The South African AMR strategy

3rd Annual Regulatory Workshop

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Sector wide Procurement

National Department of Health; South Africa

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Background to AMR

What is Antimicrobial stewardship and resistance?

Antimicrobial stewardship (AMS) is a multi-disciplinary, systematic approach to optimising the appropriate use of all antimicrobials to improve patient outcomes and limit emergence of resistant pathogens whilst ensuring patient safety.

Antibiotic: any of a large group of chemical substances, such as penicillin, having the capacity to inhibit the growth of, or to destroy bacteria and other microorganisms, used chiefly in the treatment of infectious diseases

Antimicrobial: an agent such as a drug that destroys or inhibits the growth of a microorganism

Antimicrobial resistance (AMR): the ability of a microorganism to withstand treatment with an antimicrobial drug'

Background

- Antimicrobial resistance (AMR) is a major global public health crisis.
- The Global Action Plan (GAP) objectives, adopted by the 68th World Health Assembly in May 2015 calls for the countries to put in place their own Action plans to address AMR
- The development and implementation of a national AMR strategy that complements international efforts is a major step towards containment of the growing threat of AMR in human and animal health.
- The AMR Strategy Framework 2014 – 2019 has been approved
- The Implementation Plan that puts these strategic objectives into effect has also been developed

Why do we need an AMR strategy and implementation plan?

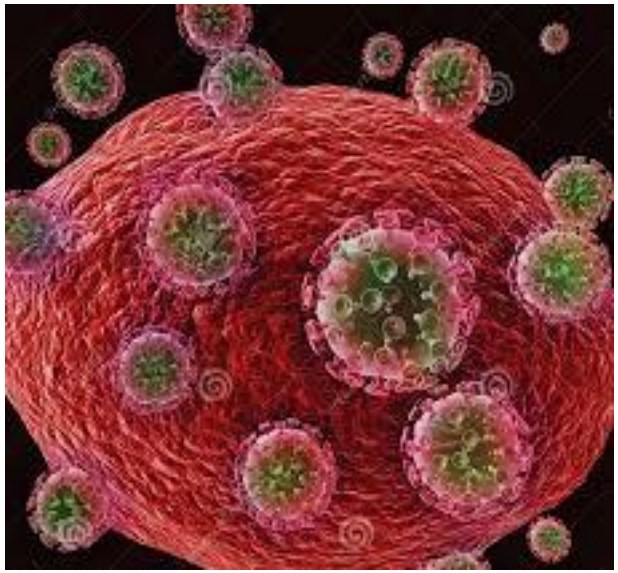
South Africa's triple burden of AMR Multidrug resistant organisms

The AMR strategy and implementation plan is a template for all multidrug resistant organisms

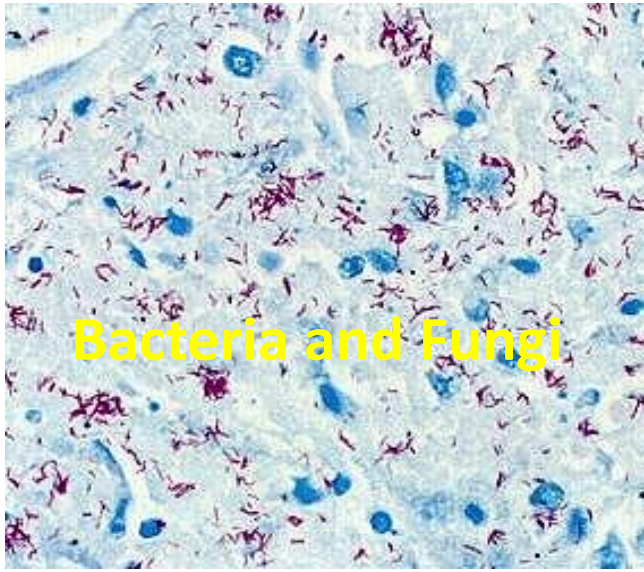
Multidrug resistant TB (MDR TB)

Drug resistant HIV

DRHIV



Multi drug resistant organisms (MDR)



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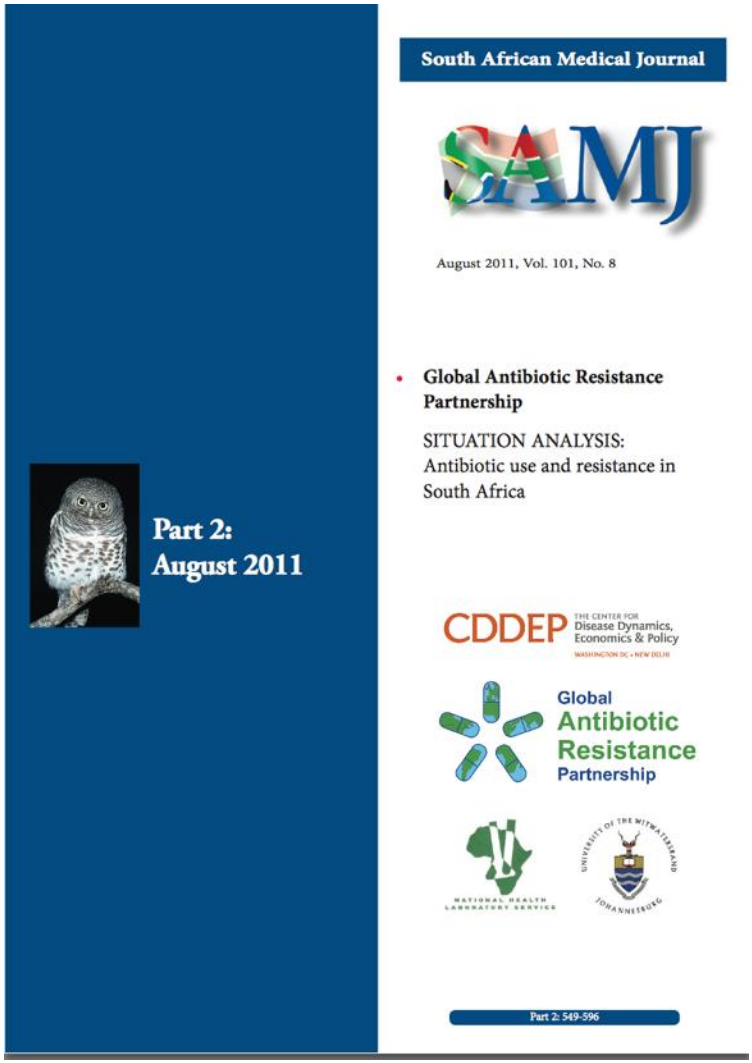
How serious is AMR in SA?

SAMJ situational analysis 2011

The situational analysis identified
numerous multidrug resistant organism concerns and resource constraints limiting implementation of good infection control practices and antimicrobial stewardship programs



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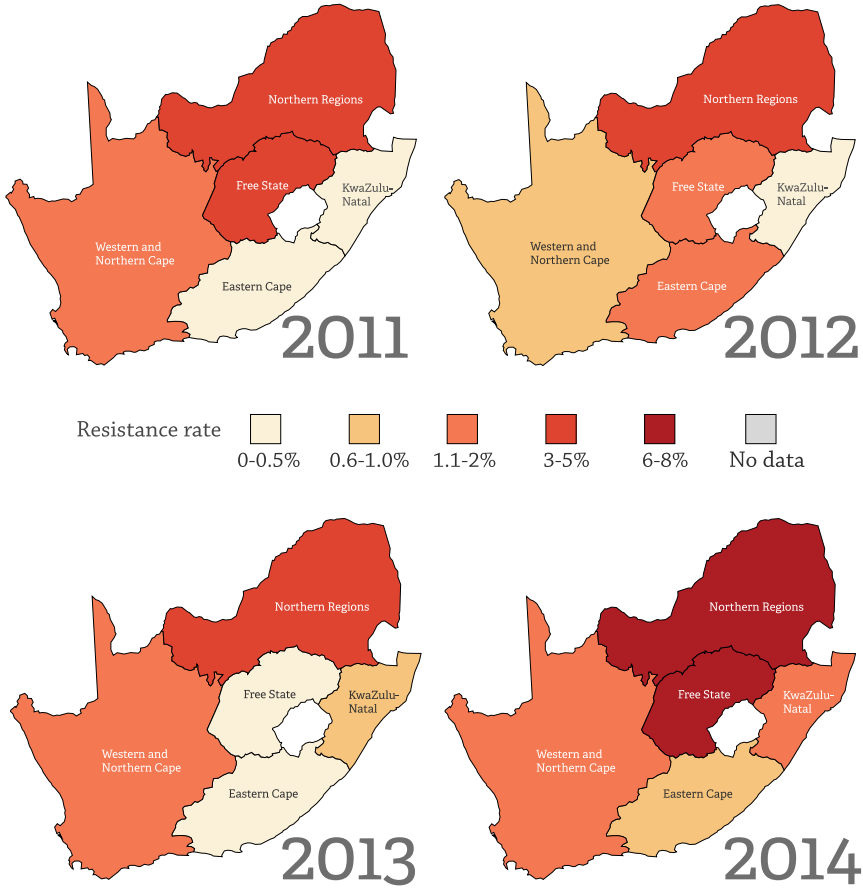
Key AMR organisms baselines

Available surveillance data from both the public and private sectors over the period 2012-2014 have been aggregated and combined to create the baseline results for 3 key multidrug resistant organisms.

The baseline findings are that all three organism-antibiotic combinations show statistically significant change over time:

- Staphylococcus aureus and cloxacillin – significant **decrease** in resistance over 3 years ($p<0.001$) - currently resistance is at 30%
- Klebsiella pneumoniae and carbapenems – significant **increase** in resistance over 3 years ($p<0.001$) - currently resistance is at 3,2%
- Escherichia coli and ciprofloxacin – **no change** in resistance over the 3 years ($p=0.83$) - currently resistance is at 27%

Klebsiella pneumoniae resistance to carbapenems



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Resistance Maps generated by CDDEP using Private sector data as collected by SASCM (South Africa Society of Clinical Microbiologists) and public sector data as collected through the 21 sentinel sites by the NICD (National Institute for Communicable Diseases).

Therefore we need to implement Antimicrobial Stewardship at all levels

We need to better manage our antimicrobial resistance, to limit further increases in resistant microbial infections, and improve patient outcomes.

We can achieve this through:

- Preventing infections in the first place through good Infection Prevention & Control practices and immunisations
- Rational and prudent Antimicrobial use

a → The purpose of the AMR Strategic framework is to provide structure for managing AMR, to limit further increases in resistant microbial infections, and improve patient outcomes

The AMR journey that South Africa undertook

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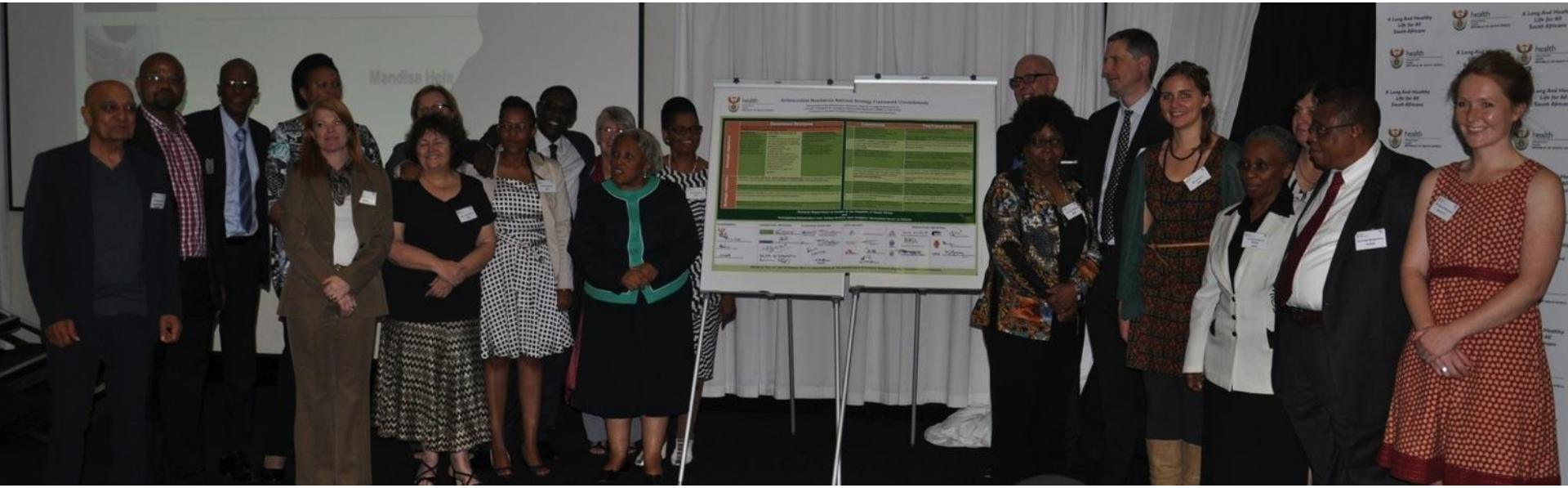
The South African AMR initiative started at the summit in October 2014.

Brought together key stakeholders from government, laboratory services, clinician societies, civil societies and regulatory bodies



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The summit culminated in all stakeholders signing a commitment to ……

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Antimicrobial Resistance National Strategy Framework Commitments

The purpose of the Antimicrobial Resistance National Strategy framework is to provide a framework for managing Antimicrobial Resistance (AMR), to limit further increases in resistant microbial infections, and improve patient outcomes.

Strategic objectives

Governance Structures

Strengthen, coordinate and institutionalise interdisciplinary efforts through national and health establishment level governance structures

Surveillance
Optimise surveillance and early detection of antimicrobial resistances to enable reporting of local, regional, and national resistance patterns to optimise empiric and targeted antibiotic choice

Infection Prevention & Control
Enhance infection prevention and control of the spread of resistant microbes to patients in healthcare settings, focusing on improvement in hand hygiene and the identification and isolation of patients with resistant organisms. Community measures include preventing infection through wide-reaching vaccination programmes and improvements in water and sanitation.

Antimicrobial Stewardship
Promote appropriate use of antimicrobials in human and animal health through antimicrobial stewardship including:
- Effective policies and protocols
- Stewardship at point-of-care
- National prescribing guidelines
- Appropriate antibiotic choice

Strategic enablers

Legislative and policy reform for health systems strengthening to support the quality of antimicrobials in the country and to enable control over prescribing of antimicrobials in the animal health sector.

Education of all levels of health providers in human health and agriculture in the critical concepts of antimicrobial stewardship, infection control, infectious diseases, microbiology and pharmacology.

Communication to educate the public, create awareness of the dangers of inappropriate antimicrobial use and enhance patient advocacy to combat antimicrobial resistance.

Research into novel diagnostics, such as point of care testing, new antimicrobials and implementation of treatment guidelines (treatment duration, antimicrobial consumption).

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

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and
Participating Stakeholders from Various Sectors, each Company represented herein as follows:

GOVERNMENT	LABORATORY SERVICES	CLINICIAN SOCIETIES	CIVIL SOCIETY	REGULATORY SOCIETIES
Department of Agriculture, Forestry and Fisheries National Department of Health Department of Science and Technology	National Health Laboratory Services AMPATH (on Behalf of Private Labs) SALPA IVD DIAGNOSTICS	South African Antimicrobial Stewardship Programme federation of infectious diseases societies of southern africa SAHIVSoc PSSA	Treatment Action Campaign Section 27 Médicins Sans Frontières MSH	Office of Health Standards Compliance South African Pharmacy Council South African Veterinary Council Medicines Control Council South African Nursing Council Health Professionals Council of South Africa

Signed on this 16th day of October 2014 in Johannesburg as The Antimicrobial Resistance National Strategy Framework Commitments

Stakeholder committed to work collaboratively, to invest resources and implement sustainable strategies and intervention to manage AMR in South Africa

1. To collaborate as intersectoral, interdisciplinary organisations and departments to strengthen, co-ordinate and institutionalise efforts to address Antimicrobial Resistance
2. To establish a national surveillance system to track and report resistant organisms and Antimicrobial use in agriculture and human health
3. To enhance the processes, structures, resources and supplies needed for effective Infection Prevention & Control
4. To promote the appropriate use of Antimicrobials in human and animal health through antimicrobial stewardship in facilities and suitable enabling legislation and regulations
5. To build the expertise and strengthen the competency of health and veterinary professionals and improve the staffing levels of the workforce in Antimicrobial Resistance and Infection Prevention & Control
6. To increase the community awareness of Antimicrobial Resistance
7. To promote research into novel diagnostics and clinical trials in Infection Prevention & Control and Antimicrobial Resistance

Pillars of the South African AMR Strategy Framework

Impact: Rational Antimicrobial use and improved patient outcomes

Strategic objective

Antimicrobial resistance Governance

Diagnostic stewardship	Enhance Surveillance	Antimicrobial Stewardship	Prevention including IPC and vaccination

Enablers

Health systems strengthening, research, education and communication

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Objectives of the South African AMR Strategy Framework

Strategic objective

- **1:** Strengthen, coordinate and **institutionalize interdisciplinary efforts** through national and health establishment level governance structures
- **2: Optimise surveillance and early detection** of antimicrobial resistances to enable reporting
- **3: Enhance infection prevention and control** of the spread of resistant microbes to patients in healthcare settings, wide-reaching vaccination programmes and improvements in water and sanitation; and
- **4:** Promote **appropriate use** of antimicrobials in human and animal health through **antimicrobial stewardship.**

Strategic Enablers

- **Legislative and policy reform for health systems strengthening** to support the quality of antimicrobials and to enable control over prescribing of antimicrobials in the animal health sector
- **Education** of all levels of health providers in human health and agriculture in the critical concepts of antimicrobial stewardship, infection control, infectious diseases, microbiology and pharmacology
- **Communication** to educate the public, create awareness and enhance patient advocacy of the dangers of inappropriate antimicrobial use
- **Research** into novel diagnostics such as point of care testing and clinical trials of treatment duration, antimicrobial consumption plus new antimicrobials.

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The AMR implementation plan describes the activities needed to effect the strategy

Infection Prevention & Control Strategic Objective

Enhance infection prevention and control of the spread of resistant microbes to patients in healthcare settings, wide-reaching vaccination programmes and improvements in water and sanitation

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Infection Prevention & Control Strategic Objective

Prevention of infection is a key step in reducing the need for antibiotic use. Therefore preventing and controlling the spread of resistant microorganisms would include a focus on:

- Preventing new infections through an effective immunisation campaign as part of EPI and seasonal prevention strategies
- Prevent and control the spread of resistant organisms at health facility level through:
  - Improvements in basic infection control techniques such as hand hygiene and use of Personal Protective Equipment
  - Ensuring that the Infection Prevention & Control practitioners are sufficient in number and sufficiently qualified to perform their functions according to the standards required
  - Improvement in the availability of cleaning and IPC supplies
  - Improved planning of health establishments infection control infrastructure needs

Infection Prevention and Control Activities in Implementation plan

Output		Activity
Availability of IPC supplies and equipment	1	Update the list of non-negotiable IPC supplies and cleaning supplies
	2	Improve the availability at Health establishment level of non negotiable IPC supplies
IPC that meets standards at Health Establishment level	1	Evaluate the IPC gaps in standards to determine interventions required
	2	Strengthen the implementation of the core standards for IPC through the reinforcement of the ICAT manual and Infection Prevention & Control guidelines and Quality improvement methodology
	3	Improve hand hygiene through awareness days
	4	Ensure staffing norms for IPC practitioners are put in place
Improved immunisation uptake	1	Determine interventions to address gaps and promote appropriate immunisation uptake
	2	Encourage seasonal vaccine uptake

Infection Prevention and Control Activities in Implementation plan

Output		Activity
Recognition of IPC practitioners *as a cadre of staff*	**1**	Collaborate with SANC to determine standard Infection Prevention & Control practitioner qualifications and recognition
	2	Clearly define the roles and responsibilities and competencies of the IPC practitioner in the Health Establishment
	3	Assess the availability and competencies of IPC practitioners at Health establishment and District level against norm
	4	Develop a HRD strategy to address gaps in competency and number of IPC practitioners
	5	Establish IPC practitioners in all health establishment as per norms agreed

Infection Prevention & Control Strategic Objective

INFECTION PREVENTION AND CONTROL

- NDOH Communicable disease unit to take on role of IPC :
  - New IPC specialist post to be motivated for a suitable candidate to Implement the IPC guidelines and policy
  - Linkage between National IPC and the already established IPC structures at facility , district and province level needs to be determined
  - Standardise surveillance system and reporting of infections to be developed
  - Monitoring and evaluation systems to be put in place to determine implementation against policy and NCS

Office of Health Standards Compliance provides the regulatory support

OHSC
Office of Health Standards Compliance
Ensuring quality and safety in health care

"protect and promote the health and safety of the healthcare users and staff"

The facility level requirements for implementation of IPC is prescribed within the Norms & Standards for health facilities

They place an obligation on the health facility to implement the systems and processes within their clinical units to ensure compliance to these standards and therefore provides the traction and an enforcement mechanism for the AMS policy

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Medicines Control Council (MCC)

REGULATORY SUPPORT

- Commodities required for AMS:
  - Quality
    - Antimicrobials, vaccines, diagnostics & IPC products.
  - Expedited review of novel health technologies.
  - Vaccination
    - Policy
    - Seasonal.
  - Clinical trials
  - Education
  - Uninterrupted supplies

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Thank you

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