



**MARIA
VIRGINIA ALA**

Director IV
*National Center for
Pharmaceutical Access to
Medicine
Philippines*

Director IV
Health Policy Development
and Planning Bureau
October 22, 2008 to
present

Officer-in-Charge
**Bureau of International
Health Cooperation**
January 18, 2005 to
October 21, 2008

Medical Officer VII
Bureau of International
Health Cooperation
Department of Health,
Manila
January 2001 to present

Project Manager IV

Women's Health and Safe Motherhood Project
Department of Health
November 1995 to December 2000

- Reviews detailed implementation plan and updates this annually.
- Coordinates with and integrates all project participants – DOH program managers, consultants, suppliers/contractors into a smooth working group.
- Coordinates the establishment of management structures consistent with donor and government executives of participating LGU's to ensure effective project implementation.
- Provides periodic updates to the Project Director on policy and project implementation and provide briefing/updates to other officials and participating agencies.
- Act as resource person, facilitator and trainer during consultation meetings, workshops and training/seminars.
- Assist DOH and LGUs in developing performance monitoring systems and other management information system.
- Established reporting procedures and coordinates submission and review of progress reports to DOH and donor agencies.
- Coordinates WHSMP activities with other DOH initiatives which promotes interests of the local government and promote local management and expansion of health programs/projects.
- Supervises the performance of the technical and administrative staff of the PMO.
- Act as Secretary to the PSC and implements commendations/decisions of PSC.
- Performs other functions assigned by the Project Director.

Medical Specialist III

Office for Special Concerns/Office for Public Health Services
Department of Health
November 1992 to October 1995

Designated Acting Project Manager

Women's Health and Safe Motherhood Project
August 1994 to October 1995

- Pre-implementation activities of the Women's Health and Safe Motherhood Project

PHILIPPINE COUNTRY SITUATION

On Antimicrobial Resistance

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The problem of antimicrobial resistance (AMR) has been recognized worldwide. Multidrug resistant pathogens such as MRSA, MDR-TB, XDR-TB and the third generation cephalosporin-resistant extended-spectrum beta-lactamases have been noted. Currently, new pathogens such as *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, and *Vibrio cholerae* O1 which possess the ability to resist almost all available antibiotics are emerging.

WHO has been spearheading the global containment initiatives on AMR in humans since 2001, with its publication of the WHO Global Strategy outlining the six-point policy package that sets the framework for critical actions to be undertaken by the government to stimulate change by stakeholders. (1) The Food and Agriculture Organization of the United Nations (FAO) and the World Organization for Animal Health (OIE), on the other hand, have been cooperating with each other to address the AMR issues in the animal sector. As early as 2004, in recognition of the multifactorial problem of antimicrobial usage and resistance in the agriculture and veterinary field including aquaculture, OIE has convened an ad hoc committee on Antimicrobial Resistance responsible

for the development of specific chapters tackling this problem in the Terrestrial Code and Terrestrial Manual. (2)

In the Philippines, although many in the health sector are aware of the existence of antimicrobial resistance, the current efforts have not been enough to directly address the situation and consider that the problem is like a time bomb ready to explode.

The presence of antimicrobial resistant strains in the country has been monitored by the Research Institute for Tropical Medicine (RITM), the Department of Health (DOH) designated reference laboratory responsible for the Antimicrobial Resistance Surveillance Program or ARSP (DO No. 339J), since 1988. RITM, together with the 21 bacteriology laboratory (sentinel sites) in tertiary care hospitals which are mostly government owned, located in the 14 regions nationwide conduct the laboratory-based AMR surveillance of the pathogens from clinical cases.

Most of the bacterial pathogens which are in the surveillance list are those which are causing

infections in the ten leading causes of morbidity, namely acute lower respiratory tract infection and pneumonia, bronchitis/bronchiolitis, and acute watery diarrhea. The surveillance also take account of organisms which are commonly associated with HAIs, and the sexually transmitted infection, i.e. N. gonorrhoea, and Escherichia coli, an enteric pathogen, as well as a common cause of urinary tract infections. (3) The ARSP does not include though all diseases of interest like tuberculosis and HIV. For tuberculosis, the surveillance of the MDR-TB and XDR-TB is done by the National Tuberculosis Research Laboratory which is also in RITM, and some private laboratories while resistance in HIV is detected by the STD AIDS Cooperative Central Laboratory or SACCL of DOH.

Unfortunately, ARSP does not have a counterpart in the animal sector. The laboratory surveillance of antimicrobial resistance in animal husbandry and aquaculture is not in place. The only activity that may indirectly relate to AMR in the animal sector is the drug residue monitoring as required under AO No. 24 s. 2009 otherwise known as the National Veterinary Drug Residues Control Program in food. This policy likewise provides the implementing guidelines on the manufacture, importation, exportation, distribution, administration, regulation, control and rational use of veterinary drugs in food producing animals. Currently pending in the Senate is the Food Safety Act bill which will ensure the quality of food throughout the food chain for human consumption.

Majority of the information on AMR in animals can be gathered from researches that have been conducted by undergraduate and graduate

students. The most common isolates in these studies were Escherichia coli and the non-typhoidal salmonella. Most of these studies found 100% of the isolates exhibiting AMR to one antimicrobial and most of them showed it to be tetracycline. It was also shown that in a lot of these cases more than 90% exhibited multiple drug resistance. Other antimicrobials to which high resistance were registered are trimethoprim- sulfamethoxazole, penicillin, ampicillin and chloramphenicol. The isolates which was found to have high resistance to antimicrobials was Escherichia coli. In other researches, they have provided evidences regarding conjugative transferability of drug resistance (4, 5, 7) and have attributed the development of AMR to the use of antibiotics in feeds in the farm where the samples were taken. (4) Similarly, in a study conducted Morales in 2000, it was shown that antibiotic residues increased AMR and allergic reactions to antibiotics in humans. (6)

Based on the country situation analysis that was recently conducted, it shows that the critical role of the laboratory in the surveillance of AMR has not been fully recognized. This is evident by the limited number of participating laboratories to the program since its inception, inadequate manpower and funding support to expand the scope of the testing, absence of information on correlation between laboratory-based data with clinical data or antibiotic use surveillance and the lack of integration of all AMR data. (8)

There have been several factors identified as contributory to the emergence of antimicrobial

resistance and problems in access to essential medicines and use of poor quality drugs are some of them. The Philippines has established early a regulatory body to monitor drugs and medicines from procurement to ensuring their quality through the creation of the Food and Drug Administration (RA 3720 or the Food, Drug, Devices and Cosmetics Act). As an additional mechanism to safeguard the drug supply in the country, the Philippine Medicines Policy was created in 2010 (formerly the Philippine National Drug Policy) in order to ensure equitable availability and affordability of safe, efficacious and quality (Phil Medicines Policy 2010) under the guidance of the DOH- National Center for Pharmaceutical Access and Management (NCPAM) established by AO 2010-0005. A key strategy in implementing this policy is the development of the Philippine National Drug Formulary (PNDF) which contains the essential drugs list or drugs that are essential for diseases and conditions of the majority in the Philippines.

There is, however, a gap in completely looking at the AMR picture on these areas as there is still inadequate system in the veterinary field to complement efforts in human health. Both animal husbandry and aquaculture have no essential medicines list to guide stakeholders on the acceptable drugs/medicines. Furthermore, presence of two regulatory bodies for drug regulation, feed additives and water soluble drugs under Bureau of Animal Industry (BAI) while pharmaceutical preparation with FDA, creates some confusion to manufacturers which affects the supply of these medicines in the market. (8)

The gap further expands to the concern in monitoring the rational drug use or medicines in

the veterinary sector and in patient care. For both human and animal sectors, implementation of the monitoring system on drug prescription, dispensing and use is insufficient, if not totally missing. Information on antibiotic use on a national level has always been found to be scanty, and hospital consumption contributes little in total drug use information. At best, conclusions can be inferred only from data/trends noted in tertiary training hospitals in Metro Manila. Much is desired when it comes to monitoring in the veterinary field.

Moreover, there are no standard treatment guidelines (STGs) for animals and some drugs needed to treat a specific disease are not registered in the Philippines. Veterinarians are left without a choice but to find a substitute for those antibiotics and antimicrobials for humans are normally selected even if available packaging is not appropriate for veterinary use. Another issue is the non-compliance of farm owners to the withdrawal period recommended in administering drugs to food animals. If this withdrawal period is not followed, there will be drug residues in foods sold in the market. One major challenge to the Department of Agriculture is the practice of drug companies to go directly to farm owners and sell drugs which is difficult to monitor. (8)

On a positive note, policies exist that provide rules and regulations in the implementation of prescribing and dispensing requirements in both humans (AO No. 62 s. 1989 and AO No. 63 s. 1989) and animals (AO No. 111b s. 1991 and AO No. 40). It is noteworthy to mention that the animal sector has demonstrated a strong

will when they banned the use of chloramphenicol, beta antagonist drugs and nitrofurans in food producing animals. But this same resolve is now being challenged in the light of uncontrolled practice of using antibiotics as growth promoters in animals.

In view of the magnitude of the problem of AMR, the government needs to make AMR control a national priority by creating a national plan that shall integrate, coordinate, strengthen and develop sustainable, well financed, collaborative systems and mechanisms to combat AMR in the Philippines.

¹ <http://www.who.int/world-health-day/2011/en/>

² http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/AMR_OIE.pdf

³ ARSP Annual Report in 1993 and 2011

⁴ Canto, E., Valdez, S., Caduhada, J. 2001. Antibiotic susceptibility patterns and conjugative transferability of the multiple drug resistance in *Escherichia coli* isolates from chickens. Undergrad Thesis, De La Salle University Manila

⁵ Ciceron, M., del Prado, J. and Echauz, J. 2005. Antibigrams and conjugative transferability of antibiotic resistance of *Escherichia coli* isolates from chicken and fish grown in integrated fish farms. Undergrad Thesis, De La Salle University Manila.

⁶ Morales, R.L. 2000. Isolation of manganese and copper tolerant bacteria from Laguna de Bay and their antibiotic resistance patterns. Undergraduate Thesis, College of Arts and Sciences, University of the Philippines, Los Banos, Laguna.

⁷ Nepomuceno, J., Nido, MT, Solis, L. 2001. Antimicrobial Susceptibility Patterns and Conjugative Transferability of Multiple Drug Resistance in *Escherichia coli* isolated from Swines raised at the International Training Center on Pig Husbandry in Lipa City Batangas. Undergrad Thesis, De La Salle

⁸ Country Situation Analysis on Antimicrobial (CSA-AMR) Study