







Antimicrobial Resistance (AMR) Initiatives in the Animal Health Sector

DR. MERVYN S. AGAD

Veterinarian II

Bureau of Animal Industry – Veterinary Laboratory Division

Empowering Veterinary Authorities through PPP Project Management Training
October 2, 2025
Novotel Manila



Outline

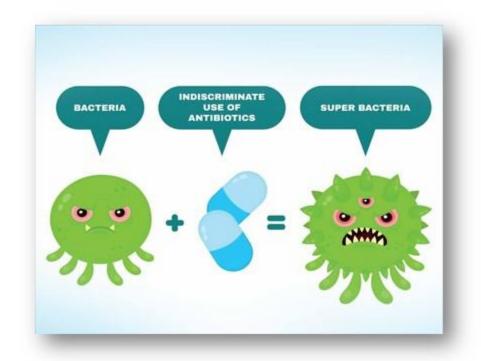
- I. What is AMR?
- II. National AMR Program
- III. BAI-AMR Technical Working Group
- IV. Different Activities/Initiatives per Key Strategies
- V. Lessons Learned and Ways Forward

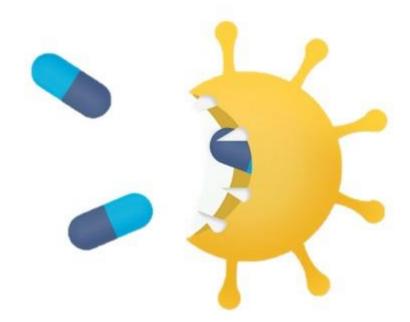
I. What is AMR?



ANTIMICROBIAL RESISTANCE

It refers to microorganisms such as bacteria, fungi, viruses, and parasites, that have acquired resistance to antimicrobial agents



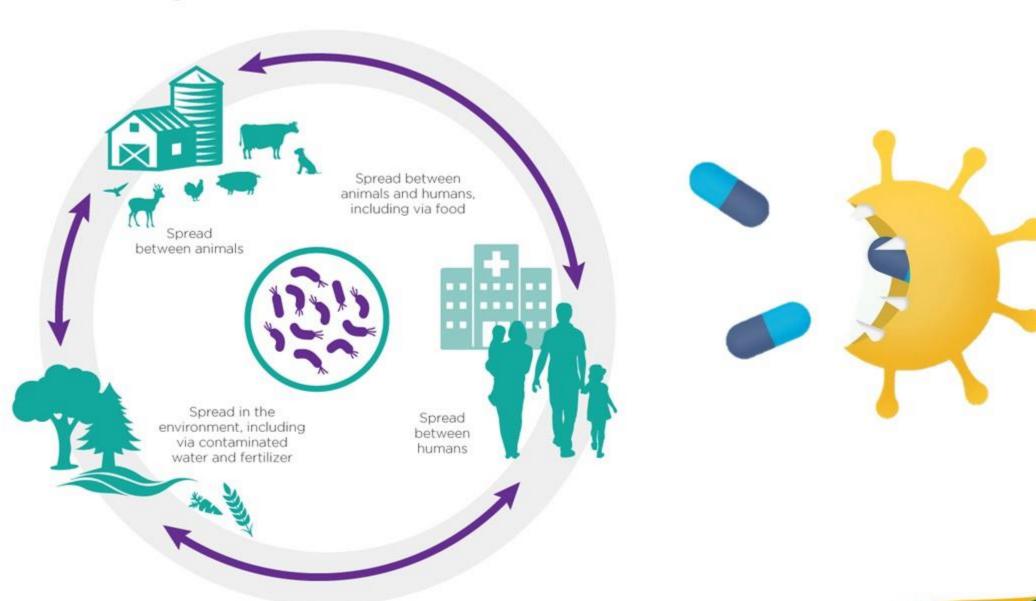


I. What is AMR?

It is caused by the inappropriate and excessive use of antimicrobial agents through the USE, OVERUSE, AND MISUSE of the antimicrobials especially in the human health and agricultural sectors



ONE HEALTH



II. National AMR Program

Administrative Order No. 42, s. 2014

Creating an Inter Agency Committee for the formulation and implementation of a National Plan to control Antimicrobial Resistance in the Philippines

Co-Chairs:

Department of Health (DOH)

Department of Agriculture (DA)

Members:

Department of Science and

Technology (DOST)

Department of Interior and Local

Government (DILG)

Department of Trade and Industry (DTI)













II. National AMR Program

DA-TWG on AMR

Special Order No. 284 of 2021

Special Order No. 248 of 2023

Special Order No. 456 of 2023

Special Order No. 1211 of 2025

Composition:

Chair, Co-chair, Vice-chair

Permanent Members - DA Agencies

Non-Permanent Members -

Representatives – Academic institutions

Representatives – Professional/Collegial Organizations

Representatives – Livestock, Poultry and Fisheries Stakeholders

Associations

Secretariat









































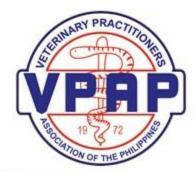






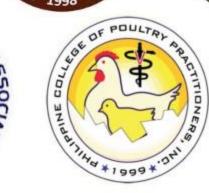
















National Federation of Hog Farmers, Inc.





III. BAI AMR TWG



Animal Health and Welfare Division (AHWD)



Veterinary Laboratory Division (VLD)

Animal Feeds Veterinary
Drugs and Biologics
Control Division
(AFVDBCD)

- AO 42, Series of 2014 was signed creating the Inter-agency Committee on AMR (ICAMR)
- DA special order 695 creating the DA-TWG on AMR (amended in 2016)
- FDA No Prescription, No Dispensing policy
- AO 6, Series of 2014
 Policy on Establishment of Laboratory Networks

- DOH AO 2, s. 2016 National Policy on Infection Prevention and Control in Health Care Facilities
- National Antibiotic Guidelines published (Human health)
- DA-BAI & DA-NMIS AMR Pilot Surveillance in Regions III and 4A
- UN General Assembly adopted the political declaration aimed to combat AMR, One Health Approach

- AMR Surveillance Plan – Animal Health Sector (2018-2020)
- Regional training & retooling of veterinarians
- Creation of the Regional AMR council
- Identified regional AMR coordinators
- DA launched the iAMResponsible campaign

- Updating of the DOH & DA Joint AO on Licensing of Establishments and registration of Veterinary Drugs & Products
- Philippine GAHP implementation review
- Development of the national veterinary drug residue monitoring framework
- Online lecture series on 1) AMR research and collaboration (DA agencies and veterinary institutions) and 2) Impacts of COVID-19 and animal infectious diseases on AMR in the Philippines
- WAAW 2020 (joint activities with the DA, DOH, WHO, and FAO to tackle the 7 KS areas of the PNAP on AMR)
- University wide students' forum on AMR and QuizCon 2020
- · ARSP-AH review and updating
- · AMR IEC materials (translation to local dialects

2014 2015

2016

2017

2018

2019

2020

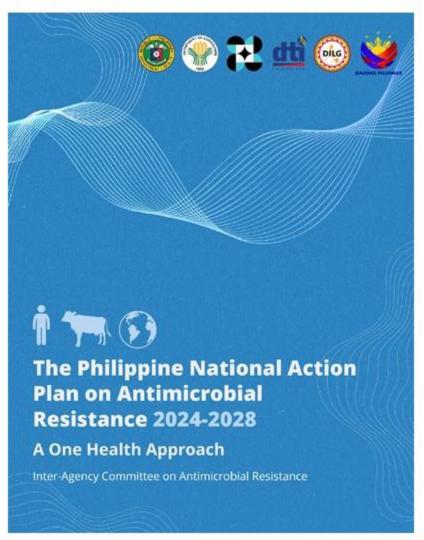
- First celebration of the World Antimicrobial Awareness Week (WAAW)
- AMR Surveillance Program (ARSP) launched by RITM and ICAMR
- DOH AO 2015-0049, Accreditation of laboratories for PhilHealth reimbursement of selected Antibiotics in the Philippine National Drug Formulary
- Launching of the Philippine Action Plan to Combat AMR One Health Approach
- · IRR of the Food Safety Act of 2013
- WHO, OIE, and FAO developed One Health approach to combat AMR

- FAO AMR Project in the Philippines (GCP/GLO/710/UK)
- DA Department Order 4, Series of 2017 on the Rationalization of all DA Laboratories
- Publication of the National Unified Health Research Agenda (NUHRA) 2017-2022 highlighting support for AMR and research on drug discovery, innovation, and health technologies

- Launching of the Philippine National Action Plan on AMR 2019-2023
- ATLASS and development of veterinary drug residue workplan
- Regional training and retooling of veterinarians
- · Joint OIE and FAO VLSP in the Philippines
- Review on the Philippines regulatory framework and polices on AM, AMR and AMU
- National AMR forum/Regional Students' AMR forum (WAAW 2019)

Philippine National Action Plan (PNAP) to Combat AMR

- Aligned with the Global and Regional Agenda to combat AMR
- Multi-sectoral engagement
- Emphasis on "One Health Strategy"
 - ✓ PNAP 2015-2018
 - ✓ PNAP 2019-2023
 - ✓ PNAP 2024-2028





Key Strategies of the Philippine Action Plan to Combat Antimicrobial Resistance (2019-2023)



Commit to the Philippine National Action Plan through multi-sectoral engagement and accountability



Implement appropriate measures to reduce infection across all settings



Strengthen surveillance and laboratory capacity



Promote innovation and research on AMR



Ensure uninterrupted access to safe and quality-assured antimicrobials



Improve awareness and understanding of antimicrobial resistance through effective communication and education



Regulate and promote the rational use of antimicrobials



- Participation in the regular and special meetings called by the ICAMR
- Participation in CODEX Task Force on AMR (TFAMR) and Veterinary Drug Residues
- Participation in the discussion with UN Agencies (WHO, FAO, and UNEP) for the establishment of the AMR program in the environment sector











Workshop on Mapping of Stakeholders and Data Sources to Facilitate
 Monitoring of the Quantities and Usage Patterns of Antimicrobial Agents
 Used in Animals and Workshop on Enhancing Private Sector Awareness on
 AMR (April 2024)



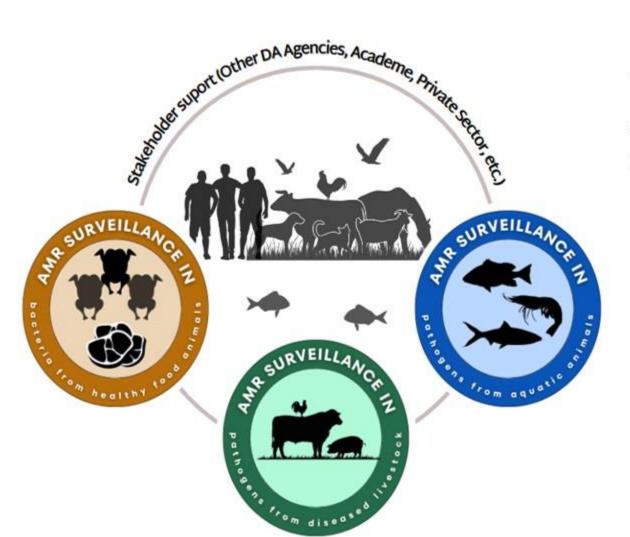




 The Philippine National Action Plan (PNAP) involves multi-sectoral engagement emphasizing the "One Health Approach" to further strengthen our campaign against AMR.

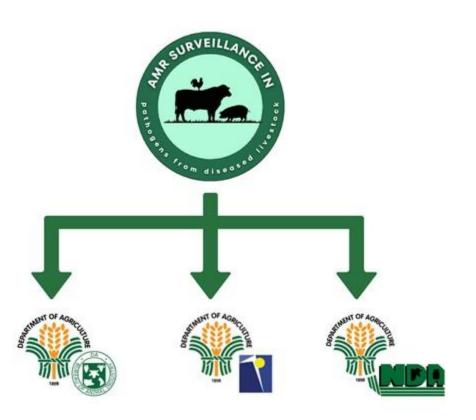


KS2 (A) Strengthen Surveillance and Laboratory Capacity



The Antimicrobial Resistance Surveillance Program for Animal Health (ARSP-AH) covers 3 components:

- Bacterial pathogens from healthy food animals
- Bacterial pathogens from diseased livestock and poultry
- Bacterial pathogens from Aquaculture/fisheries



PRIMARY GOAL: Create a coordinated system for monitoring antimicrobial resistance (AMR) in prevalent **bacterial** pathogens found in sick animals within the region.

KEY OBJECTIVE: To establish guidelines for treating common bacterial pathogens and strengthen mechanisms that promote and reinforce good veterinary practices.

Lead Agencies:

Bureau of Animal Industry (BAI)

Philippine Carabao Center (PCC)

National Dairy Authority (NDA)



The target bacterial pathogens included in the ARSP-AH in Livestock and Poultry are based on priority bacterial diseases and the current capabilities of the diagnostic laboratories

RUMINANTS

- Escherichia coli
- Staphylococcus aureus
- Streptococcus agalactiae
- Klebsiella pneumoniae
- Pasteurella multocida

SWINE

- Actinobacillus pleuropneumoniae
- Pasteurella multocida
- Bordetella bronchiseptica
- Streptococcus suis
- Escherichia coli
- Haemophilus parasuis
- Salmonella spp.
- Staphylococcus aureus

POULTRY

- Escherichia coli
- Staphylococcus aureus
- Avibacterium paragallinarum
- Pasteurella multocida
- Salmonella spp.



Designation of AMR Regional Laboratory and Field Coordinators to ensure proper implementation of AMP programs and related guidelines throughout the country.







Strengthen Surveillance and Laboratory Capacity









QUEZON CITY, **METRO MANILA** 22-25 OCTOBER 2024

















RADDL Refresher Training and Parallel Testing on Bacterial Isolation, Identification, and Antimicrobial Susceptibility Testing (2022-present)



16 Regional Animal Disease Diagnostic Laboratories

2022 - 2025

15 out of 16 RADDLs accomplished



53 laboratory technical staff trained







FAO Antimicrobial Resistance
Monitoring System (InFARM) and IT
Platform











Strengthen Surveillance and Laboratory Capacity

Annual Proficiency Test on
Antimicrobial Susceptibility Test
(PTAST) for Disk Diffusion and
Minimum Inhibitory Concentration
(CuVET and APHA)









Participation in the Assessment Tool for Laboratory Surveillance System (ATLASS) Mission









FAO-Assessment Tool for Laboratories and AMR Surveillance Systems (FAO-ATLASS) Training













Ensure Uninterrupted Access to Safe and Quality-Assured Antimicrobials



The DA and DOH delineate on their roles in regulating antimicrobials and its supply chain.







Regional Training on ANIMUSE for Asia and the Pacific







PHILIPPINE NATIONAL STANDARD	PNS/BAFS 48:2022
Veterinary Drug Residues in Food — Product Standard -	— ICS 65.020.30
Maximum Residue Limits (MRL)	

BAI monitors for the **banned antimicrobials** in animal feed establishments.

Coordination and dialogue with LGUs, clients, stakeholders, and industry were done to assess challenges and promote prudent use of antimicrobials in agriculture and farm.

Drug	Administrative Order (AO)/Administrative Circular (AC)	Title
Beta-Agonist a) Clenbuterol b) Salbutamol c) Terbutalin d) Pirbuterol	Department of Agriculture (DA) AO No. 14, series of 2003	Ban on the Use in Food Animals of Beta-Agonist Drugs Used in Human as Bronchodilators and Tocolytic Agents
Nitrofurans a) Furaltadone b) Furazolidone c) Nitrofurazone	DA-Department of Health (DOH) AO No. 2, series of 2000	Declaring a Ban/Phase Out of the Use of Nitrofurans in Food Producing Animals
Carbadox and Olaquindox	DA AO No. 60, series of 2000 DOH AO No.4-A, series of 2000	Ban and Withdrawal of Olaquindox and Carbadox in the Market
Chloramphenicol	DA AO No. 60, series of 1990 DOH AO No. 91, series of 1990	Declaring a Ban on the Use of Chloramphenicol in Food Producing Animals
Diethylstilbestrol (DES)	DOH AO 194, series of 1973	Ban on the use of diethylstilbestrol (DES)
Malachite green and Gentian Violet	Bureau of Fisheries and Aquatic Resources (BFAR) - AC No. 256, series of 2015	Declaring malachite green and gentian violet as health hazards and prohibiting their use in food fish production and trade
7. Chloroform (Trichloromethane)	DOH AO No. 341. series of 1978	Ban on the use of chloroform (trichloromethane)

Workshop on the Formulation of Philippine Veterinary Therapeutic Guidelines for Swine and Poultry (PVTG) An AO on Veterinary Drug Order was drafted and for presentation – public consultation

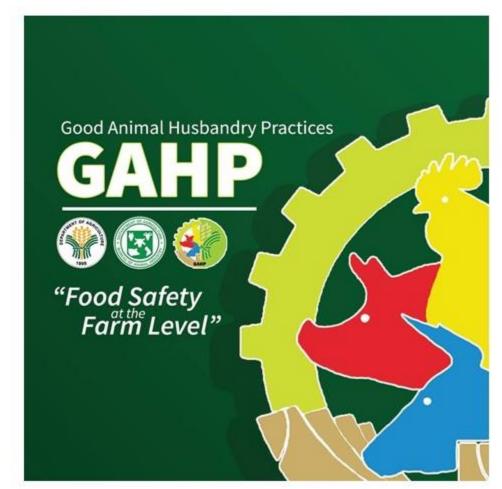
Automation of the VDO and VCPR: Veterinary Drug use Monitoring System (Vet DRUMS)







 Adhering to good animal husbandry practices through proper sanitation, hygiene, animal welfare, biosecurity practices, and prudent use of antimicrobials, have a key role in preventing the spread of AMR.







Implement Appropriate Measures to Reduce Infection Across All Settings



FARM PRODUCTS ARE SAFE AND FIT FOR HUMAN CONSUMPTION



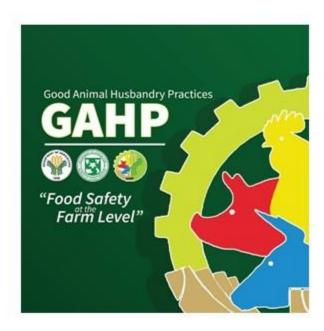
ENSURING ANIMALS' SAFETY AND COMFORT



ENSURING WORKERS' SAFETY AND COMFORT



PREVENT DEGRADATION TO THE ENVIRONMENT



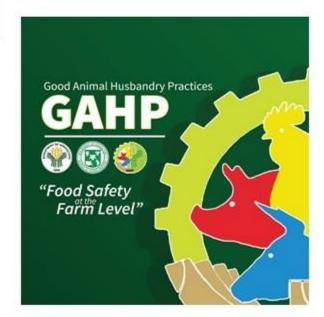


FARM PRODUCTS ARE SAFE AND FIT FOR HUMAN CONSUMPTION

For food to be considered Safe and Fit for human consumption, there should be:

No drug and additive residues in the meat

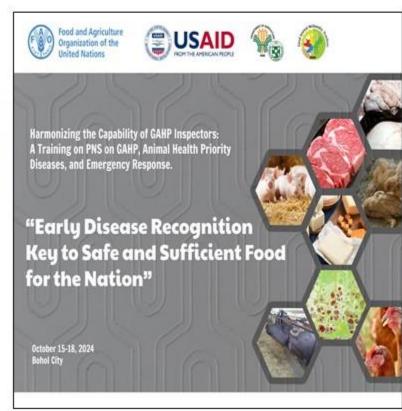
- Proper withdrawal period is followed
- Banned drugs not used
- Prevention Antimicrobial Resistance







Harmonizing the Capability of GAHP Inspectors: A Training on PNS on GAHP, Animal Health Priority Diseases, and Emergency Response (October 15-18, 2024)





- AMR-related researches were published
- Collaboration with DOST through its AMR Surveillance and Research Project
- AMR initiatives at scientific conferences and through poster presentations.





OPRIONAL PERSONNEY 24240740 (B.J.A. 2020)



Antimicrobials Used in Backyard and Commercial Poultry and Swine Farms in the Philippines: A Qualitative Pilot Study

Toni Rose M. Barroga ¹, Relidrin G. Morales ¹, Carolyn C. Benigno ¹, Samuel Joseph M. Castro¹, Mardi M. Canibar¹, Maria Fe B. Cabullo ¹, Agnes Agunos ¹⁷, Katinka de Balogh ¹ and Alejandro Darado-Garcia

OPEN ACCES

Edited by Allguar Anger Minero

Conglutered University of Maint, Span

Georg Nijayan, Kara Linversity Clinical Research Unit, Ventuers

*Correspondence:

Aligento Donato Gercal

*Fresent address

Owner for Floodborns, Environment and Zischoto Wechous Zischose Public Health Agency of Careas (Sueph, ON, Carea)

> Specially section is price was submeted to

a section of the Propietrs in liketuresy

Accepted 12 life: Accepted 12 life: Published 01-July

Flood and Agrouture Organization of the United Nations—Philippine Companient on the Distalt Blots to Comment Antimicrobial Bloodback States (the Nation Agronal AGOPELD MAYOR), Guerro Cop. Philippines. "Department of Agrounture, Bloodback of America Nations," Couldon Cop. Philippines. "Department of Agrounture, Bloodback of Assa and the Bloodb. Bloodback in Bloodback of Agrounture Operations on the Lindon States (Agrounture States) and the Bloodback Bloodback of Bloodback of Agrounture Operations on the Lindon States, Advon. Bloodback of Assa and the Bloodback Bloodback of Bloodback of Agrounture Operations on the Lindon States, Advon. Bloodback of Aground Bloodback of Bloo

Chicken and park are the most frequently consumed meat products in the Philippines. Swine and poultry are regred in either commercial farms (CMI) or backuprd farms dIYS; the latter production system is relatively common and essential to food security in low- and middle-income countries (LMCs) such as the Philippines. Similar to resource-limited LMICs, antimicrobial use (AMU) surveillance has not yet been established: thus, AMU in food animals is a knowledge gap in understanding the emergence of antimicrobial resistance (AMR) in zoonotic foodborne bacteria in the country. This qualitative AMU plot study sims to describe the antimicrobial active ingredients (AAIs) used and associated AMU practices in g., source of AAIs and informed AMU decisions) by poultry and swine CMf and BYI in the Philippines. Ninety-three farms. across four regions in the Philippines voluntarily provided AMU information as part of a larger biosecurity and good practices study. The percentage of farms using AAI over the total number of farms was the metric used to describe AMU. In total, there were 30 AAIs used (CMt. n =27 and BYt. n = 13); per farm, the number of AAIs used ranged from 1 to 7. The spectrum of AAIs was more diverse in swine (n = 24) compared to poutry in = 18i. Enrofickacin was the most frequently reported AAI in poultry (33%) and swine (36%) farms. Respiratory diseases were the most frequently reported reason for AMU in both species. Between production systems, significant differences were observed in the percentage of farms using amoxicilin (27% CMf vs. 3% BYf), colistin (17% CMf vs. 3% BYf), and oxytetracycline (12% CMf vs. 39% BYf), in terms of AMU practices, of important concern was the over-the-counter access of AAIs at retail outlets and the limited veterinary oversight in BYf. Our data indicated that antimiorobials critically important for human medicine are frequently used in poultry and swine farms in the Philippines. This study can inform the development of guidelines for curbing AMR through prudent AMU and serves as a reference point for AMU surveillance capacity development. in the Philippines.

Keywords: fams level, artimicrobials, surveillance, poultry, swine, Philippines, LMC

Parkes in Warmay Spinish | more horizon on a

Address Seams Colores Silve



iAMResponsible

 As part of the nationwide celebration of the Antimicrobial Awareness Week, the FAO with support from various Food Safety Regulatory Bodies of the country launched the *iAMResponsible* campaign on November 19, 2018.

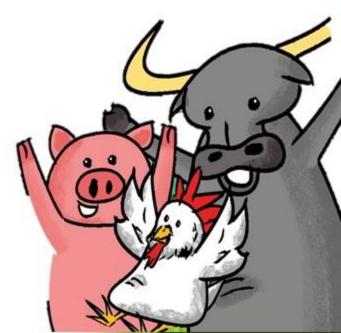




iAMResponsible

- Distribution of IEC materials on AMR and translated 7 dialects:
 - Ilokano
 - Kapampangan
 - Bicolano
 - Aklanon
 - Hiligaynon
 - Bisaya
 - Chavacano



























Student's Forum

2022	2023	2024
CBSUA	UEP	ISU
CavSU	CSU	USM
DLSAU	CTU	PSAU
SWU		



















WAAW

 Since 2015, the Philippines has actively participated in the celebration of World Antimicrobial Awareness Week (WAAW).







WAAW 2024 : EDUCATE. ADVOCATE. ACT NOW.









LESSONS LEARNED

- Capacitation of the laboratory is crucial (manpower, funds, equipment, kits etc).
- Cases of ASF and AI caused additional workload in labs that hinders the surveillance efforts
- Requires close collaboration and cooperation among all stakeholders along the food chain (LGU, data submission).
- AMU and AMR Data are paramount in mitigating AMR and its potential should be maximized. (If you cannot measure it, you cannot improve it).
- The awareness campaign helps disseminate relevant information (stakeholders, students, government).
- GAHP is beneficial in reducing food safety risks as GAHP has practices designed to mitigate these risks along the production chain.
- Strengthening of legislations is a must.
- Acceptance level of relevant stakeholders should be considered.
- Consistency and continuity of programs is needed manpower, budget.
- Private sector engagements are important.

WAYS FORWARD

- Implementation of the ARSP-AH Component 2 Surveillance for Diseased Livestock and Poultry.
- Conduct of ATLASS for the national (self-assessment) and regional laboratories.
- More strategized data collation and analysis from the surveillance.
- Conduct of capacitation of field coordinators and LGUs in disease recognition and proper sample collection.
- Continuous awareness programs at the farm level and for students.
- Monitoring of Antimicrobial Use at the farm level.
- Development and implementation of Drug Residue monitoring programs.
- Continuous collaboration with development partners and other sectors/institutions in the implementation of various AMR activities nationwide.
- Adherence to the PNAP 2024-2029 of BAI-AMR related initiatives and activities.





THANK YOU FOR LISTENING!



Email us at: iamresponsibleph2019@gmail.com



Like us at: fb.com/IAMesponsible.ph









MERVYN S. AGAD, DVM

Veterinarian II



Bacteriology and Mycology Laboratory Animal Disease Diagnosis and Reference Laboratory (ADDRL) Veterinary Laboratory Division (VLD)



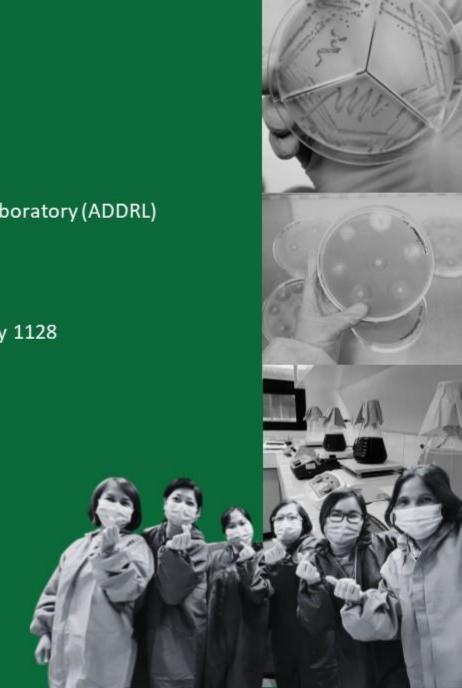
BAI, 5 Visayas Avenue, Diliman, Quezon City 1128



addrl.bacte@yahoo.com



(02) 8528 2240 loc. 1607 to 1608



THE FAO AMR PLEDGE FOR GOVERNMENT WORKERS

I PLEDGE TO TAKE ACTION AND

Stop overuse and misuse of antimicrobials by:

- Supporting a multi-sectoral national plan on antimicrobial resistance
- Developing and enforcing regulations to stop overuse and misuse of antimicrobials in humans, plants, and animals
- Making information on how to stop overuse and misuse of antimicrobials available to citizens

Prevent the spread of infection by:

- Developing and enforcing regulations to prevent the spread of infections through:
 - Monitoring farms', hospitals', and clinics' compliance with infection prevention and control standards; and
 - Enforcing good agriculture and food production practices









Antimicrobial Resistance (AMR) Initiatives in the Animal Health Sector

DR. MERVYN S. AGAD

Veterinarian II

Bureau of Animal Industry – Veterinary Laboratory Division

Empowering Veterinary Authorities through PPP Project Management Training
October 2, 2025
Novotel Manila