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Rajiv Gandhi University of Health Sciences, Karnataka

V Year Pharm-D / II Year Pharm D Post Baccalaureate Degree Examination – 07-Nov-2023

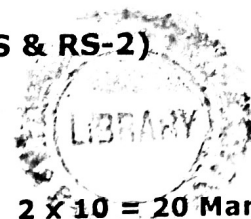
Time: Three Hours

Max. Marks: 70

PHARMACOEPIDEMOLOGY AND PHARMACOECONOMICS (RS & RS-2)

Q.P. CODE: 2875 / 2891

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary



LONG ESSAYS (Answer any two)

2 x 10 = 20 Marks

1. Define DUE. Explain the steps involved in DUE and mention the pharmacist role in DUE cycle.
2. What is cost effective analysis? Explain with suitable examples how the outcome can be measured using cost effective analysis.

Identify and explain two major pharmacoepidemiological models used to test the relationship between drug exposure and patient outcomes.

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

- Explain any three important methods of determining medication adherence.
- What are meta-analysis models? Give examples with strengths and weakness.
- Explain the significance of relative risk and Attributable risk.
- Explain few important pharmacoepidemiological studies involving drug induced birth defects.
- Define drug formulary? Explain various parameters which are analysed in formulary decision making process.
- Explain the steps involved in cost minimization analysis.
- What is decision tree? With an example explain the use of decision tree in clinical decision analysis.
- Explain in detail Spontaneous Reporting System.

SHORT ANSWERS

10 x 2 = 20 Marks

- Define prevalence.
- Mention the limitations of pharmacoeconomic studies.
- Define and explain odds ratio.
- Define indirect cost.
- Name four computerised database used for pharmacoepidemiological research.
- Explain case series?
- 18. Explain the need for Pharmacoeconomics.
- 19. Mention the objectives of pharmacoepidemiology.
- 20. Define cost utility analysis.
- 21. Explain QOL and QALY



Rajiv Gandhi University of Health Sciences, Karnataka
V Year Pharm-D (II Year Pharm D Post Baccalaureate) / V Year Pharm-D
Degree Examination – 22-Nov-2022

Time: Three Hours

Max. Marks: 70 Marks

PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS (RS & RS-2)

Q.P. CODE: 2875 / 2891

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any two)

2 x 10 = 20 Marks

- Explain in detail the methods of pharmacoeconomic evaluation. a) Cost minimization analysis
b) Cost benefit analysis c) Cost effective analysis d) cost utility analysis
- Define record linkage system and explain the process of record linkage system and also explain the probabilistic and deterministic approach in record linkage system.
- Explain case control and cohort studies with suitable examples. Mention its merits and demerits.

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

- Identify two common Pharmacoepidemiology studies used to describe the relationship between drug exposure and patient outcomes.
- Define a) Attributable risk b) Relative risk c) Odds ratio
- Explain the different types of costs in a pharmacoeconomic studies.
- Write a note on studies of vaccines safety.
- Write about prescription event monitoring.
- Explain the role of Pharmacoeconomics in formulary management.
- Explain the strengths and weakness of Meta-analysis.
- Describe electronic medical records (EMRs).

SHORT ANSWERS

10 x 2 = 20 Marks

- Explain case reports.
- Define Pharmacoeconomics and outcome research.
- Define spontaneous reporting systems.
- Define prevalence and incidence.
- Define "Defined daily dose" and "Prescribed daily dose".
- Define time risk relationship.
- Enlist ad-hoc data sources.
- Explain the strengths and weakness of Medicaid and Medicare.
- Define hospital pharmacoepidemiology.
- Mention the applications of cost utility analysis.

Time: Three Hours

Max. Marks: 70 Marks

PHARMACOEPIDEMOLOGY AND PHARMACOECONOMICS (RS & RS-2)

Q.P. CODE: 2875 / 2891

Your answers should be specific to the questions asked
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LONG ESSAYS (Answer any two)

2 x 10 = 20 Marks

Explain in detail different types of pharmacoepidemiological survey studies. Add a note on cross sectional surveys.

Explain the factors to determine cost of illness with an illustration and applications.

Explain in detail the cohort studies in pharmacoepidemiological study designs and explain in detail cohort classification.

BRIEF ESSAYS (Answer any six)

6 x 5 = 30 Marks

1. Explain the importance of medication adherence and elaborate on barriers to medication adherence.
2. Elaborate on time risk relationship and odds ratio in PEY studies.
3. Write any five drug induced birth defects.
4. What do you mean by formulary management, explain using pharmacoeconomic perspective?
5. Explain the approaches to control the confounding variables.
6. Define cost benefit analysis. Write a note on willingness to pay.
7. Explain the criteria for causal nature of an association.
8. Explain the different types of cost in pharmacoeconomic study.

10 x 2 = 20 Marks

BRIEF ANSWERS

1. Explain the potential contributions of PEY studies.
2. Define Ad-Hoc studies and enumerate the strength of Ad-Hoc studies?
3. Explain the need of pharmacoeconomics.
4. Write two applications of CMA.
5. Enlist types of errors
6. Define QALY & QOL
7. Define DUE
8. Define risk in PEY.
9. Define vaccine safety.
10. Role of pharmacist in essential drug concept.



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Rajiv Gandhi University Health Sciences, Karnataka
(II Year Pharm-D / II Year Pharm-D Post Baccalaureate) / V Year Pharm-D Degree Examination - 15-Nov-2021

Time: Three Hours

Max. Marks: 70 Marks

PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS (RS & RS-2)

Q.P. CODE: 2875 / 2891

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any two)

2 x 10 = 20 Marks

Identify and explain the two major pharmacoepidemiological models used to test the relationship between drug exposure and patient outcomes.

What is cost utility analysis? Explain with suitable examples how the outcome is measured using cost utility analysis.

Define DUE. Explain the steps involved in DUE and mention pharmacist role in DUE cycle.

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

Define and explain the process of record linkage system.

Explain relative risk and Odd's ratio with suitable examples

Explain the different types of bias in pharmacoepidemiology with examples

Explain the role of pharmacoeconomics in formulary management.

Describe the concept of vaccine safety.

Discuss the concept of prescribed daily dose and defined daily dose.

Explain Markov model with suitable examples.

Write a note on prescription event monitoring.

SHORT ANSWERS

10 x 2 = 20 Marks

Define pharmacoepidemiology.

What are the requirements of an ideal database?

Write a note on need for pharmacoeconomics studies.

Write any two applications of CEA.

Define record linkage system.

Define pharmacoeconomics and outcome research.

Define prevalence

Define odds ratio

Define birth defects.

Define drug formulary



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Rajiv Gandhi University of Health Sciences, Karnataka

Year Pharm-D (II Year Pharm D Post Baccalaureate) / V Year Pharm-D Degree Examination – 19-Mar-2021

Time: Three Hours

Max. Marks: 70 Marks

PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Q.P. CODE: 2875 / 2891

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any two)

2 x 10 = 20 Marks

What are meta-analysis models? Give examples with their strength and weaknesses.

Discuss Cost benefit Analysis with suitable case study.

Explain in detail the concept of risk and measurement of risk of an ADR.

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

Explain unit drug distribution system.

Relate confidence interval with the measurement of odds ratio.

Define vaccines. Write a note on VAERS in vaccine safety.

Describe the role of pharmacist in formulary decision making.

Describe the stages involved in the process to investigate a research question.

Define health economics. Write a note on ECHO model.

Describe different type of error that occurs in pharmacoepidemiological study.

Identify two common statistics used to describe the relationship between drug exposure and outcomes.

10 x 2 = 20 Marks

SHORT ANSWERS

2. Write scope of pharmacoepidemiology.

3. Write the strength and weakness of automated database.

4. Define pharmacoeconomics.

5. Write any two applications of cost of illness.

6. What is QALY?

7. Define tangible costs

8. Define Medication adherence

9. Define relative risk

10. Enlist two birth defects.

1. What are the different types of formulary.



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Rajiv Gandhi University of Health Sciences, Karnataka
V Year Pharm-D (II Year Pharm D Post Baccalaureate) / V Year Pharm-D Degree Examination – 14-Sep-2020

Time: Three Hours

PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS
Q.P. CODE: 2875 / 2891

Max. Marks: 70 Marks

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any two)

2 x 10 = 20 Marks

1. Describe the process of prescription event monitoring. Add a note on its significance.
2. Discuss various costs in pharmaco-economic studies. Elaborate on direct and indirect costs.
3. What is medication adherence? Explain the methods used to assess medication adherence.

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

1. Describe drug use measures with regard to monetary units.
2. Summarize the significance of relative risk and attributable risk in PEY studies.
3. Write the WHO criteria for risk management in PEY studies.
4. Describe the process for addition and deletion of drugs in formulary.
5. Explain in detail the types of errors in PEY studies.
6. Define cost effective ratio. Add a note on ICER & ACER.
7. Explain about National Pharmacovigilance system.
8. Explain in detail case series.

SHORT ANSWERS

10 x 2 = 20 Marks

1. Write the objectives of pharmacoepidemiology.
2. What are the strengths and weakness of Medicaid and Medicare.
3. Define Pharmacoeconomics.
4. Write two applications of Cost of illness analysis.
5. Define case reports.
6. Define cost utility analysis.
7. Define prescribed daily dose.
8. Define time risk relationship.
9. Define hospital pharmacoepidemiology.
10. Write a note on rational use of drugs.

Time: Three Hours

Max. Marks: 70 Marks

PHARMACOEPIDEMOLOGY AND PHARMACOECONOMICS

Q.P. CODE: 2875 / 2891

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any two)

2 x 10 = 20 Marks

- Explain the merits and demerits of cohort and case controlled study.
- What is bias? Explain the different types of bias with examples in pharmacoepidemiology.
- Explain in detail the methods of pharmacoeconomic evaluation a) CBA b) CUA

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

- Give the strengths and weakness of Meta-analysis.
- Describe a typical DUE cycle.
- Describe the electronic medical records (EMRs)?
- What is Markov model? Explain with examples.
- Explain the three key aspects in set up of ad-hoc studies.
- Explain methods, advantages and disadvantages of cross sectional study.
- Write a note on case reports with its advantages and disadvantages.
- Discuss the confidence interval and odds ratio.

10 x 2 = 20 Marks

SHORT ANSWERS

- 2. Define ADE with an example.
- 3. Enlist two softwares used in PE studies.
- 4. Enumerate the role of pharmacist in formulary development.
- 5. Difference between relative risk and attributable risk.
- 5. Write a note on VAERS.
- 7. Define DDD.
- 8. What do you mean by Essential drug list?
- 9. What are strength and weakness of computer database?
- 10. Enlist types of bias.
- 1. Explain QOL and QALY.



Rajiv Gandhi University of Health Sciences, Karnataka

ear Pharm-D (II Year Pharm D Post Baccalaureate) / V Year Pharm-D Degree Examination – JUNE-2019

Time: Three Hours

PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Max. Marks: 70 Marks

Q.P. CODE: 2875 / 2891

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

SHORT ESSAYS (Answer any two)

2 x 10 = 20 Marks

- Define DUE. Explain the steps involved in a DUE and mention the pharmacist role in DUE cycle.
- What is cost effective analysis. Explain with suitable examples how the outcome is measured using cost effective analysis.
- What is Bias? Explain the different types of Bias in pharmacoepidemiology with examples.

SHORT ESSAYS (Answer any six)

6 x 5 = 30 Marks

- Explain the probabilistic and deterministic approach in record linkage system?
- Explain the methods used to assess medication adherence
- Explain studies of vaccine safety with an illustration
- What are the criteria for decision making in formulary management.
- Explain criteria for causal nature of an association in pharmacoepidemiology study
- Explain the different types of cost in pharmacoeconomic studies.
- How is confidence interval measured for an Odd's ratio?
- Describe Cohort study with an example.

SHORT ANSWERS

10 x 2 = 20 Marks

- Write scope of pharmacoepidemiology.
- Write the strength and weakness of automated database.
- Define pharmacoeconomics.
- Write any two applications of cost of illness.
- List meta-analysis models
- What is willingness to pay?
- Define Medication adherence
- Define relative risk
- Enlist any two vaccine safety studies
- What are the different types of formulary?

Jiv Gandhi University of Health Sciences, Karnataka
V Year Pharma-D Degree Examination – Mar 2013

Three Hours

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Max. Marks: 70 Marks

PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Q.P. CODE: 2875

Your answers should be specific to the questions asked
 Draw neat labeled diagrams wherever necessary



ESSAYS (Answer any two)

2 x 10 = 20 Marks

What is medication adherence? Explain the methods used to assess medication adherence.

Explain few important Pharmacoepidemiological studies involving drug induced birth defects.

Explain the application of pharmacoeconomics.

T ESSAYS (Answer any six)

6 x 5 = 30 Marks

Describe spontaneous reporting system.

Describe a case control study. Give its advantages and limitations.

What is decision tree? With an example, explain the use of decision tree in clinical decision analysis.

Give the strengths and weakness of Metaanalysis study.

Explain the various measurements of outcome in a Pharmacoepidemiological study.

Explain the method, advantages and disadvantages of a cross sectional study.

Describe the steps involved in formulating a study design in Pharmacoepidemiology.

Write about prescription event monitoring.

10 x 2 = 20 Marks

T ANSWERS

Define Attributable risk.

Define selection bias.

Give the advantage of cohort study.

Define defined daily dose and prescribed daily dose.

Define monetary units.

What is outcome research?

Give examples of Intangible cost involved in pharmacoeconomic study.

What is record linkage system?

Define incidence.

What is QALY?

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Three Hours

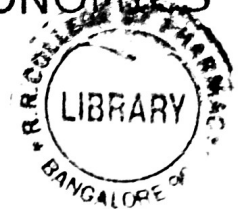
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Max. Marks: 70 Marks

HARMACOEPIDEMOLOGY AND PHARMACOECONOMICS

Q.P. CODE: 2875

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary



ESSAYS (Answer any two)

2 x 10 = 20 Marks

Explain the applications of pharmacoepidemiology.

What is cost utility analysis? Explain with suitable examples how the outcome is measured using cost utility analysis.

Define DUE. Explain the steps involved in a DUE and mention the pharmacists' role in a DUE study.

ESSAYS (Answer any six)

6 x 5 = 30 Marks

Explain the various measurements of outcome in a pharmacoepidemiology study.

Describe spontaneous reporting system

Briefly explain cost minimization analysis

What are the requirements of an ideal database? Write the strengths and weakness of automated databases

Explain the different types of costs in a pharmacoeconomic study

Describe a case control study. Give its advantages and limitations.

Identify 2 common statistics used to describe the relationship between drug exposure and outcomes.

What is a decision tree? With an example explain the use of a decision tree in clinical decision analysis

10 x 2 = 20 Marks

ANSWERS

List Meta analysis models

Give the advantages of cohort study.

Define defined daily doses and prescribed daily doses.

What is a case report and give its limitations

What is ICER and ACER.

Define pharmacoeconomics and outcomes research

Classify the types of association which can be found in a pharmacoepidemiology

Explain the significance of relative risk in pharmacoepidemiology

Explain "confounding"

What is record linkage system

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Gandhi University of Health Sciences, Karnataka
V Year Pharma-D Degree Examination - Sep 2012

Three Hours

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Max. Marks: 70 Marks

PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Q.P. CODE: 2875

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary



ESSAYS (Answer any two)

2 x 10 = 20 Marks

Describe in detail the steps involved in creating a study design in a pharmacoeconomics study

Identify the two major pharmacoepidemiological models used to test the relationship between drug exposure and patient outcomes and explain

Define pharmacoepidemiology. Explain the history and scope of pharmacoepidemiology

ESSAYS (Answer any six)

6 x 5 = 30 Marks

Explain the significance of relative and attributable risk in a pharmacoepidemiological study.

List the various methods of assessing medication adherence and explain any three important methods

Explain the benefits and limitations of a drug surveillance program

Write a note on studies of vaccine safety

Explain markov model and give its applications

Describe a typical DUE cycle

Explain cost - effectiveness model

Give the strengths and weakness of meta - analysis

10 x 2 = 20 Marks

ANSWERS

List any four applications of pharmacoeconomics

Mention the limitations of pharmacoeconomics

What is a record linkage system

List out software used in pharmacoeconomics

Mention two drug products recalled with associated adverse events

Give the applications of cost - benefit analysis

What is odds ratio - with the help of a suitable example explain how odds ratio can be estimated

Define prevalence and incidence

List out the four primary perspectives from which a primary pharmacoeconomics study can be conducted

What is intangible cost in a pharmacoeconomics study

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Three Hours

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Max. Marks: 70 Marks

PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Q.P. CODE: 2875

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary



ESSAYS (Answer any two)

2 x 10 = 20 Marks

- Define pharmacoepidemiology. Explain case - control studies and cohort studies with suitable examples
- What is medication adherence? Explain the methods used to assess medication adherence.
- Define pharmacoeconomics. Explain with suitable examples how the outcome is measured using cost effectiveness analysis. Give the advantages and disadvantages of this model

6 x 5 = 30 Marks

ESSAYS (Answer any six)

- Explain the strengths and weakness of automated databases
- Explain the significance of relative and attributable risk in a pharmacoepidemiological study
- What is bias? Explain the different types of bias
- Explain the advantages of pharmacoepidemiological models over randomized controlled studies
- What is Markov model? Give its application
- Explain a few important pharmacoepidemiological studies involving drug induced birth defects
- Describe a typical DUE cycle
- Describe the steps involved in a cost minimization analysis study

10 x 2 = 20 Marks

ANSWERS

- What is QALY?
- What is signal generation? Mention its significance
- What is the need of post marketing surveillance
- Define the terms; prevalence and incidence
- What is defined daily dose and prescribed daily dose
- Give examples of Meta analysis models
- What are the advantages of cross sectional studies
- Define the term outcome research
- What is 'opportunity cost' in a pharmacoeconomics study
- List out the four primary perspectives from which a primary pharmacoeconomic study can be conducted

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Three Hours

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Max. Marks: 70 Marks

PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Q.P. CODE: 2875

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Draw neat labeled diagrams wherever necessary



ESSAYS (Answer any two)

2 x 10 = 20 Marks

Give the definition, history and scope of pharmacoepidemiology.

What is cost utility analysis? Explain with suitable examples how the outcome is measured using cost utility analysis.

What is bias? Explain the different types of bias with examples in pharmacoepidemiology.

ESSAYS (Answer any six)

6 x 5 = 30 Marks

What are the requirements of an ideal database? Write the strengths and weakness of automate databases

What are meta-analysis models? Give examples

Explain the different types of costs in a pharmacoeconomic study

Describe a typical DUE cycle

Explain the role of pharmacoeconomics in formulary management

Describe a cohort study with an example.

What is Markov model? Explain the features.

Explain the types of errors that can occur in a pharmacoepidemiological study.

10 x 2 = 20 Marks

ANSWERS

Define incidence and prevalence

Name any four computerized databases used for pharmacoepidemiological research

What is willingness to pay

Define attributable risk.

Mention the limitations of a pharmacoeconomic study

Outline the steps involved in creating a study design for a pharmacoeconomic study.

What are case series?

What are ad hoc data sources?

Explain selection bias.

Define sensitivity analysis.

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