Insights on the way forward for combatting Antimicrobial Resistance (AMR) in Africa:

Findings from policy consultations during the Launch of the Africa CDC AMR Surveillance Network

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Background 1: Launch of AMRSNET during ACDx 2017

• The Africa CDC AMR surveillance network (AMRSNET) was launched in November 2017 during the Advanced Course on Diagnostics (ACDx)

• ACDx is an annual course conducted by the Fondation Merieux and the London School of Hygiene and Tropical Medicine in Annecy, France

• The course aims to advocate the value of diagnostics and build capacity of policy makers to make critical decisions on diagnostics

• The 2017 ACDx is focused on the role of diagnostics in the global and national AMR response

• The course brought together WHO, experts(from academia such as iSense), AMR policy makers and industry to share diagnostic technology innovations and how they could be implemented to accelerate the AMR response
Fellows and faculty at the Advanced Course in Diagnostics
Africa CDC statement on AMR:
“Within the next 5 years, AMRSNET will work to:

- improve detection of antibiotic resistant infections in humans and animals,

- delay its emergence,

- limit transmission, and mitigate harm among patients infected.

- To achieve these goals, AMRSNET will advocate for policies and laws to enable long-term prevention and control and strengthen human resources capacity.” (Source: Africa CDC website).
Background-3: Rationale

• The AMR strategy of AMRSNET is ambitious and different African countries would need to adapt this strategy in-country

• Course was a unique opportunity to obtain the views and perspectives of African country representatives on AMR surveillance priorities for their countries

• African countries represented were: Cameroon, Senegal, Zimbabwe, Tanzania, Kenya, South Africa, Mauritius and Burkina Faso.
Method

The questions asked in the interviews were:

• Does your country have an AMR strategy?

• What are the diagnostic priorities you would suggest for AMR surveillance in your country? Why?

• What immediate actions should be implemented by your country?
Results-1: Diagnostic priorities

• Need for a test to distinguish bacterial and viral infection. Measures to ensure high uptake of such as test among end-users (clinicians and nurses) should be put in place

• Connectivity of diagnostics for real time data for action

• Selection of affordable diagnostic technologies for detection of Gram –ve bacteria resistance to permit impact assessment of AMR stewardship programmes
Harnessing Nanotechnology, Telecomms and Big Data for Global Health

**Building the Toolkit**

- Apps and Dashboards
- Big Data Analytics
- Nanosensors
- End-User Needs and Test Beds
- Biomarker Discovery and Capture Ligands
- Advanced Nanomaterials
Results-2: Immediate actions

• setting up and stepwise implementation of the WHO-recommended surveillance system adopted to national AMR strategic plans and disease burden;

• concomitant formulation and implementation of a multisectoral AMR control policy embracing the One Health concept;

• development of financial plans and business models (a strong economic case) to sustain AMR diagnostics and control, and to reduce out of pocket expenses;

• capacity building for AMR at all levels of the health care system
Conclusion

• The **launch of AMRSNET** is a crucial step towards building country capacity to conduct AMR surveillance in Africa

• **Diagnostic technologies, with connectivity**, play a pivotal role towards this challenging mission

• **A stepwise approach** with ongoing capacity building will be relevant in the implementation of the surveillance network

• An **economic case** is needed to ensure in-country government support and funding to ensure the sustainability of the national and regional AMR response
Acknowledgement

• The Africa CDC and AFENET for supporting the travel of AMR fellows to the ACDx course and AMRSNET launch.

• Professor Rosanna Peeling for her input and guidance.

• iSense project team (all flagships)

• Fondation Merieux

• All fellows and faculty of the ACDx 2017
Thank you for listening