

**ANTIBIOTIC THERAPEUTIC DRUG MONITORING TESTS,
HOSPITAL RAJA PERMAISURI BAINUN, IPOH, PERAK-
A REVIEW**



**DIPLOMA PHARMACY IN THE
FACULTY OF PHARMACY,
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PULAU PINANG**

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ABSTRACT

Therapeutic Drug Monitoring is one of the clinical methods that had been useful in Drug Therapy. Despite the fact that it had been started in Malaysia since 1980, there are not many research had been done regarding this service. Therapeutic drug monitoring is the specific drugs measurement at timed intervals in order to maintain a relatively constant medication concentration in the bloodstream. Not all medication needs to undergo therapeutically monitored. Usually only those drugs that have narrow therapeutic index will undergoes TDM.

The purpose of this research is to make a review of antibiotic therapeutic drug monitoring assays in Hospital Raja Permaisuri Bainun in June 2011. I wanted to find out the number of antibiotic tests in June 2011 and which type of antibiotic that have the highest number of test among the three types of antibiotics. Besides that, in this research I investigated which antibiotics have the highest number of toxicity cases. In addition, I identified the mistakes that have been done by medical practitioner that contribute to TDM errors in antibiotics test.

Majority of the information related to TDM can be obtained either in journals or in articles. To get more specifics details regarding my research topic, I went to the TDM unit of HRPB to get the patient's record in June 2011. My research is a retrospective study. The study environment is TDM unit of Clinical Pharmacy, HRPB. At the end of this research, I found out that the numbers of antibiotics test in June 2011 are 200 tests. Based on the data that I had, I found out that the antibiotics that have the highest number of test is vancomycin. After further investigation it proven that the antibiotics that have the highest number of toxicity cases is also vancomycin. Factors that lead to TDM errors can be divided into three errors personnel, equipment and environment errors. In a nutshell, medical practitioner should become more aware and increase their knowledge of antibiotic therapeutic drugs monitoring assays as it is an important tool for better health care.

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