



**Ministry of Health & Family Welfare**

# National Action Plan

Antimicrobial Resistance Containment in Bangladesh

**2017-2022**



**Disease Control Unit**

**Communicable Disease Control Program (CDC)**

**Directorate General of Health Services**

APPROVED

Disease Control Division,  
Communicable Disease Control Program,  
Directorate General of Health Services  
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**Antimicrobial Resistance Containment in Bangladesh**

# **National Action Plan**

**Disease Control Unit  
Communicable Disease Control Program  
Directorate General of Health Services (DGHS)  
2017**

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## Glossaries:

**Antimicrobial Resistance Containment:** Antimicrobial Resistance Containment addresses the challenges of antimicrobial resistance to slow the emergence and reduce the spread of antimicrobial-resistant microorganisms through reducing the disease burden and the spread of infection, improving access to appropriate antimicrobials, improving rational use of antimicrobials, strengthening health systems and their surveillance capabilities, enforcing regulations and legislation and encouraging the development of appropriate new drugs and vaccine

**Infection prevention and control:** Infection prevention and control refers to policies and procedures used to prevent occurrence of infectious diseases, minimize and prevent the risk of spreading infections, especially in hospitals and human or animal health care facilities.

**Multisectoral coordination:** Multisectoral coordination refers to deliberate collaboration among various stakeholder groups (e.g., government, civil society, and private sector) and sectors (e.g., health, animal, environment etc.) to jointly achieve a policy outcome. By engaging multiple sectors, partners can leverage knowledge, expertise, reach, and resources, benefiting from their combined and varied strengths as they work toward the shared goal of producing better health outcomes.

**National Steering Committee:** It is the highest executive body at ministerial level comprising ministers, secretaries and other high officials of Ministries of Health and Family Welfare and Fisheries & Livestock. It also includes top executives of concerned UN bodies, professional bodies and different stakeholders

**National Strategy:** National Strategy is a national document that provides a framework of a consensual basis for the goals, objectives, priorities, area of interventions, instruments and means of the national initiatives in the national context ensuring collaborative activities by integrating new and existing programmes and initiatives into a cohesive, national response involving cross sectoral cooperation at the local, regional and national levels to support a collaborative effort to change those practices that have contributed to the development of the problem (resistance) and implement new initiatives to reduce and combat the problem (inappropriate antibiotic usage and resistance) during the next five to ten years.

**National Technical Committee:** It is the highest multisectoral and multidisciplinary executive technical body at directorate level headed by Director General of Health Service and Director, Disease Control, DGHS as member secretary. Representatives from Drug Administration, Livestock and Fisheries directorate, high officials of DGHS, leaders of professional bodies of different disciplines and executives of UN organizations have been included in this committee. Some eminent personalities from different sectors are also incorporated in this committee.

## **Abbreviations:**

ACSM- Advocacy, communication and social mobilization

AMs- Antimicrobial agents

AMR- Antimicrobial Resistance

ARC- Antimicrobial Resistance Containment

AST- Antimicrobial Susceptibility Test

CDC- Communicable disease control

DC, DCU- Disease Control unit

DGHS- Directorate General of Health Services

GLP- Good Laboratory practice

GMP- Good manufacturing practice

GPP- Good pharmacy practice

HCF- Healthcare facility

HCP- Healthcare provider

IPC- Infection prevention and control

MoFLS- Ministry of Fisheries and Livestock

MoHFW- Ministry of Health and Family Welfare

MoL- Ministry of Law

NAP- National Action Plan

NSC- National Steering Committee

NTC- National Technical Committee

STG- Standard Treatment Guideline

WHA- World Health Assembly

WHO- World Health Organization

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## Background

Antimicrobial Resistance (AMR) is a growing global public health threat that is imposing serious effects on public health management of the infectious diseases. Microorganisms are now emerging with abilities to resist the killing effects of antimicrobials (AMs), making the drugs less effective or ineffective in vivo in majority of the cases.

Irrational and inappropriate use of antimicrobials, causing AMR, is a well understood natural consequence. An association between excessive and unnecessary use of AMs and drug resistance because of selective pressure has been documented. The emergence and spread of AMR are complex phenomena due to improper knowledge of AMs usage and inadequate interactions between the prescribers and the patients, along with lack of adequate attention of the regulatory bodies and the policy makers. Patient compliance with recommended treatment is another major problem. Easy availability without prescription and unqualified antimicrobials in Bangladesh also influences the emergence of resistance. The WHO and other international bodies rightly addressed AMR as the biggest threat for the management of infectious diseases.

The World Health Assembly (WHA) Resolution of 1998 urged Member States to develop multiple measures for ARC including: (i) to encourage appropriate and cost effective use of antimicrobials, (ii) to prohibit the dispensing of antimicrobials without the prescription of a qualified health care professional, (iii) to improve practices to prevent the spread of infection and thereby the spread of resistant pathogens, (iv) to strengthen legislation to prevent the manufacture, sale and distribution of counterfeit antimicrobials and the sale of antimicrobials on the informal market, and (v) to reduce the use of antimicrobials in food-animal production.

Member countries of WHA were also encouraged to develop sustainable systems to detect resistant pathogens, to monitor volumes and patterns of use of antimicrobials and the impact of control measures. Following these recommendations, the health ministers of the member states of World Health Organization for South East Asia (WHO SEA) region met in Jaipur, India in September, 2011 and agreed to acknowledge the AMR as a major global public health issue, to institute a coherent, comprehensive and integrated national approach to combat AMR and sixteen other activities by signing to a charter of activities named as the “*Jaipur Declaration*”. The other important areas in the *Jaipur Declaration* includes development of national antibiotic policy and formulation of multisectoral national alliance against AMR for multisectoral approach for regulation of use of antimicrobial agents, promotion of behavioural change in prescribers and communities for rational use of antimicrobial agents, building capacities for efficient surveillance, strengthening diagnostic capacities for microbial diseases and infection prevention and control programs.

In continuation of the efforts related to *Jaipur Declaration* and to review the status of implementation of AMR country plans and to align them with the AMR Global Action Plan, 2015, the designated AMR national focal points of the WHO member countries met in New Delhi, India and made many recommendations in June, 2015. These recommendations include: (1) Establishment of a national governance mechanism, (2) Development/ strengthening national surveillance system for AMR, (3)

Establishment of a national AMR reference laboratory, (3) To include AMR in education and training curriculum, (4) Strengthening of hygiene and infection prevention and control program, (5) Strengthening regulatory mechanism to ensure access of quality antibiotics, etc.

In concordance with the global and WHO activities on ARC, the Ministry of Health and Family Welfare (MoHFW) in Bangladesh has come forward and initiative was taken to conduct program for containment of antimicrobial resistance in Bangladesh. Director, Disease Control and Line Director, Communicable Disease Control, DGHS was selected as a national focal point to coordinate the national program. Since AMR is a multi-faceted problem, conduction of activities in well-coordinated manner through One Health approach is very important. Involvement of multi-sectoral stakeholders was ensured by formulating different national level committees with representation from multisectoral stake holders including interministerial National Steering Committee (NSC), headed by honourable Minister for MoHFW, National Technical Committee (NTC) headed by Director General of Health Services. Subsequently a National Strategy for Antimicrobial Resistance Containment in Bangladesh was developed and approved by the NSC and the NTC with further recommendation of developing a National Action Plan (NAP). A multisectoral working group representing human health, animal health and drug administration was assigned and the NAP was developed based on the national strategy covering almost all the areas recommended by the WHO and other relevant global agencies.

### **Objectives of the National Strategy for ARC:**

1. To establish multi-sectoral approach for planning, coordination and implementation of antimicrobial resistance containment (ARC) activities;
2. To promote and ensure rational use of antimicrobial agents in human health, livestock and fisheries sectors ;
3. To promote and strengthen infection prevention and control measures to minimize the emergence and spread of AMR;
4. Promoting and strengthening biosafety and biosecurity principles and practices and containment measures;
5. To review, update and strengthening of regulatory provisions;
6. To strengthen surveillance system for AMR containment;
7. To promote operational research and education in the area of AMR;
8. To establish Advocacy, Communication and Social Mobilization (ACSM) for ARC activities;

## Activities of National Action Plan (NAP) at a glance

1. Establish multi-sectoral approach for planning, coordination and implementation of ARC
2. Ensure rational use of AMs in human health, Livestock, Fisheries sectors and Environment
  - a. Develop/update **standard treatment guideline (STG) for human and animal health sector** based on AST data and ensure adherence to STG;
  - b. Ensure **availability of AMs** at all healthcare facilities (HCFs);
  - c. Ensuring **quality laboratory testing and reporting** of antimicrobial susceptibility test (AST) for right selection of AMs
  - d. Develop **Antibiotic policy**;
  - e. Establish/ strengthen **national reference laboratory and regional Microbiology laboratories**;
  - f. Ensure **GLP** at all **Microbiology laboratories**;
  - g. Enforce and enhance **regulatory provisions** for use AMs;
  - h. Ensure **good pharmacy practice (GPP)** at points of sale of AMs;
  - i. Ensure **good manufacturing practice (GMP)** at Pharmaceutical industries;
  - j. Enforce and enhance **regulatory provisions** for use of AMs
3. Promote and strengthen **infection prevention and control (IPC)** measures in both human and animal health sectors to minimize emergence and spread of AMT
4. Establish **AMR-surveillance system**;
  - a. Establish national Reference Microbiology Laboratory (RMLs) and select regional microbiology laboratories for AMR- **surveillance**;
  - b. Web-based laboratory **surveillance** and **laboratory networking** for AMR;
  - c. **Monitoring of AMs** use.
5. Promote basic, experimental and operational research in the area of AMR
6. Establish advocacy, communication and social mobilization (ACSM)