# CHAPTER-06

## ASSESSMENT OF AWARENESS, KNOWLEDGE AND COMPLIANCE OF PRESCRIBED ANTIBIOTIC USE AMONG EMPLOYEES OF DECISION RESOURCE GROUP

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## INTRODUCTION

The treatment of microbial diseases has a well-documented history in ancient societies such as Egypt, Greece, and China. The introduction of antibiotics to the world marked a significant milestone with Sir Alexander Fleming's discovery of penicillin in 1928.

Antibiotic resistance, strictly defined as a microorganism's ability to survive and withstand exposure to antimicrobial drugs, poses a recognized global health concern at local, national, and international levels [1]. The current scenario reflects antibiotic resistance not merely as an indicator of maintaining health but as a growing threat to public health due to widespread misuse. The prevalence of antibiotic resistance varies among countries but is generally associated with the prescribed outpatient use of antibiotics at the national level. However, antibiotic use extends beyond prescription, including self-medication practices where antibiotics are used without a doctor's guidance. This involves obtaining additional antibiotics from prior prescribed courses, acquiring them from relatives or friends, purchasing antibiotics without a prescription, and obtaining them both legally and illegally [2].

The inappropriate use of antibiotics has significantly contributed to the development of resistance. Previous epidemiological studies have demonstrated a clear correlation between the widespread use of antibiotics and the emergence and spread of resistant microbial strains. In microorganisms, genetic traits can be acquired from both relatives and nonrelatives through mobile genetic elements such as plasmids. Horizontal gene transfer (HGT) at this genetic level facilitates the exchange of antibiotic resistance among various types of microorganisms. Resistance can also arise spontaneously through mutation [3]. Antibiotics eliminate susceptible competitors, allowing resistant microorganisms to proliferate through natural selection. Despite warnings about misuse, antibiotics are excessively prescribed on a global scale.

## RESEARCH OBJECTIVE

1. To evaluate employees' understanding and awareness of antibiotics.

2. To examine the utilization of antibiotics as per prescription.
3. To investigate the correlation between awareness, knowledge of antibiotics, and the utilization of prescribed antibiotics.

## RESEARCH METHODOLOGY

A descriptive, cross-sectional, and observational survey was carried out to evaluate the awareness, knowledge, and adherence to prescribed antibiotic usage. The study involved collecting data from employees of a corporate consulting firm located in Bangalore, Karnataka, through an emailed survey using Google Forms. The total sample size for the study comprised 100 respondents. Convenient sampling was employed to gather data from an accessible cohort of employees, resulting in 100 responses out of the 120 employees to whom the survey was distributed. Therefore, the response rate stood at 83.33%.

## RESULTS AND DISCUSSION

A significant portion, specifically 71% of the overall respondents, is aware that antibiotics lack effectiveness against viruses. The majority of participants acknowledge that the excessive use of antibiotics diminishes their efficacy over time. Nevertheless, a substantial 25% of the respondents hold the belief that antibiotics are effective in treating the common cold.

Half of the total respondents (50%) admit to discontinuing their antibiotic course prematurely due to feeling better. A majority of respondents, either currently or in the past, engage in self-medication or self-administration of antibiotics. Common issues leading to self-administration include throat infections, tonsillitis, sinusitis, and the common cold. Notably, a significant portion (31%) of respondents fail to document the specific problem for which they administer antibiotics. Furthermore, 52% of respondents acquire antibiotics without a prescription from a pharmacy. Despite 88% claiming awareness of antibiotic resistance, only 41% report exposure to any antibiotic awareness campaigns. Interestingly, 47% of respondents still anticipate being prescribed antibiotics for conditions like coughs, colds, or sore throats, even though antibiotics are ineffective for such ailments. Additionally, 31% of respondents struggle to recall when they last

administered an antibiotic, highlighting a lack of meticulous tracking in their antibiotic usage, a contributing factor to antibiotic resistance.

## CONCLUSION

Merely possessing awareness of the term "antibiotic resistance" does not guarantee adequate knowledge about the prudent use of antibiotics. The survey responses indicate a distinct pattern of antibiotic utilization among respondents, revealing that despite their claimed awareness of antibiotic resistance, they lack comprehensive understanding regarding their judicious use. It is imperative to communicate to employees that purchasing antibiotics without a prescription, as observed in 52% of respondents, can potentially lead to misuse and, ultimately, contribute to antibiotic resistance. The organization, specifically the consulting firm, should enhance its efforts to educate employees about the adverse effects and repercussions of improper antibiotic use. Implementing additional awareness campaigns within the organization would play a crucial role in educating employees about the importance of using antibiotics judiciously and ensuring their optimal utilization.

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