

National AMR Strategies: The Ghana Story

2ND Global network for antimicrobial resistance and infection prevention symposium

THEME: Innovations towards Combating Antimicrobial Resistance: A whole of Society Engagement

DATE: 4th – 7th March 2019

Dr. Priscillia Nortey, School of Public Health, University of Ghana
Member, Ghana National Policy Platform for Antimicrobial Resistance (NPAR)

Outline of Presentation

1. Success of Ghana's Public Health Governance
2. Launching of the AMR Policy and National Action Plan (NAP)
3. Understanding Ghana
4. How the Policy and NAP were developed
5. Policy objectives and Strategic Plan of the NAP



- Home
- News
- ICT
- Insurance
- Investment
- Oil & Gas
- Politics
- Tourism
- Editorials/Opinion

Home / General News / Ghana ranks 4th in the world in Health Governance Capacity Index

Ghana ranks 4th in the world in Health Governance Capacity Index

April 8, 2017 | General News, Lead
Comments Off on Ghana ranks 4th in the world in Health Governance Capacity Index

- Facebook
- Twitter
- Google +
- Stumbleupon
- LinkedIn
- Pinterest

Ghana ranks fourth in the world in the Health

Public health governance

The report focused on the quality of health care governance in 18 low- and middle-income countries in sub-Saharan Africa and Asia along five dimensions: health management capacity, health policies, health regulations, health infrastructure and financing, and health systems.

The report focused on the quality of health care governance in 18 low- and middle-income countries in sub-Saharan Africa and Asia along five dimensions: health management capacity, health policies, health regulations, health infrastructure and financing, and health systems.

AMR and SDGs



AMR strikes hardest on the poor
→ Rate of resistance is high
→ Lack of affordable treatment
→ Poor infection prevention



Untreatable infections in animals threaten sustainable food production for our population



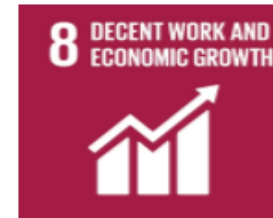
Antimicrobials are fundamental components of all health systems



All of which require multi-stakeholder partnerships



Antibiotic residues from hospitals, pharmaceutical companies and agriculture contaminate the water



*Cumulative costs of AMR is predicted to be US \$120 trillion by 2050



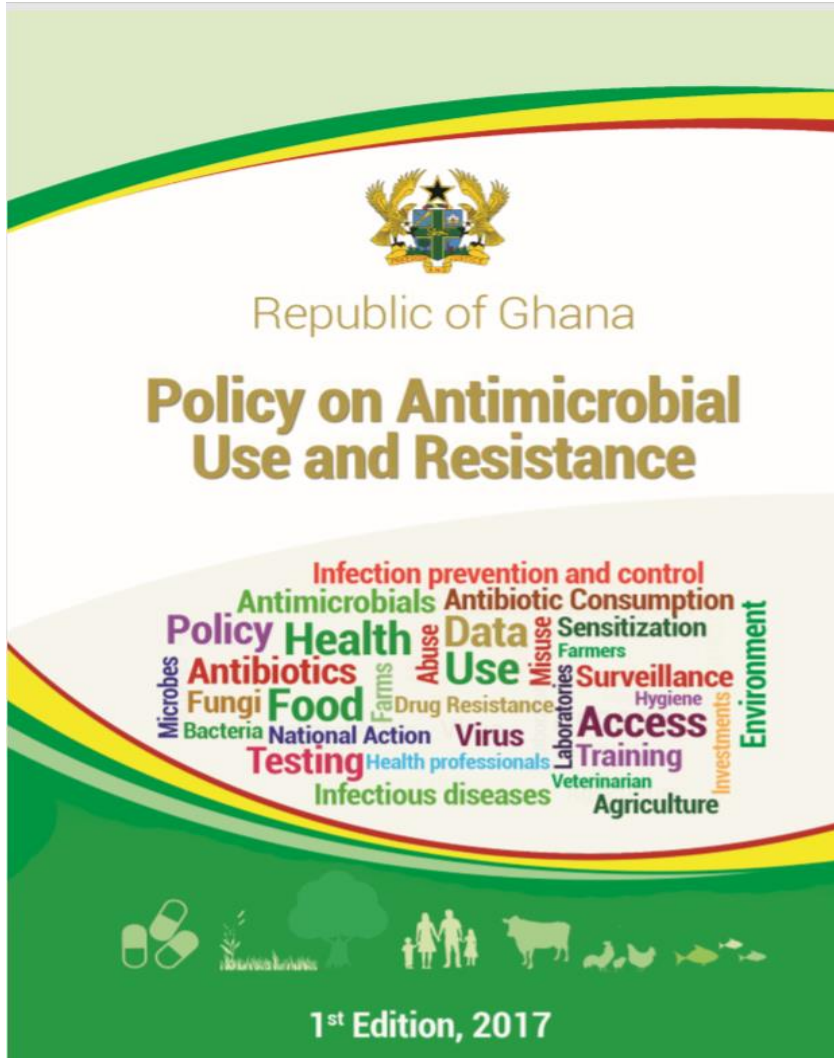
It is crucial to balance access, innovation and conservation of antimicrobials to contain AMR

*World Bank Group Report on Drug-Resistant Infections (March 2017)

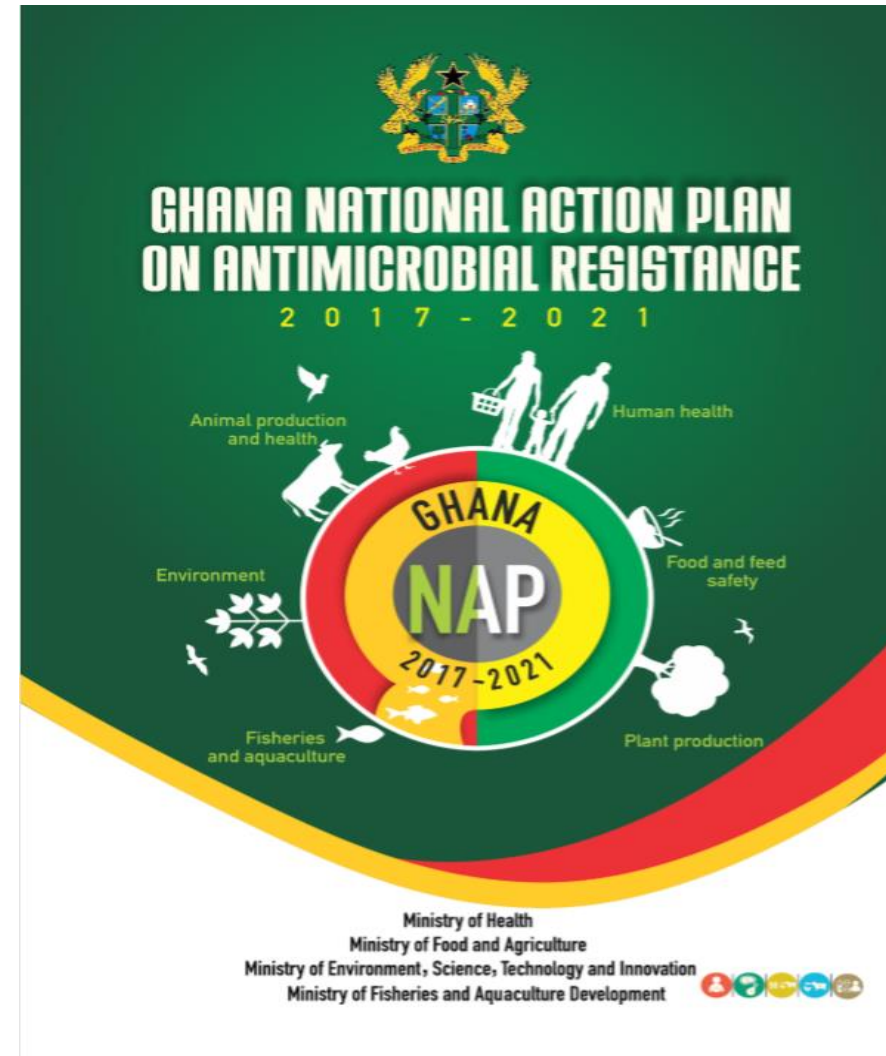
The Ghana AMR story

- Ghana is considered a leading country on the African continent for handling antimicrobial resistance due to the work done and the approach they have taken in developing the National Action Plan on Antimicrobial Resistance.

<https://www.reactgroup.org/national-action-plans/>

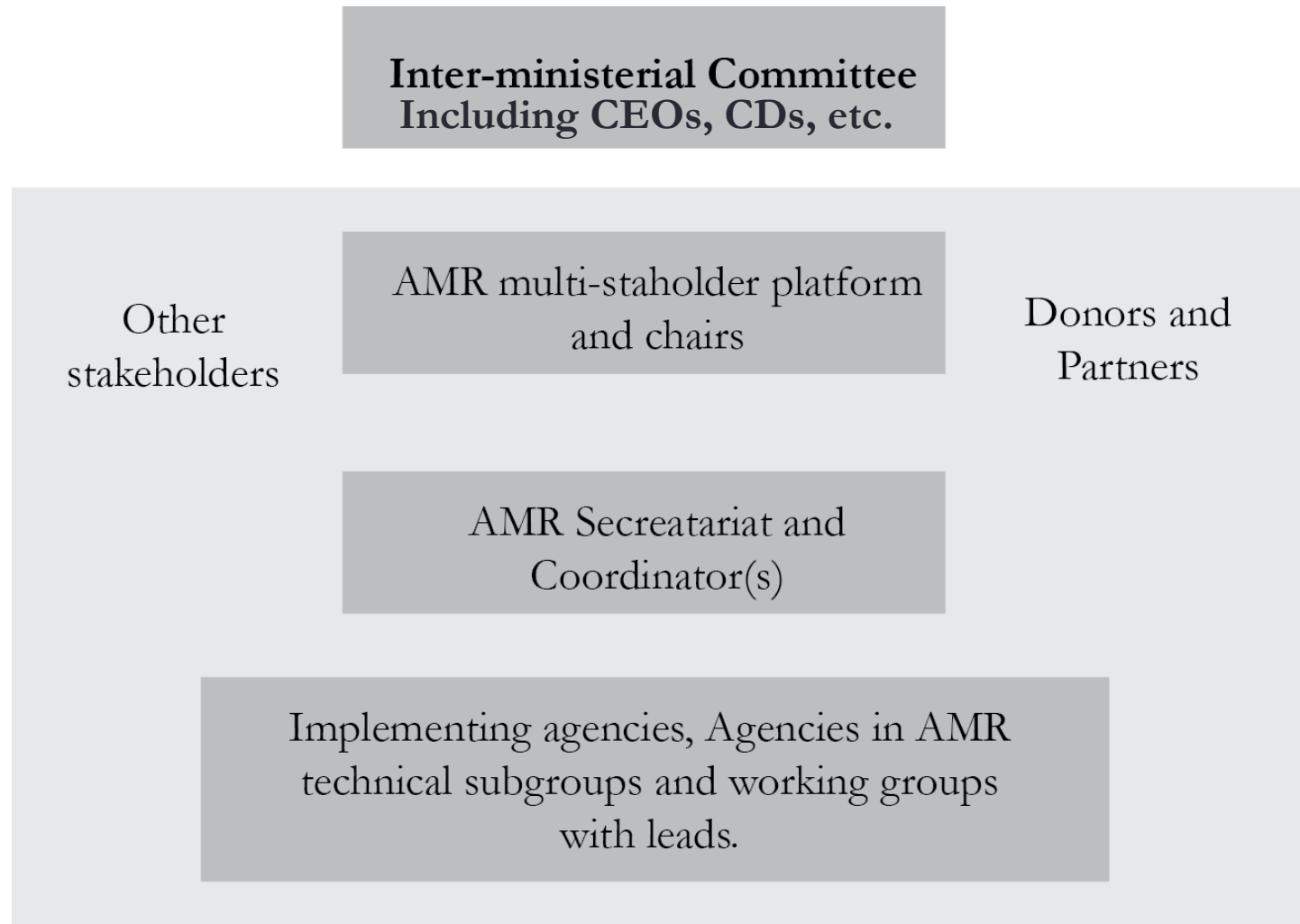


[AMR design 14.12.2017 A5 Final 19.03.pdf](#)



[NAP_FINAL_PDF_A4_19.03.pdf](#)

Governance



Ghana launches its AMR Policy and National Action Plan: 30th April 2018



His Excellency, President Nana Addo Dankwa Akufo-Addo launching Ghana's AMR Policy and National Action Plan

Ghana launches its AMR Policy and National Action Plan



Government of Ghana with

- **WHO**
- **FAO**
- **OIE**

World Health Organization (WHO)
Food and Agriculture Organization of the United Nations (FAO) and
World Organization for Animal Health (OIE)

Launch of the AMR Policy and National Action Plan

Excerpts of the President's speech

- ... *“Ghanaians to get involved in the control of antimicrobial resistance in Ghana”.*
- ... *“antimicrobial resistance represents a great threat to the realization of the Sustainable Development Goal 3 which stresses on ensuring healthy lives and promote wellbeing for all at all ages”*
- ... *“Our food supply chain is also not being spared because antibiotic resistance is a major challenge to animal husbandry and fisheries and aquaculture sectors, as research has shown”.*

Excerpt of the President's speech during the launch

The President

- ... that the implementation of the AMR policy will be backed by a functional regulatory framework.
- ... tasked the Minister for Health and Attorney-General to take the necessary steps to move some of the policy issues into legislation to ensure public health and safety.
- ... observed that key among these are policy on environment and waste, rational use of medicines, crop and animal production, and residues.

Understanding Ghana

Some Ghana stats



2019 World Percentage	0.39%
2019 Growth Rate	2.15%
Density	126.18/km ²
Area	238,533 km ²
Capital City	Accra

Demographic, epidemiological and socioeconomic trends

Ghana is going through several transitions.

Demographic

- Life expectancy increase - 57 (2000), 61 (2003), 67 (2017)
- Fertility rate: Decrease - 4.7 (2000) 3.87 (2018)
- Age structure: largely youthful

Epidemiological

- NCDs and Injuries increasing morbidity and mortality
- Double burden of infectious and non-infectious diseases

Socio-economic

- Changing country trends
- Socioeconomic divide between the urban and rural settings

Health Institutions

Government

1. Ghana Health Service (GHS)
2. Ministry of Health (MOH)
 - Five levels of provision. This is increasing in level of care provided
 - i. Health posts (CHPS)
 - ii. Health centers
 - iii. District hospitals
 - iv. Regional hospitals
 - v. Tertiary hospitals

Other

3. Christian Health Association of Ghana (CHAG)
4. Private Health Facilities
5. Maternity clinics
6. NGOs
7. Informal sector

The Development of the Policy And NAP

The One Health Approach to the development process

The '**one health**' approach was used to understand and reduce the use of antimicrobial agents in humans, aquaculture, plant production and in animal health

- The sectors involved in the process to develop the required guidance are shown in the next slide

AMR Policy and National Action Plan had the contributions and support

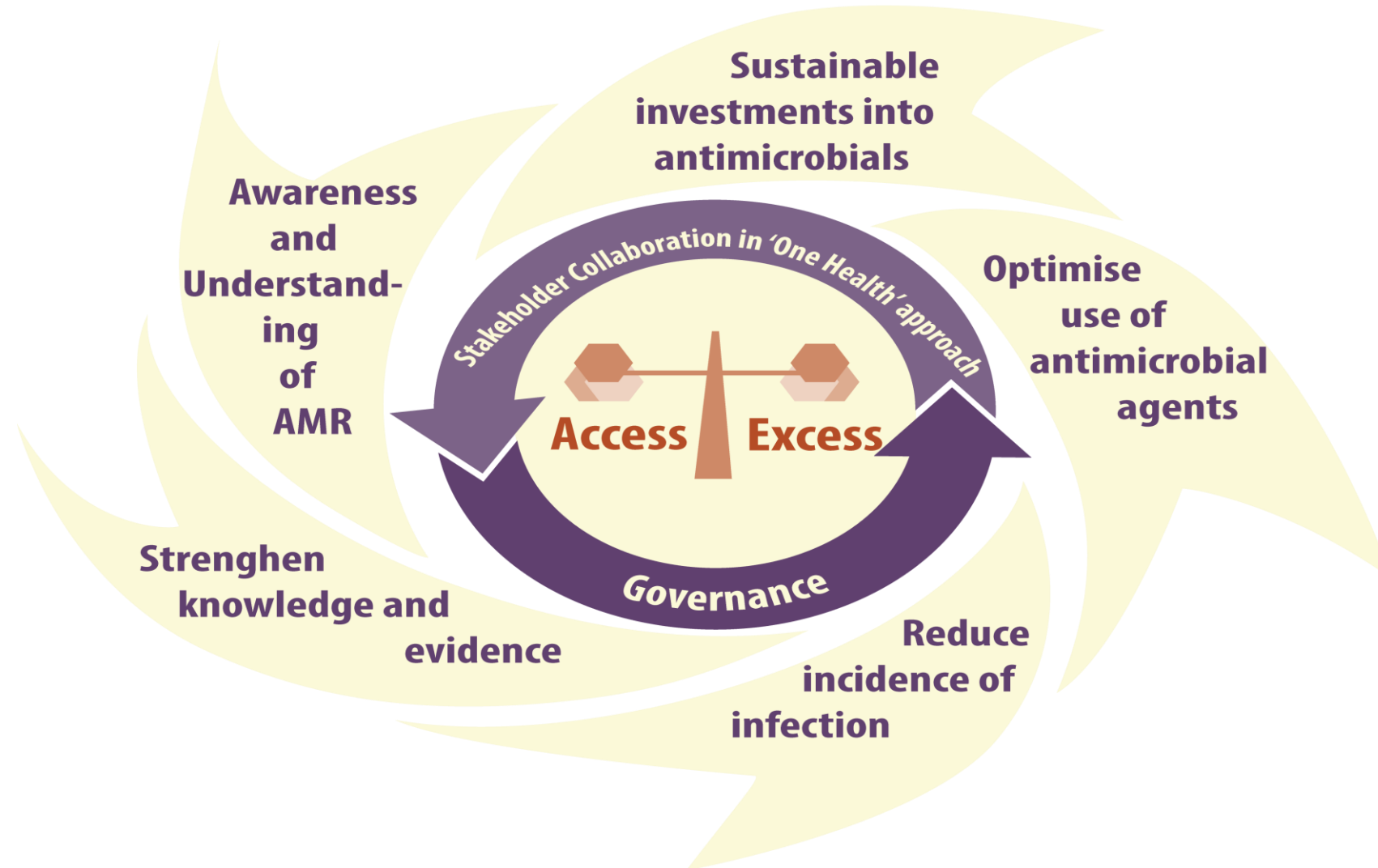
- Ministry of Health,
- Ministry of Food and Agriculture,
- Ministry of environment Science Technology and Innovation,
- Ministry of Fisheries and Aquaculture Development,
- Ministry of Education,
- Ministry of Trade and Industry,
- Ministry of Justice and Attorney General's Department,
- Ministry of Interior,
- Ministry of Water Works and Housing,
- Ministry of Local Government and Rural Development,
- Ministry of Defense,
 - As well as the respective Departments and Agencies of all the above Ministries
- The World Health Organisation,
- Food and Agriculture Organisation,
- The AMR Platform,
- Stakeholders from
 - Food and Drugs Authority
 - Ghana Standards Authority
 - Academia,
 - Civil Society,
 - Donors/Development Partners and
 - Private Sector

Situational analysis of the AMR challenge:

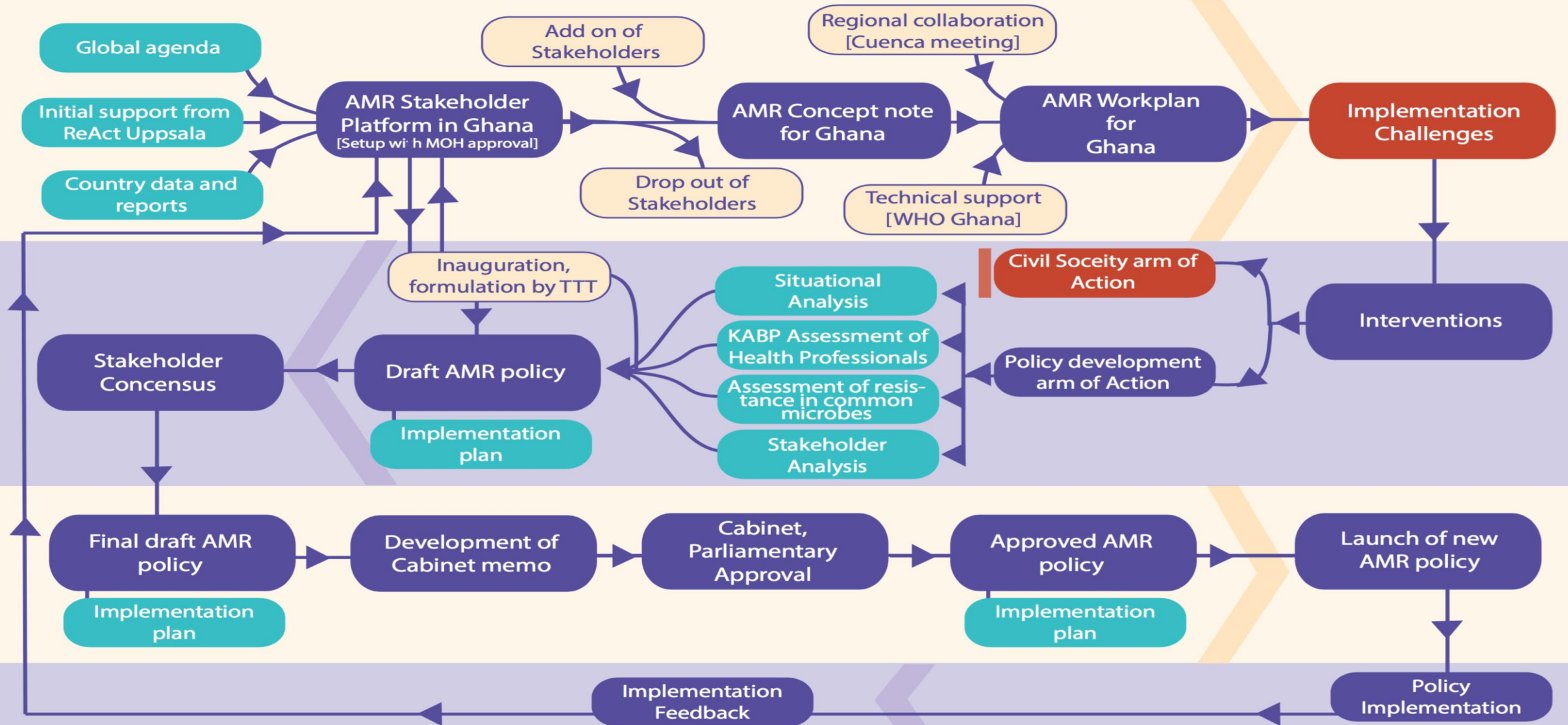
- Absence of policy on antimicrobial access and use
- Irresponsible and / or inappropriate use of antimicrobials
- Lack of information on the proper use of antimicrobials
- Spurious, Substandard, Falsified, Fake and Counterfeit antimicrobials
- Unregulated access to antimicrobials
- Use of antimicrobials in agriculture as growth promoters
- Poor infection prevention and control in health facilities
- Poor environmental sanitation
- Poor or absence of surveillance on antimicrobial use
- Poor knowledge on antimicrobial resistance
- Bad agricultural or animal husbandry practice

These findings guided the NPAR and the resultant Policy and NAP

Country response: Global guidance



Policy Process for Antimicrobial Resistance Policy for Ghana





Republic of Ghana

Policy on Antimicrobial Use and Resistance

Word cloud containing terms: Infection prevention and control, Antimicrobials, Antibiotic Consumption, Sensitization, Policy, Health, Abuse, Data, Misuse, Farmers, Antibiotics, Use, Surveillance, Hygiene, Fungi, Food, Farms, Drug Resistance, Laboratories, Access, Bacteria, National Action, Virus, Training, Testing, Health professionals, Veterinarian, Infectious diseases, Agriculture, Environment, Investments, Microbes.



1st Edition, 2017

Country response: AMR strategic policy objectives

Strategic objective 1:

- Improve awareness and understanding of antimicrobial resistance through effective communication, education and training.
 - Behaviour change through communication and education of health professionals, veterinarians etc., farmers and the general public as well as curriculum updates in training institutions

Country response: AMR strategic policy objectives

Strategic objective 2:

- Strengthen knowledge and evidence base through surveillance and research
 - Evidence and knowledge generation and use, based on local AMR trends, through functional surveillance systems for AMC and AMR in both human and non-human sectors; with due cognizance to the pre-requisite need to build capacity in laboratory systems and infrastructure

Country response: AMR strategic policy objectives

Strategic objective 3:

- Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures and good agricultural and biosecurity practices.
 - Minimizing the need for antimicrobial use; through implementation of infection prevention and control strategies, including vaccinations and good hygiene as well as strategies on waste management, plant resilience promotion, vector control, biosafety and biosecurity and standard infectious disease control practices

Country response: AMR strategic policy objectives

Strategic objective 4:

- Optimize the use of antimicrobial agents in humans, aquaculture, plant production and in animal health in the 'one health' approach
 - Stimulating responsible use through antimicrobial stewardship programmes in all relevant sectors that makes use of standards and evidence-based treatments, SOPs, standards on wash-out periods as well as proper disposal of microbially sensitive waste into the environment

Country response: AMR strategic policy objectives

Strategic objective 5:

- Develop the economic case and create an enabling environment for sustainable investment that takes account of the needs of Ghana, and increase investment in new medicines, diagnostic tools, vaccines and other interventions.
- Promoting research on AMR including potential local source of antimicrobial agents; optimising supply of quality-assured antimicrobials including improvements in local manufacture within stringent regulation.
- Well governed and coordinated implementation arrangements with close collaboration with all



GHANA NATIONAL ACTION PLAN ON ANTIMICROBIAL RESISTANCE

2 0 1 7 - 2 0 2 1



Ministry of Health

Ministry of Food and Agriculture

Ministry of Environment, Science, Technology and Innovation

Ministry of Fisheries and Aquaculture Development



Brief overview: AMR National Action Plan

- By implementing the NAP, ministries, agencies and departments (MDAs) would be implementing the AMR policy for Ghana.
- Guidelines have been developed to assist MDAs to mainstream the AMR NAP into their POWs/medium term strategies

Structure of the NAP

- Background
 - Introduction, Situational analysis and assessment, Country response, Governance
- Objectives
- Strategic plan
- Operational plan
- Budget
- Monitoring and Evaluation framework

First Page of the NAP Strategic Plan

STRATEGIC PLAN		Timelines				
		Year 1, Q4 2017-2018	Year 2, 2018	Year 3, 2019	Year 4, 2020	Year 5, 2021
		J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
Strategic objective 1: Improve awareness and understanding of antimicrobial resistance through effective communication, education and training.						
Awareness-raising and risk communication						
Sub-objective 1 - Increase national awareness of AMR						
Strategic interventions	Activities					
5.1.1.1 There shall be collaboration with all stakeholders (including Civil Society Organisations-CSOs and Media) for continuous education to promote the responsible use of antimicrobials amongst general public in the spirit of the 'one-health' approach	5.1.1.1.1. Engage CSOs and the media (as AMR media partners) to educate the public on responsible use of antimicrobials in the spirit of 'One health'					
	5.1.1.1.2. Develop Information, Education and Communication (IE & C) materials for targeted groups in a structured public education campaign					
	5.1.1.1.3. Educate the public in order to promote the responsible use of antimicrobials among the general population					
	5.1.1.1.4. Review the public education campaigns for optimized impact					
5.1.1.2 There shall be continuous education to promote the responsible use of antimicrobials in animal husbandry, aquaculture and crop production with emphasis on the dangers of antimicrobial misuse	5.1.1.2.1. Engage professional associations to educate professionals to promote the responsible use of antimicrobials at all levels of practice in all affected sectors (human, animal, plant, environment, etc.)					
5.1.1.3 The Ministry of Health (MOH) and its agencies, in collaboration with the educational institutions shall incorporate information on antimicrobials into their curricula	5.1.1.3.1. Develop the content framework on responsible use of antimicrobials for consideration into the curriculum of training institutions. (This is to serve as the basis for the content of syllabus)					
5.1.1.4 The Ministries of Food and Agriculture, Fisheries and Aquaculture Development shall collaborate with the relevant educational institutions to develop and include in their curricula the concept of AMU and AMR	5.1.1.4.1.(a) Develop the content framework on responsible use of antimicrobials in non-human settings, for consideration into the curriculum of training institutions. (This is to serve as the basis for the content of syllabus) [See activity 5.1.1.4.1.(a) below]					

OPERATIONAL PLAN

The AMR National Action Plan details an operational plan which describes activities to be implemented /actions to be taken in line with the broad strategic objectives recommended. Lead implementers have been identified as well as relevant collaborators. The list of collaborators could be expanded during implementation.

Activities	Description of Activity	Time of implementation	Frequency (within 5 years)	Lead implementer/ Responsibility	Collaborators
Strategic objective 1: Improve awareness and understanding of antimicrobial resistance through effective communication, education and training.					
Sub-objective 1					
5.1.1.1.1. Engage CSOs and the media (as AMR media partners) to educate the public on responsible use of antimicrobials in the spirit of 'One Health'	[CSO and media training workshop on AMR]	July, November 2018	1	GCNH, VSD, GHS	GJA, DP, Media, MMDA, MOFA (APD, PPRSD), Fisheries Commission, MOH (HPU), PSGH, GRNA, GRMA, OTCMSA, GMA, GVMA, Farmer Based Organisations
5.1.1.1.2. Develop Information, Education and Communication (IE & C) materials for targeted groups in a stratified public education campaign	[Technical Working Group activity with clear TORs, includes illustration, design and printing]	June-July 2018	1	GHS (Health Promotion Unit), MOFA (ISD), VSD, APD	GCNH, DP, Media, MMDA, Office of the Director of Pharmaceutical Services, MOH, MOFA (APD, PPRSD), Fisheries Commission, MOH, PSGH, GRNA, GRMA, OTCMSA, GMA, GVMA
5.1.1.1.3. Educate the public in order to promote the responsible use of antimicrobials among the general population	[AMR public education campaign through radio, TV, print media, social media, schools, communities, churches, etc.]	August-September 2018, November 2018-May 2019	5	VSD, GHS, GNDP	GCNH, DP, Media, MMDA, GES, MOFA (APD, PPRSD), Fisheries Commission, MOH (HPU), PSGH, GRNA, GRMA, OTCMSA, GMA, GVMA
5.1.1.1.4. Review the public education campaign for optimized impact	[Technical assistance: Review of public education campaign]	January 2019	1	VSD, GHS	All relevant stakeholders
5.1.1.2.1. Engage professional associations to educate professionals to promote the responsible use of antimicrobials at all levels of practice in all affected sectors (human, animal, plant, environment, etc.)	[Technical Workshop with relevant professional bodies and AMR Advocacy teams, Annual General meeting/ Continuous professional education platforms]	May 2018, December 2018	1	Professional associations (GMA, GRNA, PSGH, GRMA, VEMTAG, GVMA)	Professional associations, VEMTAG, All relevant stakeholders
5.1.1.3.1. Develop the content framework on responsible use of antimicrobials for consideration into the curriculum of training institutions. (This is to serve as the basis for the content on syllabus)	[Technical Working Group activity with clear TORs]	June 2018	1	AMR Platform Technical Working Group	Academics, MOH, MOFA MOE, GHS, Relevant professional regulatory bodies, all relevant stakeholders
5.1.1.4.1.(a) Develop the content framework on responsible use of antimicrobials in non-human settings, for consideration into the curriculum of training institutions. (This is to serve as the basis for the content on syllabus)	[Refer to activity 5.1.1.3.1]	[Refer to activity 5.1.1.3.1]	[Refer to activity 5.1.1.3.1]	[Refer to activity 5.1.1.3.1]	[Refer to activity 5.1.1.3.1]
5.1.1.4.1.(b) Incorporate content on responsible use of antimicrobials into the curriculum of training institutions for professionals in all affected sectors (human, animal, plant, environment etc.) [This is linked with Activity 7.1.1.1.3.]	[Technical workshop with relevant training institutions and AMR Advocacy teams]	July-August 2018	1	AMR Platform Technical Working Group	Academics, VSD, FAO/MESTI, all relevant stakeholders

First Page of the NAP Operational Plan

Budget

Strategic objective 1:

Improve awareness and understanding of antimicrobial resistance through effective communication, education and training.

Strategic objective 2:

Strengthen knowledge and evidence base through surveillance and research

Strategic objective 3:

Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures and good agricultural and biosecurity practices.

Strategic objective 4:

Optimize the use of antimicrobial agents in humans, aquaculture, plant production and in animal health in the 'one health' approach

Strategic objective 5:

Develop the economic case and create an enabling environment for sustainable investment that takes account of the needs of Ghana, and increase investment in new medicines, diagnostic tools, vaccines and other interventions.

These have all been
costed in USD

Ghana AMR integration report WHO-June 2018

Resource mobilisation for
antimicrobial resistance
(AMR): Getting AMR into plans
and budgets of government
and development partners

Ghana country level report

PROCESS INDICATOR MATRIX

The Ghana AMR National Action Plan provides an M and E framework as detailed below to enhance project implementation. Indicators are provided under each strategic objective and sub-objective including the data sources that inform the indicator or where the indicator could be obtained and targets for the stated indicator.

Activities	Implementation time	Process Indicator/ Deliverables	Data source	Targets
Indicators-Strategic Objective 1				
Sub-objective 1				
5.1.1.1.1. Engage CSOs and the media (as AMR media partners) to educate the public on responsible use of antimicrobials in the spirit of 'One health'	July, November 2018	[1] Number of CSOs and media engaged [2] Number of CSO and Media engagement workshops held	MOFA, MOH, MESTI	[1] Participation from 10 radio stations and 5 TV stations with national coverage [2] Participation from CSO from all 10 regions
5.1.1.1.2. Develop Information, Education and Communication (IE & C) materials for targeted groups in a standardised public education campaign	June-July 2018	Simple and concise IE&C materials produced and available in several formats for various media channels	GHS (Health Promotion Unit), MOFA(ISD), Office of the Director of Pharmaceutical Services-MOH, VSD, AFD	[1] 250,000 flyers, stickers and fact sheets [2] 100,000 posters
5.1.1.1.3. Educate the public in order to promote the responsible use of antimicrobials among the general population	August-September 2018, November 2018-May 2019	[1] Number of awareness session activities undertaken [2] Number of people sensitized [3] Number of people trained	ISD, MESTI, MOH, MOFA, VSD, GHS, MOFAD, GES	[1] 10 awareness session activities per year [2] 10 regions sensitized [3] 50 ToT conducted twice for the period
5.1.1.1.4. Review the public education campaign for optimized impact	January 2019	[1] Public education campaign review report available	VSD, GHS	[1] Changes in public awareness on AMR demonstrated
5.1.1.2.1. Engage professional associations to educate professionals to promote the responsible use of antimicrobials at all levels of practice in all affected sectors (human, animal, plant, environment, etc.)	May 2018, December 2018	[1] Number of professional associations engaged	Professional associations	[1] Professional associations in all sectors engaged [2] Number of AGMs/CPDs etc. held on AMR
5.1.1.3.1. Develop the content framework on responsible use of antimicrobials for consideration into the curriculum of training institutions. (This is to serve as the basis for the content on syllabus)	June 2018	[1] Content framework for update of syllabus developed	MOH, MOFA, AMR Platform, Academia, GHS	[1] Content framework for update of syllabus developed submitted to all tertiary institutions training professionals in human and animal health
5.1.1.4.1.(a) Develop the content framework on responsible use of antimicrobials in non-human settings, for consideration into the curriculum of training institutions. (This is to serve as the basis for the content on syllabus)	[Refer to activity 5.1.1.3.1]	[Refer to activity 5.1.1.3.1]	[Refer to activity 5.1.1.3.1]	[Refer to activity 5.1.1.3.1]
5.1.1.4.1.(b) Incorporate content on responsible use of antimicrobials into the curriculum of training institutions for professionals in all affected sectors (human, animal, plant, environment etc.) [This is linked with Activity 5.1.1.1.3]	July-August 2018	[1] Content framework for update of syllabus developed	AMR Platform, Academia, GHS, VSD	[1] Updated curriculum of training institutions containing modules on AMR [2] Short summary courses/lectures on AMR in training institutions

M&E Framework of the NAP

Policy on Antimicrobial Use and Resistance



A word cloud graphic with a rainbow-colored curved border at the bottom. The words are arranged in a roughly circular shape and include:

- Infection prevention and control
- Antimicrobials
- Antibiotic Consumption
- Policy
- Health
- Data
- Sensitization
- Antibiotics
- Abuse
- Use
- Misuse
- Farmers
- Fungi
- Food
- Farms
- Drug Resistance
- Surveillance
- Environment
- Bacteria
- National Action
- Virus
- Access
- Hygiene
- Testing
- Health professionals
- Laboratories
- Training
- Investments
- Infectious diseases
- Veterinarian
- Agriculture

Acknowledgements

- Dr. Martha Gyansa-Lutterodt, Chief Pharmacist, and Chair for the NPAR
- Members of the NPAR
- All Stakeholders working to reduce AMR in Ghana
- Dr. Mawuli Dzodzomenyo, SPH, Member Global- NAMRIP Steering Group

THANK YOU

THINGS TO DO IN GHANA

()

Kakum National Park



- Nature reserve with virgin rainforest, a 40m-high canopy walkway, birding trail & tree house

Mole National Park



- Extensive wildlife refuge with savanna & forest habitats for elephants, antelopes & other game.

Cape Coast Castle

- Museum of the trans-Atlantic slave trade
- Museum housed in a European-built waterfront castle used in the trans-Atlantic slave trade.



Lake Volta

- Lake Volta, the largest artificial reservoir in the world in terms of surface area, is contained behind the Akosombo Dam. It is completely within the country of Ghana and has a surface area of 8,502 square kilometres. [Wikipedia](#)



Mole National Park

- Mole National Park protects an area of savannah and forest in northern Ghana. It's home to elephants, leopards and rare birds such as the white-backed vulture

