CHAPTER - I  
INTRODUCTION, AIMS AND OBJECTIVES

Introduction:

My doctor is
A good doctor
He made me no
Iller than I was

*Willem Hussem (The Netherlands) 1900-1974*

*Translation: Peter Raven*

As once quoted by Hippocrates, “Primum non nocere” - in the first place do no harm is often cited as one of the foundation stones of a sound medical care¹.

Mankind has always desired for survival of the fittest and the modern medicine, medicine health care facilities and its novel interventions have made it possible to a varied extent. While one of the most essential pillars of a responsible medical care is that of an accurate and proper prescription, there remains quite a lot of lacunae and ambiguity in this area according to various studies²,³,⁴.

*Prescription order being an important therapeutic transaction between physician and patient, it brings into focus the diagnostic acumen and therapeutic proficiency of the physician with instructions for palliation or restoration of the patient’s health. The most carefully conceived prescription order may become therapeutically useless, however, unless it communicates clearly with the pharmacist and adequately instructs the patient on how to take the prescribed medication⁵.* A drug prescription is often the end point of a patient’s visit to a medical practitioner, as an instruction from the prescriber to a dispenser, it ought to be considered a medico-legal document that should be written legibly, accurately and completely⁶.
Basic prescription writing skills is a prerequisite for a proper prescription to avoid prescription errors, as it is suppose to teach and train a budding doctor on how to write a prescription, something that he would do for decades to come. Prescribing physicians as well as those involved in the execution of the prescription hold a legal responsibility for prescription.

Although the prescription format may very slightly from one country to another, most countries agree on the core elements that should be included in prescription order. These are - prescriber’s name, address, telephone number and signature, patient’s name, address, age, weight (important at the extremes of age), prescription date, drug name (preferably generic), formulation, strength, dose, frequency of administration, quantity prescribed, reasons for prescribing and instructions for use. A good quality prescription is an extremely important factor for minimizing errors in the dispensing of medication and physicians should adhere to the guidelines for prescription writing for the benefit of the patient\textsuperscript{7}. A proper documentation of the prescribing practice allows the identification of acceptable and non-acceptable prescribing habits. Such information is needed to set up continuous systems to ensure good prescribing habits and to maintain an efficient health care system. Health professionals may also utilize these informations to develop guidelines for a cost effective prescribing in their local areas. As the complexities of medication management pose a significant safety risk for the patients. Each of the phases of the medication process, namely prescribing, dispensing, administering and monitoring, provide opportunities for confusion or error. Medication errors are defined as a failure/s in the treatment process that leads to or has the potential to lead to harm to the patient frequently occur at the drug ordering or prescribing stage\textsuperscript{8}. There are two major types of medication errors i.e. prescription errors which encompass those related to the act of prescription writing and that of prescribing faults which
encompass irrational prescribing, inappropriate prescribing, underprescribing and ineffective prescribing arising from erroneous medical judgement or decisions concerning treatment or treatment monitoring\textsuperscript{9,10}. Such errors can occur both in general practice and hospital, although they are rarely fatal they can affect patients safety and quality of health care \textsuperscript{3,11}.

Prescription errors as defined by Dean et al using the Delphi technique is defined as a clinically meaningful prescribing error which occurs when there is an unintentional significant reduction in the probability of treatment being timely and effective or increase in the risk of harm when compared with generally accepted practice\textsuperscript{12}.

Figure-1 illustrates the relationships between medication errors, prescribing errors, adverse drug events (ADEs), potential adverse drug events (potential ADEs) and adverse drug reactions.

Therefore prescription errors are a common cause of adverse events or medication errors and may be largely preventable\textsuperscript{13}. Although prescribing errors occur in a range between 0.56\% and 9.9\% of all prescriptions\textsuperscript{14}. These error rates are dependent on the definitions and various study methods used for prescribing errors. All such errors in turn are a major component of medical errors, which are an
important factor that influences the quality of patient care. According to Barach et al., nearly 100,000 individuals per year in the US die of preventable medical errors.

Learning about how to prescribe and prescribing skills appears to fall between two pillars: (i) it is not taught at medical school and (ii) it is assumed to be in place by the doctors of first employment. The question remains when do doctors actually receive training for effective prescription writing practices. There are other cultural factors as well which contribute to how a prescription activity is perceived among doctors. Cultural differences particularly when it involves questioning authority have led to the inability of junior doctors and nurses to question the decisions of seniors, especially that of senior doctors. A critical outcome of such phenomenon can lead to pharmacists being seen as a line of defense against errors, or actually inhabiting that role of deciding about medication dose and frequency.

Prescribing being one of common tasks in daily general practice, there seems abundant evidence of continuous poor prescribing in the world e.g. evidence of poor prescribing in UK. While poor prescribing is not an uncommon practice in India also. In India, conventional or traditional methods of prescribing on a prescription i.e. hand written on a prescription blank are still prevalent. Physicians as well as pharmacists, however, should be exposed to alternative means of prescription e.g. prescription forms, electronically transmitted prescriptions, fax simile prescriptions, telephonic order etc. and in fact most of the doctors are willing for a shift from traditional methods. Development of the ability to write and dispense a complete and unambiguous prescription(s) consistently is an essential, yet often neglected, part of a medical care training process. Unfortunately the prescriptions written by qualified physicians suffer from serious deficiencies and are not properly written.
Prescriptions containing errors communicate incompletely or inadequately to the pharmacist and may have various detrimental consequences. There seems to be an urgent need for physician education on appropriate prescription writing and furthermore re-inclusion of tutorials on prescription writing in final clinical year and internship of medical students. Administrative monitoring of the prescription habits of physicians is needed both to improve the health care process and to maintain the improvement. This study is an effort directed to find out the errors in prescription writing and interventions to improve upon such error prone practices of prescription writing.

Given the current scenario or scale of prescription errors, a need was felt concerning lacunae’s in the field of prescription writing. This study serves as an important reminder to the practicing consultants to write proper accurate prescriptions and to avoid prescription errors. Since writing of prescriptions is an important aspect of medical practice, there is need for physicians and the consultants in various respective areas to focus on the importance of proper prescription writing orders. By examining the various aspects of prescription writing that can cause errors and by modifying prescribing habits, accordingly, the physician can improve the chance that the patient will receive the correct prescription, whether in a hospital or in an outpatient setting. By being alert to common problems that can occur with medication orders and communicating with the patients, physician, pharmacists and other health care professional one can assist in reducing prescription errors thereby decreasing the number of medication errors.

**Aims of the Study:**

1. To find out the pattern or rate of prescription errors.
2. To find out whether prescription writing abides with the W.H.O. standards of prescription writing.
3. To assess the causes of prescription writing errors in Anand district.

**Objectives of the Study:**

1. To reemphasize on the importance of error free prescription writing in clinicians and health care providers.
2. To increase awareness about the problems caused by errors in prescription writing and ways to minimize the same.
3. To devise novel interventions for the practicing clinicians to prevent prescription errors.

Errors will always occur in any system, but it is essential to identify causes and attempts to minimize risk. Although it is difficult to quantify precisely the extent of prescription errors, they are frequent and often avoidable representing a major threat to patient safety. Prescribers should be informed and made aware of errors that have been made in their environment and the conclusions of the analysis. Error reporting systems have been widely used both internally as well as externally in various health care institutions.

Hippocrates himself, in the first volume of his Epidemics, put all events better in context i.e. when dealing with the diseases has two precepts in the mind: to procure benefit and not to harm “*One must not become overly obsessed by the safety issues, but it is a necessary element in good medical care.*

So the main objective of the present study is to emphasize on the skills of prescription writing and thus create an awareness amongst the existing and future clinicians on ways and means to minimize prescriptions errors.