Protocol for Surveillance of Antimicrobial Use in Nepal

Government of Nepal

Ministry of Health and Population

Department of Drug Administration (DDA)

2025

Director General

Disclaimer

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GOVERNMENT OF NEPAL
MINISTRY OF HEALTH AND POPULATION
DEPARTMENT OF DRUG ADMINISTRATION

1748, Madan Bhandari Path-4
Bijuli Bazar, Kathmandu

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Foreword

The rising prevalence of antimicrobial resistance (AMR) has become one of the most urgent public health challenges of the 21st century. The misuse and overuse of antimicrobials significantly contribute to this global issue, making it essential to establish robust surveillance mechanisms to monitor antimicrobial use, assess trends, and guide policy decisions. In Nepal, where access to healthcare is diverse and complex, a well-structured system for tracking antimicrobial consumption is crucial for managing and mitigating the risk of AMR.

This Protocol for Surveillance of Antimicrobials Use in Nepal marks a significant milestone in our efforts to monitor national antimicrobial use. It provides a comprehensive framework for the systematic collection, analysis, and interpretation of data on antimicrobial consumption from both domestic manufacturers and importers. The methodologies outlined in the protocol align with global standards, ensuring that the data generated will not only benefit Nepal but also contribute to the worldwide effort against AMR.

The protocol aims to meet the urgent need for reliable and systematic data on antimicrobial consumption in Nepal, addressing the increasing threat of antimicrobial resistance (AMR). By establishing a standardized framework for surveillance, this protocol seeks to generate robust data on AMC that will inform national public health strategies and align with global initiatives to combat AMR. The primary purpose of this protocol is to establish a standardized framework for the collection, analysis, and reporting of antimicrobial consumption data at the national level. It will be utilized by the Department of Drug Administration, Nepalese pharmaceutical companies, drug manufacturers and importers registered with the DDA to report and monitor antimicrobial consumption. The data from this surveillance system will be an invaluable evidence in influencing policy to aid the AMR containment efforts, locally and globally.

I would like to extend my heartfelt thanks and congratulations to the subcommittee for developing this essential document. I would also like to express my gratitude to FFCGN/FHI 360 Nepal and WHO Nepal for their logistical and technical support in producing this document.

Narayan Prasad Dhakal
Director General
Department of Drug Administration

Director General

Abbreviation

AMC	Antimicrobial Consumption
AMR	Antimicrobial Resistance
AMU	Antimicrobial Use
ATC	Anatomical Therapeutic Chemical
DDA	Department of Drug Administration
DDD	Defined Daily Dose
DID	Defined Daily Dose per 1,000 inhabitants per day
DU75	Drug Utilization 75%
DU90	Drug Utilization 90%
GAP-AMR	Global Action Plan on AMR
GDP	Gross Domestic Product
GLASS	Global Antimicrobial Resistance and Use Surveillance System
ICB	International Competitive Bidding
MIU	Million International Units
MoHP	Ministry of Health and Population
PMS	Post-Marketing Surveillance
NAP-AMR	National Action Plan - AMR
TWG	Technical Working Group
UK-DHSC	UK Department of Health and Social Care
VSDRL	Veterinary Standards and Drug Regulatory Laboratory
WHO	World Health Organization

Government of Nepal
Ministry of Health and Population
Department of Drug Administration

Director General

Contents

Director General

I. Background

Antimicrobial resistance (AMR) is a global public health threat, requiring coordinated action across human health, animal health, and environmental sectors. In 2015, the 68th World Health Assembly adopted the Global Action Plan on Antimicrobial Resistance (GAP-AMR), urging member states to develop National Action Plans (NAPs) to combat AMR through a One Health approach (WHO, 2015).

In alignment with the GAP-AMR, Nepal endorsed its National Action Plan on Antimicrobial Resistance (NAP-AMR) 2024–2028 in February 2024, outlining five strategic priorities:

i. Enhancing awareness of AMR through education and training
ii. Strengthening surveillance for AMR and antimicrobial use (AMU)
iii. Reducing infections through improved infection prevention and control (IPC)
iv. Optimizing antimicrobial use in humans, animals, and agriculture
v. Promoting investments in AMR research and innovations

A critical component of AMR containment is monitoring antimicrobial consumption (AMC). The World Health Organization (WHO) established the Global Antimicrobial Resistance and Use Surveillance System (GLASS) in 2016, which includes GLASS-AMC (now GLASS-AMU) for tracking national antimicrobial consumption data (WHO, 2016).

Nepal joined GLASS-AMU in 2020, with the Department of Drug Administration (DDA) as the national focal agency for AMC surveillance. The DDA collects and reports national AMC data annually to WHO GLASS AMU platform.

Key findings from Nepal's AMC surveillance

The antimicrobial consumption data from 2016 to 2023 showed that antibacterials had the highest consumption followed by antifungals, anti-tubercular drugs, antivirals and antimalarials. Among antibacterials, macrolides, lincosamides and streptogramins (J01F); beta lactam antibacterials and penicillins (J01D and J01C) constituted the top 3 antibacterials having highest DID. Based on the AWaRe classification, the Watch group comprised the majority. Azithromycin (J01FA10), cefixime (J01DD08) and amoxicillin (J01CA04) are the top 3 anti-bacterial agent that made up 75% (DU75) of consumption by oral route and ceftriaxone (J01DDo4), amikacin (J01GB06) and metronidazole (J01XD01) are the top three anti-bacterial agent that made up 75% (DU75) of

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Ministry of Health and Population
Director General

consumption by parenteral route Notably, the use of not-recommended antibiotics decreased between 2022 and 2023.

Nepal's AMC surveillance system aims to monitor antimicrobial consumption patterns, identify misuse or overuse, detect concerning trends, and provide evidence for policymaking and stewardship programs to optimize antibiotic use and combat AMR. The data will inform stakeholders, guide interventions, and support research on antimicrobial resistance dynamics.

II. Objectives of AMC Surveillance Protocol

General objective:

- To provide standard methodology and tools for AMC surveillance in Nepal.

Specific objectives:

- Define a methodology for collecting, analyzing and reporting national AMC data.
- Identify the ATC classes of antimicrobials assessed in the national surveillance.
- Outline AMC data management and analysis.
- Outline the process of reporting annual national AMC data to GLASS-AMU platform.

III. WHO Methodology and Principles

1. Antimicrobial consumption

Antimicrobial consumption is defined as the consumption estimates derived from aggregated data sources such as import or wholesale data, or aggregated health insurance data. It represents quantities of antimicrobials used in a specific health care section (public, private or public and private,) and at a specific health care level (community, hospital or community and hospital) during a specific period.

Countries are responsible for collecting, analyzing, and reporting on AMC on a regular basis (annually). Based on the information obtained through AMC surveillance, countries take necessary actions to improve AMC and AMU in the country.

Consumption data can be presented as total consumption for a country or can be disaggregated by setting (community or hospital, public or private sectors).

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2. ATC classification

The ATC classification system is a classification system for active substances used in pharmaceuticals. It categorizes drugs according to the organ or system on which they act, and their therapeutic, pharmacological and chemical properties. The system is maintained by the World Health Organization (WHO) Collaborating Centre for Drug Statistics Methodology and is widely used internationally for drug utilization research, regulation, and reimbursement policies. The ATC codes are composed of seven alphanumeric characters, organized into five levels, each representing different aspects of the drug's classification, including its anatomical, therapeutic, and chemical properties.

LEVEL	EXPLANATION
Level 1	Level 1 indicates the anatomical main group and consists of one letter. There are 14 main groups. J Anti-infective for systemic use. A Alimentary tract and metabolism, P Antiparasitic products, insecticides and repellants.
Level 2	Level 2 indicates pharmacological and therapeutic subgroups; for example, **J01** is Antibacterial for systemic use, **J02** Antimycotics and **J04** Antimycobacterial.
Level 3	Level 3 indicates chemical or pharmacological subgroups; for example, J01**C** is Beta-lactam antibacterial, Penicillins.
Level 4	Level 4 indicates the pharmacological subgroup; for example, J01C**A** is Penicillins with extended spectrum
Level 5	Level 5 indicates the chemical substance; for example, J01CA**01** is ampicillin and J01CA**04** is amoxicillin

3. Defined daily dose (DDD)

The most used measurement statistic is the number of DDDs. The DDD is the assumed average maintenance dose per day for a medicine used for its main indication in adults. A DDD is only assigned for drugs that already have an ATC code. There are no separate DDDs for children, so DDD estimates for pediatric formulations are difficult to interpret.

Government of Nepal
Ministry of Health and Population
Department of Durg Administration

Director General

The number of DDDs provides a measure of extent of use; however, for comparative purposes this data is usually adjusted for population size or population group [DDDs/1000 inhabitants/day, (DID)].

IV. Elements of AMC data collection

There are three elements to the AMC data collection: AMC data, denominator data, and descriptive or contextual information that is relevant for interpreting the consumption estimates calculated.

Elements of data collection

Antimicrobial Consumption Data	• Product level data • Consumed packages at product level (Aggregated packages) • May be stratified by health care levels and sectors
Denominator data	• Population under surveillance to which data apply • May be stratified by health care sectors
Contextual information related to antimicrobial consumption	• Data source information, for example, national reference data (total) or health care sector (community or hospital) • Which antimicrobials are included in surveillance • Specific exclusions of health care institutions (e.g. nursing homes, day care centers, psychiatric facilities and private sector)

1. Antimicrobial consumption data components

For the National AMC surveillance, reporting will be carried out for a calendar year (January to December). The ATC/DDD methodology will be used to standardize the data collection and reporting of AMC. The reporting requires collection of AMC related data and denominator data.

i. AMC data

The AMC data comprises of product information and consumption data.

a. Product information

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Director General

A list (register) of all antimicrobial products in the country with market authorization (license) provided by the DDA will be prepared. Furthermore, the product will be linked to respective domestic manufacturers and importers with contact details for AMC data collection. For each unique product a range of information will be collected to calculate consumption based on DDD using the ATC system.

b. Consumption data

For each antimicrobial product reported in the register, consumption is reported as the total number of packages sold by domestic manufacturers and importers for the given year of reporting (assumed to be consumed by the population in the defined time). For most antimicrobials, the DDDs/1000 inhabitants/day (DID) will be calculated for the total population, including all age and gender groups.

ii. Denominator data

The total numbers of DDDs derived as consumption estimates should be adjusted for the population to which the data applies. Appropriate population should be used to calculate national consumption estimates, through population information obtained from the World Population Prospects. For example, when the surveillance is conducted at the national level, but only captures about 80% of the drugs in the market at the national level (e.g. missing data from some domestic manufacturers, importers, etc.), the total national population should be used and the consumption should be noted as being an underestimate resulting from missing data (e.g. estimated at 20%).

iii. AMC reporting metrics and indicators

The National AMC surveillance is concerned with the volume of antimicrobials consumed as DDD. In addition to DDD, the following indicators should also be considered for estimating the consumption:

- quantity of antibiotics as DDD per 1000 inhabitants per day (DID) for total consumption and by pharmacological subgroup:

  DID = (Total DDD x 1000) / (Population x 365)

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Ministry of Health and Population
Department of Durg Administration

Director General

- relative consumption of antibiotics as a percentage of total consumption by route of administration (i.e., oral, parenteral, rectal or inhaled); and
- list of the most frequently used antibiotic substances, making up 75% and 90% of the total consumption, that is, Drug Utilization 75 (DU75) and Drug Utilization 90 (DU90) – stratified by route of administration.

iv. Numerator data

The numerator is the DDD.

The unit of measurement of consumption is DDD/1,000 inhabitants/day (DID).

v. Assumption

The assumption is national consumption equals the sales from domestic manufacturers, importers, distributors, wholesalers and other stakeholders as reported by them.

V. AMC surveillance methodology

To ensure the standardization and comparisons of AMC on regular basis, the GLASS-AMU methodology is adopted and uses the ATC system to classify antimicrobial substances and the number of Defined Daily Dose (DDDs) as a measurement metric for calculating consumption. The main indicator describing antimicrobial consumption is the number of DDDs per 1000 inhabitants per day (DID).

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Department of Durg Administration

Director General

VI. Antimicrobial class included in the National AMC surveillance

The national AMC surveillance focuses only on antimicrobials for systemic use; topical antimicrobials are excluded. The routes of administration of antimicrobials included in the surveillance are oral, parenteral, rectal, inhalation powder and inhalation solutions.

The table below shows antimicrobials and the respective ATC included in the national AMC surveillance in Nepal. All antimicrobials listed below are set at core monitoring level, mandatory to be included and reported.

Antimicrobial class	ATC	Monitoring
Antibacterials for systemic use	J01	Core
Antibiotics for alimentary tract	A07AA	Core
Nitroimidazole derivatives for protozoal diseases	P01AB	Core
Antifungals	J02	Core
Antimycotics	D01BA	Core
Antivirals	J05	Core
Antimycobacterials for treatment of tuberculosis	J04A	Core
Antimalarials	P01B	Core

VII. Data sources for antimicrobial consumption

The data sources for AMC are:

- Domestic manufacturers
- Importers
- DDA's permission records (Donations/International Competitive Bidding (ICB) in vertical programs)

Government of Nepal
Ministry of Health and Population
Department of Durg Administration

Director General

VIII. Annual Antimicrobial Consumption (AMC) Data Collection Process

Step 1: Updating the Antimicrobial products in prescribed excel format:

The collection of product level AMC data is done annually for the calendar year from January to December. Prior to data call, the list of antimicrobials and respective manufacturers and importers is updated annually with the new registered antimicrobials and new domestic manufacturers and importers.

Step 2: Communication with the stakeholders:

The official notice for retrospective data submission for human and veterinary antimicrobials is issued in the month of February to April. This timeframe allows ensures sufficient duration for data cleaning, verification and validation before submission to GLASS-AMU. The national focal point, in collaboration with the Technical Working Group on Antimicrobial Consumption (TWG-AMC) subcommittee coordinates the data collection and compilation processes of human antimicrobials whereas collection and compilation processes for veterinary antimicrobials are done by Veterinary Standard Drug Research Laboratory (VSDRL). At the global level, the VSDRL reports the consumption data to the World Organization for Animal Health, enabling the classification of quantitative information by type of use, animal species, and route of administration.

The data submission for human antimicrobials will utilize a Microsoft Excel spreadsheet template (Annex 1), developed based on the GLASS-AMC Excel template. Individual emails with the Excel spreadsheet template attached will be sent to domestic manufacturers, importers and other relevant data providers of antimicrobial products. Each spreadsheet will be pre-populated with specific antimicrobial product information and relevant details corresponding to the respective manufacturer or importer. Data providers are expected to review the provided information, making necessary additions or revisions to ensure completeness and accuracy.

Step 3: Preliminary validation and re-communication (if required):

1. Review and verification of all the data from national sales [domestic manufacturers, importers, (distributors and wholesalers in future)], donation and international competitive bidding is done in the spreadsheet.

Government of Nepal
Ministry of Health and Population
Department of Drug Administration

Director General

2. Any confusion or questions pertaining to the data shall be communicated to respective domestic manufacturers or importers via telephone or email or both. This will be done to confirm the accuracy and reliability of the data. The DDA may also request domestic manufacturers or importers for additional evidence, if required.

Step-4: Compilation of data and populating WHO AMC template

3. Once the accuracy and reliability of the compiled data is verified, the final compiled data is transferred to the WHO GLASS-AMU Excel template such that each data value is in the corresponding field in the template. Further details on the GLASS-AMU Excel template can be obtained in WHO's "GLASS Manual on the Management of antimicrobial consumption".

4. When reporting for GLASS-AMU, the assigned unique product identity (code) for a specific product that has been used in previous reports will be used to maintain consistency. If a new antimicrobial product is registered with the DDA, it will be assigned a unique product code that follows the last number assigned to a product. When a product is no longer available in the market or is no longer registered, it will still retain its product code. It will not be assigned to another product, to allow for the identification of the old product for historical purposes.

5. The data will be validated through the "Validate" Macro function of the WHO GLASS AMU template.

6. The consumption will be calculated through "Calculation consumption" Macro function of the template upon which the consumption report shall be prepared for GLASS-AMU submission in .tsv file.

7. If a substance or the fixed-dose combination does not have an ATC5 code assigned yet, "Z99ZZ99" as ATC5 is assigned.

8. If a specific fixed dose combination product has not yet been assigned a combination code, "Z99ZZ99_99" as combination code is used for reporting.

9. If it is not possible to assign the strength in UD for a fixed-dose combination product, "0" UD is assigned for strength, regardless of whether the product has ATC code or not.

10. After validation of AMC data, the national focal person of AMC surveillance/ the alternate national focal person of AMC surveillance will report to GLASS AMU.

Government of Nepal
Ministry of Health and Population
Department of Drug Administration

Director General

IX. Data analysis

National report is prepared based on consumption data. *Global Antimicrobial Resistance and Use Surveillance System: GLASS Manual on the management of medicines-level antimicrobial use data* will be considered for development of national report for human consumption of antimicrobial. The dissemination of findings is shared to policy makers and relevant stakeholders for necessary interventions and actions.

The DDA will provide regular feedback and suggestions to domestic manufacturers and importers on the quality of AMC data reported to the DDA. Feedback and suggestions will be provided at the end of each calendar year upon final submission of consumption data to GLASS system.

X. Data security and privacy

Data submitted via email is compiled, and master raw data will be stored in a dedicated computer at the DDA with access granted only to authorized personnel(s). Similarly, the final validated data is stored in the computer with access granted only to authorized personnel(s).

The data collected will be compiled in the WHO GLASS AMU template, cleaned, reviewed and validated for submission to the WHO GLASS-AMU.

XI. Future Plan

To minimize the time and error associated with data reporting, development of web-based software is under progress to collect AMC data. The collection of AMC data from distributor level has also been planned through the software. The software consists of a WHO-GLASS module based on the WHO GLASS-AMU Microsoft Excel template to capture all necessary data fields required for global reporting. Prior to data collection, different data stakeholders will be oriented and trained on the data requirements and reporting processes in the software for AMC surveillance.

Government of Nepal
Ministry of Health and Population
Department of Durg Administration

Director General

XII. Limitations of the protocol

1. The reported consumption is proxy for the antimicrobials consumed in the country as consumption at the consumer level cannot be assessed.
2. As the AMC surveillance is in initial stage in Nepal, the surveillance protocol does not allow disaggregation of consumption data by health care setting (community or hospital, and public or private sectors).
3. As most of the data are reported at domestic manufacturer and importer levels, determining actual national consumption is not possible.
4. This protocol does not cover unregistered antimicrobials and those not given permission by the DDA.
5. Antimicrobials consumed in agriculture and veterinary sectors are not accounted for by this protocol.
6. The reported annual consumption does not take into consideration the return of expiry products. As a result, there could be potential over estimation of consumption of antimicrobials in Nepal.

XIII. Stakeholder Mapping

Effective surveillance of antimicrobial use (AMU) and utilization of data requires coordinated collaboration among various stakeholders. The following outlines the key stakeholders with their roles in the AMU surveillance system in Nepal.

Stakeholder Category	Key Stakeholders	Roles and Contributions
1. Government Stakeholders	Ministry of Health and Population (MoHP) Department of Drug Administration (DDA) Department of Health Services (DoHS) Department of Livestock Services (DLS) Department of Customs (DoC) Veterinary Standards and Drug Regulatory Laboratory (VSDRL) Professional Councils: Nepal Pharmacy Council(NPC), Nepal Medical Council (NMC), Nepal Health Professional Council (NHPC)	Provide policy, leadership, coordination, regulation, AMR/AMU data oversight, and enforcement of standards
2. Data Generators & Users (Human & Veterinary)	Domestic manufacturers Importers Distributors Wholesalers Retailers Hospitals/Clinics	Generate, collect, and share antimicrobial use data across human and animal health sectors
3. External Development Partners	WHO Country Office / WHO AMR Collaborating Center Fleming Fund Country Grant Nepal (FFCGN) / FHI 360 Nepal Food and Agriculture Organization (FAO)	Provide technical guidance, financial assistance, capacity-building, and support alignment with global AMR strategies
4. Professional Groups	Association of Pharmaceutical Producers of Nepal (APPON) Nepal Chemist and Druggist Association (NCDA) Nepal Pharmaceutical Association (NPA) Nepal Medical Association (NMA) Nepal Veterinary Association (NVA)	Advocate for rational AMU, support data reporting, disseminate AMR protocols among members

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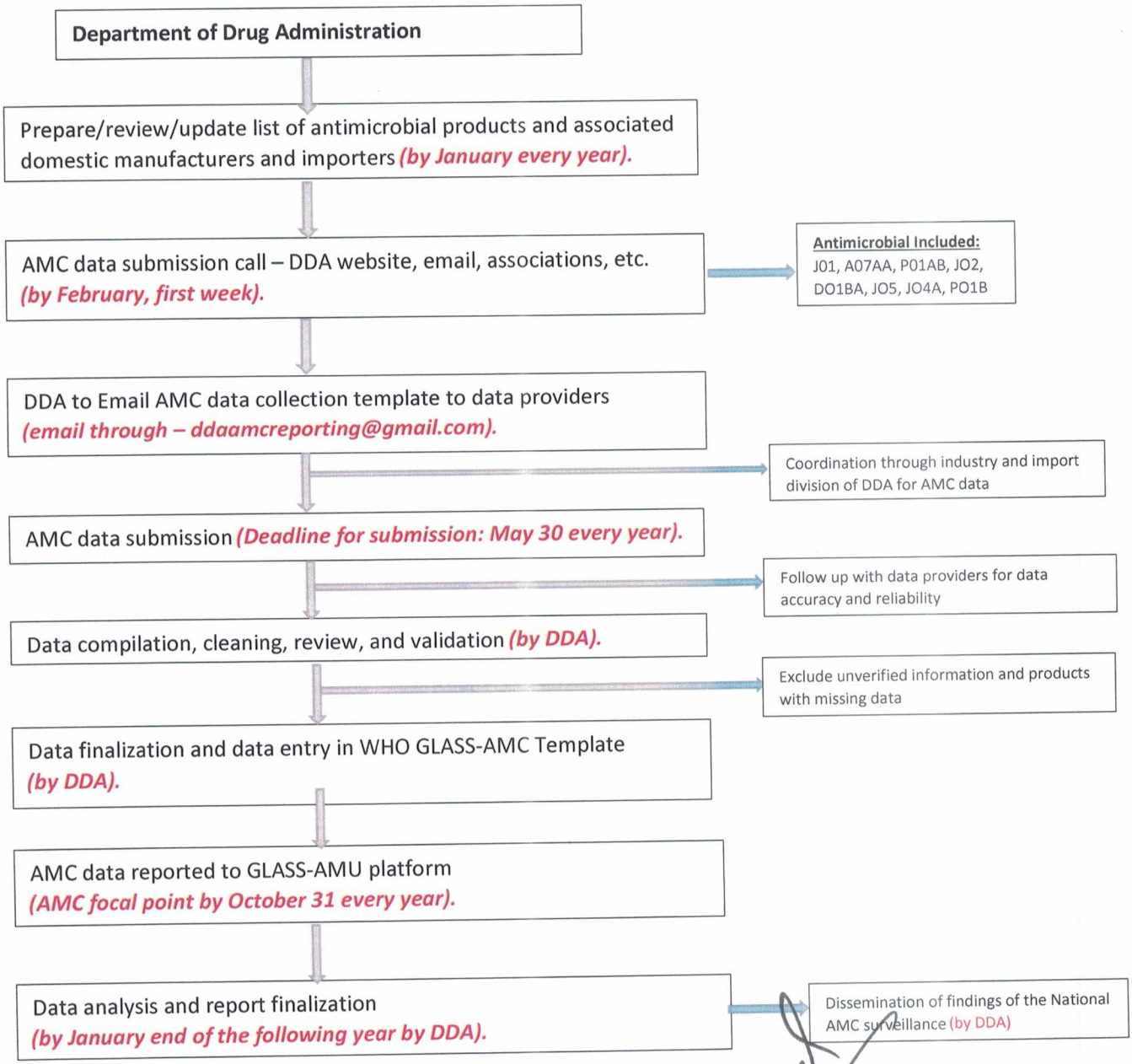
Ministry of Health and Population
Department of Durg Administration

Director General

Figure: Workflow representing National AMU Surveillance in human health



Government of Nepal
Ministry of Health and Population
Department of Drug Administration

Director General

ANNEXES

1. AMC Data Collection Template

Department of Drug Administration, Ministry of Health and Population

Survey on "Quantification of Consumption of Antimicrobial agents in Nepal"

Date:	
Domestic manufacturer	
Import firm name:	
Year of establishment	
Name(s) of principal con	

Full name of respondent:	
Position:	
Tel.no. of respondent:	
Email ID of respondent:	

Note Topical and external preparation to be excluded

2024 Consumption

S.No.	PRODUCT_ NAME	INGREDIENTS (generic name)	LABEL	PACK SIZE	PACK SIZE_UNIT	CONCENTRATION_VOLUME	STRENGTH	STRENGTH_UNIT	ROUTE_ADMIN	Dosage form	Paediatric Product (Y/N)	Product Origin	Generic	Manufacturer_country	Market_Authroization_Holder	Year_Authorization	Year_Withdrawal	Total_Packages
1	REMOXIL500	Amoxicillin	REMOXIL 500 MG TABLET	10			500	mg	O	Tablet	No	Imported	Yes	BBB	COMP_A	1990		7670
2	BACTRIM 240	Sulfamethoxazole; Trimethoprim	BACTRIM 200 mg/40 mg per 5 mL, 80 mL Oral Suspension	1	PCS	5 ML	200/40	MG	O	Suspension, Oral	Yes	Domestic	Yes	NPL	ABC	1985		2970
3	ANEROBIZOL 500	METRONIDAZOLE	ANEROBIZOL 500 mg/100 mL INFUSION	1	PCS	100ML	500	MG	P	Infusion	No	Imported	Yes	BGD	CBA	1998		678

Director General

2. Template data variable and its definition

a. **Product_Name**: indicates the brand name of the antimicrobial product.

b. **Ingredients (generic name):** indicates the composition of the antimicrobial product. If the product is a combination of more than one ingredient, mention all the ingredients separated by a semi colon (;).

c. **Label**: indicates the label of the medicinal product. If possible, the label should contain the name of the medicinal product, package size, strength and pharmaceutical form.

d. **Packsize**: indicates the package size of the antimicrobial product. The size of the product should be reported as the number of pieces in the package (tablets and capsules in one blister or strip).

- For syrup, solution, suspension and other oral liquid dosage pack size should be reported as the number of ML during data collection which should be incorporated in the *'volume'* field in the GLASS-AMU template and the packsize should be noted as 1 for such products.
- For vials and ampoules, the package size must be reported as a number of vials in the package and not as the volume of reconstituted product.

e. **Concentration_Volume:** Indicates the volume (in ML) of a liquid formulation that contains the declared strength of the active ingredient.

f. **Volume_Unit:** Indicates the unit of measurement for the total volume of liquid preparations such as syrups, suspensions, or injectables in milliliters (ML)

g. **Strength**: indicates the strength of the substance of each item, as defined by Packsize and is reported as milligram (MG), gram (G), International Unit (IU), Million International Unit (MIU).

For liquid dosage forms (solutions, syrups, suspension, etc.) indicate the strength as strength per volume.

Note: For some specific substances used in combination with others, the WHO Collaborating Centre (CC) has defined some rules; for example, to only consider the antimicrobial substance and not the combined substance (e.g. amoxicillin/clavulanic acid). For products with multiple antimicrobial substances,

the WHO CC has defined DDD for combined products. In such cases, the strength should be reported in the same unit as the DDD for the corresponding combined product. Care should be taken while assigning the correct unit dose (UD values for fixed dose combination products in the WHO GLASS-AMU template.

h. **Strength_Unit**: Indicates the measurement for the active ingredient's strength, which can be grams (G), milligrams (MG), international units (IU), million international units (MU), or unit doses (UD for fixed-dose combinations.

i. **Route_Admin**: indicates the route of administration of the antimicrobial product and is represented as Oral (O), Parenteral (P), Rectal (R), Inhalation Powder (IP), or Inhalation solution (IS).

j. **Dosage form**: indicates the pharmaceutical form of the antimicrobial product.

k. **Pediatric product**: indicates whether the antimicrobial product is intended for use in pediatrics or not and is reported as Yes or No. This is mandatory data that is required for GLASS-AMU data submission.

l. **Product_Origin**: indicates the source of the product; this can be imported, donated or locally produced in the country.

m. Generic: indicates whether the product is generic or not and is reported as Yes or No.

n. **Manufacture_country**: indicates the country where the product was manufactured.

o. **Market_Authorization_Holder**: indicates the name of the company with marketing authorization in Nepal.

p. **Year_Authorization**: indicates the year of marketing authorization granted and should be reported in A.D.

q. **Year_Withdrawal**: indicates the year of marketing authorization withdrawn and should be reported in A.D.

r. **Total_Packages**: indicates the total number of packages of the product consumed for the given year.

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3. Gant chart: Surveillance of Antimicrobials for Human Consumption in Nepal

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Update list of antimicrobial products and associated domestic manufacturers and importers		1 month												
AMC data submission call (DDA website, email, associations, etc.)			7 days											
DDA to Email AMC data collection template to data providers			7 days											
AMC data submission by data providers						Around 4 months								
Data compilation, cleaning, review, and validation									Around 7 months					
Data finalization and data entry in WHO GLASS-AMC Template											21 days			
AMC data reported to GLASS-AMC platform											21 days			
Data analysis and national report preparation													2.5 months	
Review of report and finalization														1 month
Dissemination of findings of the National AMU Surveillance														1 month

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Department of Durg Administration

Director General

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