http://www.ijapbr.com/

International journal of Applied Pharmaceutical and Biological Research, 2017; 2(4):18-20

Research Article

ISSN : 2456-0189

KNOWLEDGE OF RESIDENTS OF LAGRO, QUEZON CITY, PHILIPPINES ON ANTIMICROBIALS AND THE DEVELOPMENT OF ANTIMICROBIAL RESISTANCE

Juneve F. Tejada[1,2,3]; Rosaline B Amoin[1,2,3]; Teresa May B. Bandiola[1,2,3]; Jon Paulo F. Bautista[1,2,3]; Janine Aliza B. Birog[1,2,3]; and Jasper D. Cayanga[1,2,3]

[1]College of Pharmacy, 2Research Development and Innovation Center, 3Our Lady of Fatima University

---

ABSTRACT

Objectives: *This study aimed to assess the knowledge of the residents in Greater Lagro, Quezon City, Philippines on antimicrobials and the development of antimicrobial resistance.*
Methodology: *A questionnaire-based survey was conducted on 340 residents in Greater Lagro, Quezon City, Philippines, whereby their knowledge regarding antimicrobial use and the development of antimicrobial resistance was assessed by using a five point Likert scale, whose responses ranged from "no knowledge" to "very knowledgeable."*
Findings: *The study showed that the community residents were partly knowledgeable on antimicrobials and antimicrobial resistance.*
Conclusion: *The lack of knowledge on antimicrobials and the development of antimicrobial resistance is a fundamental public health problem that could lead to ineffective treatment as well as antimicrobial resistance.*

Keywords: Antimicrobials, Antimicrobial Resistance, Antibiotics.

INTRODUCTION

Antimicrobial resistance (AMR) pertains to the ability of microbes (bacteria, fungi, viruses, or parasites) to grow inspite of the presence of antimicrobials that normally kill or inhibit their growth, rendering these drugs ineffective against previously treatable infections. Microorganisms that develop AMR are sometimes called "superbugs." Their resistance occurs naturally over time, through genetic changes. However, this phenomenon can also be aggravated by other factors, largely through the misuse and overuse of antibiotics, both in humans and animals.

AMR is now an alarming public health concern that requires urgent and coordinated action across all sectors of society. The World Health Organization (WHO) and countries around the world are beginning to be threatened by the possibility of reaching a post-antibiotic era, where ordinary infections and minor injuries, which have been non-threatening for years, can become fatal once again (WHO, 2016).

Because of this, the researchers aimed to assess the consumers' knowledge on antimicrobials and the development of antimicrobial resistance, in the area of Greater Lagro, Quezon City, Philippines.

MATERIALS AND METHODS

The study engaged 340 adult respondents from Greater Lagro, Quezon City, Philippines on December 15 and 16, 2015 using systematic sampling technique. A self-made questionnaire survey instrument was employed to assess the respondents with Filipino translation included on the questionnaire for the respondents to understand each question easily. The series of questions ranged from "no knowledge" to "very knowledgeable." Pre-testing was done on 20 respondents who were not included in the study. Internal consistency was evaluated using Cronbach's alpha. [Knowledge Question: α=1.02 (Excellent)]
The respondents were given a survey questionnaire with the assurance that all answers were treated with confidentiality. There was no time limit to ensure careful responses from the residents.

To attain high percentage of returns, qquestionnaires were retrieved from the respondents as soon as they were done answering.

Simple descriptive statistics was applied which include percentage and mean.

RESULTS

The response rate was 100% among the 340 respondents who participated in the survey. The results are tabulated below.

Table 1: Assessment of Knowledge on Antimicrobials and Antimicrobial Resistance Questions

QUESTIONS	MEAN	VERBAL INTERPRETATION
1. I am familiar with the classification of antimicrobials.	2.40	LITTLE KNOWLEDGE
2. Incorrect use of antimicrobials can lead to Ineffective treatment.	3.07	SOME KNOWLEDGE
3. I know how to properly store antimicrobial suspensions.	2.82	SOME KNOWLEDGE
4. If taken too often, antimicrobial are less likely to work in the future.	2.77	SOME KNOWLEDGE
5. An antimicrobial will always be effective in the treatment of same infection in the future.	2.70	SOME KNOWLEDGE
6. Bacteria are germs that cause common colds and flu.	2.95	SOME KNOWLEDGE
7. I am familiar with Antimicrobial Resistance.	2.65	SOME KNOWLEDGE
8. I am familiar that I can get antimicrobial resistance from poultry products I eat.	2.43	LITTLE KNOWLEDGE
9. I am familiar that I can get antimicrobial resistance when I make contact with contaminated water.	2.61	SOME KNOWLEDGE
10. I am familiar that a lot of people die due to Antimicrobial Resistance.	2.78	SOME KNOWLEDGE

The table above showed that the respondents had little knowledge regarding the classification of antimicrobials ($\bar{x}$ =2.40) and little knowledge that they can get antimicrobial resistance from poultry products that they eat ($\bar{x}$ =2.43). They also had some knowledge that the inappropriate use of antimicrobials can lead to ineffective treatment ($\bar{x}$ =3.07), some knowledge on how to properly store antimicrobial suspensions ($\bar{x}$ =2.82), some knowledge that if taken too often, antimicrobials are less likely to work in the future ($\bar{x}$ =2.77), some knowledge that an antimicrobial will always be effective in the treatment of the same infection in the future ($\bar{x}$ =2.70), some knowledge that bacteria are germs that cause common colds and flu ($\bar{x}$ =2.95), some knowledge regarding antimicrobial resistance ($\bar{x}$ =2.65), some knowledge that they can get antimicrobial resistance when they make contact with contaminated water ($\bar{x}$ =2.61), and lastly, some knowledge that a lot of people die due to antimicrobial resistance ($\bar{x}$ =2.78).

DISCUSSION

The study provides useful information about the knowledge of respondents with respect to antimicrobial resistance and usage, which may be utilized to plan suitable educational interventions that aim at improving the antimicrobial prescribing and use.

CONCLUSION

The lack of knowledge on antimicrobials and the development of antimicrobial resistance is a fundamental public health problem that could lead to ineffective treatment as well as antimicrobial resistance. There is the urgent need to educate the consumers before all antimicrobials become ineffective because of antimicrobial resistance.

REFERENCES

1) Bandiola, Teresa May B. Practice of Antibiotics Consumption among Residents in Lagro, Quezon City. *Journal of Chemical and Pharmaceutical Research*, **2016;** 8 (11): 156-158
2) Hamilton, Elizabeth. Comparative Study of Antimicrobial Resistance in Companion Animals and their Healthcare Providers, *J Pharm Pharmacol*, **2011;** 61:311–321
3) Hogan-Gow, Victoria. An Assessment of Public Awareness, Attitudes and Use, and their Impact on Physcian Prescribing Practice and Patient Safety. *J Immunol*. ,**2007;** 182:1648–1659
4) Taylor, LaShan. Antibiotic Resistance: Multi-drug Profiles and Genetic Determinants, Cancer Lett. **2001;** 267:133–164
5) www.who.int (Retrieved **1.19.2016**)