



<b>Pharmacoepidemiology</b>
<b>Title:</b> Pharmacoepidemiology
<b>Course number:</b> 553 PHCL
<b>Semester:</b> Ninth Semester (Fifth year).
<b>Duration:</b> 2 + 0 Units (2 contact hours) per week.
<b>Aims:</b> This course is designed to impart the fundamental knowledge of pharmacoepidemiology.
<b>Objectives:</b> Upon successful completion of the course the student should be able to demonstrate the scope, definition, measurement of outcomes, concept of risk, methods, source of data and special applications of pharmacoepidemiology.
<b>Contents:</b> <b>Lectures:</b> <b>Definition and scope:</b> Origin and evaluation of pharmacoepidemiology need for pharmacoepidemiology, aims and applications. <b>Measurement of outcomes in pharmacoepidemiology</b> Outcome measure and drug use measures. Prevalence, incidence and incidence rate. Monetary units, number of prescriptions, units of drugs dispensed, defined daily doses and prescribed daily doses, medication adherence measurement . <b>Concept of risk in pharmacoepidemiology</b> Measurement of risk, attributable risk and relative risk, time-risk relationship and odds ratio.



### **Pharmacoepidemiological methods**

Includes theoretical aspects of various methods and practical study of various methods with the help of case studies for individual methods. Drug utilization review, case reports, case series, surveys of drug use, cross – sectional studies, cohort studies, case control studies, case –cohort studies, meta – analysis studies, spontaneous reporting, prescription event monitoring and record linkage system.

### **Sources of data for pharmacoepidemiological studies**

Ad Hoc data sources and automated data systems.

### **Selected special applications of pharmacoepidemiology**

Studies of vaccine safety, hospital pharmacoepidemiology, pharmacoepidemiology and risk management, and drug induced birth defects.

**Minimum course requirements:** 30 (2 x 15) Unit lectures (30 contact hours) per level.

### **Evaluation methods:**

- Quizzes	15%
- Mid term examination	25%
- Final examination (theoretical)	60%

### **Text Books (latest edition):**

1. Pharmacoepidemiology and Therapeutic risk management by Abraham G. Hartzema, Hugh H. Tilson, K. Arnold Chan
2. Text book of Pharmacoepidemiology by Brian L. Storm & Stephen E. Kimmel
3. An introduction to Pharmacovigilance by Prrick Waller
4. Pharmacoepidemiology: Principle & Practice by Michael Montagne, Brenda

**Kingdom of Saudi Arabia  
Ministry of Education  
Jazan University  
College of Pharmacy**



المملكة العربية السعودية  
وزارة التعليم  
جامعة جازان  
كلية الصيدلة

Waning, William W. McCloskey, Rebecca A. Maki.