and balance in the push and pull system
- Need for a mix of regulatory approach and behavioural change approach
- Strategic lab placement
- Putting a surveillance system in place
- Budgetary allocation to meet the need for resources
- Create awareness and advocacy. Develop messages and document case stories that can be shared through media platforms to give life to the issues
- There is need for more operational research so as to build a body of evidence.

Session 11 Beyond the conference what next? What are the next steps to achieve AMR, UHC & SDGs Agendas in African Countries Panel Discussion. Moderator – Mercy Korir, Medical Journalist.

The panelist included Martha Gyansa-Lutterodt (MOH Ghana), Mirza Alas (South Centre), Mirfin Mpundu (ReAct Africa), Allan Azegele (MoA, Kenya), Laetitia Gahimbare (WHO AFRO) and Emmanuel Kabali (FAO, Zimbabwe).

**Question 1: What did the participants say about the 3-day conference?**

- "I am encouraged to see progress and seeing people getting involved despite the difficulties…"
- "Collective energy. There is a lot of engagement in countries. It is clear that there are champions."
- "I acknowledge the big number of participants from many countries. I have learnt a lot around the important entry points between animal sector and human health."
- "We have so many champions for AMR, this shows some hope because AMR is very difficult but we have champions."
- "We can make a difference and hopefully will have public participation in the next conference."
- "I have not regretted coming into the meeting, and learnt that there are more champions than thought there were."
- "AMR is a bigger problem than HIV and will definitely need global fund for AMR."
- "We should have a healthy environment if we want to have healthy humans."
- "Now I think about my role, the takeaway message to put together actors so that we can see how we are addressing UHC while addressing AMR."
**Question 2: What issues were you expecting and that you think we need to craft a way forward for?**

- “How difficult it is to think about AMR and to relate it to UHC. I feel we need to strengthen capacity to collaborate and coordinate; need to create platforms for collaboration and ensure that we are bridging the gaps (partnership building).”

- “Practical lesson learnt from Makueni County: when we talk about UHC we think it is theory, but we have come to see that it is possible from Makueni County and Kijabe Hospital. We need to encourage study visits so that people can see practical examples.”

- “There is a great need/appetite for platforms like this one (ReAct Conference). There is still a great need to continue facilitating these platforms. Some of the things that have been validated is the area of stewardship which we should continue to support. We also need to continue promoting this one health concept. And should be promoted it in the region.”

- “The aspect of UHC, so far doing very well with the UHC coverage, but more focused to humans, but that may not be achieved optimally if we do not have the animal, plant and environmental health. If these are not covered, then we may not achieve much. Approximately 75% is yet to be covered…..”

- “Continue pushing financing to be made available. We need to position this as a priority to the countries. Keep bringing to the table the needs. The environment continues to be an area that there is still a dearth of knowledge of what needs to be done.”

**Question 3: Do you think we have been able to articulate well the connection between AMR and UHC?**

- “We have looked at various aspects. We were able to look at these set goals under the SDGs through the lens of AMR and illustrated how AMR affects these SDGs. That particular outcome of the conference, has been met.”

- “It is clear that UHC is much broader than AMR, but we have clearly spelt out the points of entry. Particularly from the Makueni County example.”

- “All the areas related to SDGs, particularly SDG3. This is due to the quality of the participants that were represented. This made this conference a success. We need to emphasize more on the quality of medicine and IPC - effects of poor hygiene and poor quality of hygiene”

- “It is very critical to ensure that you have a healthy population. When you are healthy, you are more productive and can impact positively on other aspects. Whatever goes to make you healthy is very critical and important to ensure productivity. This drives everything else including taking care of yourself, and not able to transmit diseases to animals. I hope going forward as we work towards containing the emergence and prevalence of AMR, we will need to stand up and ensure this does not happen in other sectors”
Question 4: How do we maintain political momentum where there is one or initiate it where the country is still struggling?

- "The key word is to mainstream. The champions need to go back and start mainstreaming. Let's keep preaching to our political leaders; move from project mode to programmes."

- "It is very important that we push the politicians to keep focusing on the radar; push for this to remain in the political agenda. We don't just want political goodwill. We want to start seeing political commitment through the existence of a functional secretariat and the increased investment by the political class. We can be our own advocates even in our own government to ensure there is more recognition. There is still not proportionate response to be to bring the desired change. Advocate internally, regionally and globally."

Question 5: Beyond this conference then, what next? What are the action points?

- "In the short-term we have to take some of the messages built here and propagate them. In the long-term, think in ways in which we can look for entry points, evidence and research on how we can fill the gaps identified."

- "The recommendations from this workshop should be circulated and shared within the organizations represented so that the focus is known. Have operational secretariat on AMR for the momentum to be sustained."

- "There are activities we are already doing targeted towards the UHC. Encourage the countries to do some mapping of activities happening geared towards the UHC. Try and map the players within the countries, what are the funding streams and see the synergies and duplications and where need to lobby for financial support."

- "Work towards functional secretariats, towards strengthen the governance of one health."

- "We will ensure that the report of this conference is out and circulated and that the ideas will be amplified both at the regional level and at the global level."

- "Use the lesson learnt to continue supporting the member states to emphasize on the UHC."

- "Will advocate for the regional and national AMR plans so that the activities can be implemented in a more coordinated manner. Will support the regional activities related to UHC."

- "Continue supporting the countries on the integrated surveillance."

- "Ultimately we need to start seeing behavior change from the short-term to the long-term. The first behavior that needs to change about how we utilize resources when they are made available. Keep the plans detailed, focused and costed."
Notable commitments by and expectations from conference participants:

- Try to amplify the messages through the policy briefs, and build political momentum.
- For the next year’s conference present more data, and invite political leadership and those that finance the interventions.
- Different countries are at different levels in implementing one health programme. The next conference will need to be based on the current status of the respective countries.
- I will share the results with the MTaPs team, with initial discussion towards establishing the communities of practice and will seek to have much more participation from the USAID MTaPs perspective.
- Strengthen surveillance and advocate for more countries to enroll, report into GLASS.
- Encourage research on the one health approach - this can be done in the short-term.
- UHC - it is important to increase more of preventive initiatives and not necessarily curative; increasing the preventive perspective will be a great deal.
- Some countries seem to be lagging behind and may need a push. Come up with minimal but important/compulsory activities that the tripartite can support.
- We have a long way to go in the fight against AMR, and need to put in systems in place to realize this great impact.
- We need to reframe our AMR stories to give life to AMR if we are to make some progress. This is something that can be done in the short term.
- There is need to give more voice to regional and technical people and bring that perspective to governance processes.
- The one health approach is what we own and what we do every day. Go out and mobilize other colleagues.

Official Closing Remarks Highlights - Laetitia Gahimbare, World Health Organization, Africa Region:

AMR is a global crisis with significant global health security implications. There is need to emphasize the importance of AMR in order to achieve UHC. AMR is a challenge that cannot be addressed overnight by one country. However, the challenge of AMR and potential areas have been highlighted, for purposes of making a difference. There is need to sustain interest and implementation under the one health approach. The discussions were interesting and very inspiring with sharing of knowledge and experiences. Progress has been made by various countries, aligned with the Global Action Plan under the One Health Approach. WHO is committed to the cause. The speaker congratulated all countries that are implementing their NAPs and encouraged the others to start. She reminded the participants on the upcoming AMR awareness week celebrated in November every year.
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