

UNIVERSITI TEKNOLOGI MARA

**THE STUDY OF DRUG UTILIZATION OF UPPER  
RESPIRATORY TRACT INFECTION (URTI), AT  
OUTPATIENT DEPARTMENT OF HOSPITAL  
TENGKU AMPUAN RAHIMAH, KLANG,  
SELANGOR; A PRESCRIPTION ANALYSIS STUDY**

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**Bachelor of Pharmacy (Hons.)**

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## ABSTRACT

**Background:** Drug utilization study of upper respiratory tract infection, (URTI), was important to be reviewed because the drugs are commonly used in hospital setting. Thus, this study aims to evaluate the drug utilization in every category of age and gender based on class of drug and adherence of prescriber to clinical practice guideline in management of URTI.

**Methodology:** This is retrospective prescription study. 9114 prescription was collected from outpatient department of HTAR and was used in gathering data.

**Result:** From review of 410 prescription with URTI, the most commonly prescribed drug were antihistamine 96.7% followed by paracetamol 55.2%, antibiotic 30.6%, vitamin C 19.6%, gargle preparation 13.9% and cough preparation 12.1%. Out of 30.6%, antibiotic combination of Amoxicilin and Clavulanate was commonly prescribed by doctors by which 46 (16.7%) while diphenhydramine was the first choice for antihistamine by 115 (40.9%) prescriptions.

**Conclusion:** The result of drug use in URTI especially with antibiotic was majority in line with the rational use of the drug but most of the patient receive non-antibiotic drug due to a few reasons.

# CHAPTER 1

## INTRODUCTION

### 1.1. Overview

With an estimated 3.5 million deaths worldwide in 2008, acute respiratory infections in particular pneumonia remain one of the most important causes of death in both adult and children. Pneumonia is one of the two biggest killers of children under 5 years old, accounting for 18% death respectively in 2008 (Organization, 2011).

Upper respiratory tract infections (URTI's) are illness caused by acute infection of pathogen like viral and bacterial which involves the upper respiratory tract including the nose, paranasal sinuses, pharynx or larynx. This commonly includes tonsillitis, pharyngitis, laryngitis, sinusitis, otitis media or common cold.

The human upper respiratory tract (URT), is the reservoir of a diverse community of commensals and potential pathogen like *Streptococcus pneumonia*, *Haemophilus influenza* and *Moraxella catarrhalis* (Murphy, Bakaletz, & Smeesters, 2009), (Bosch, Biesbroek, Trzcinski, Sanders, & Bogaert, 2013) which are three predominant bacterial pathogens that cause infectious disease by synergetic and antagonistic interactions between URT.

Ear or otitis media is one of the affected parts by URTI and it causes a major burden to global health. Based on a prospective and cohort study of otitis media during first seven years of children, at least once before 3 years of age more than 80% of children will have developed