



Eviscore Foundation Course

Module 1 – ASK

Worksheet 1D: Matching Clinical Questions to Study Designs

Estimated Time: 10–15 minutes

Difficulty: ★ Beginner

Name: _____

Date: _____

Learning Objectives

After completing this worksheet, you should be able to:

- ☐ Identify the most appropriate study design for different clinical questions.
- ☐ Understand why different questions require different research methods.
- ☐ Prepare for efficient evidence searching in Module 2.

Quick Reference Guide

Clinical Question Type	Preferred Study Design
Therapy	Randomized Controlled Trial (RCT)
Diagnosis	Diagnostic Accuracy Study
Prognosis	Cohort Study
Harm (Etiology)	Cohort Study or Case-Control Study
Prevention	Randomized Controlled Trial (RCT)

Remember: A Systematic Review may summarize several high-quality studies for any of these question types.

Activity 1 – Match the Question Type to the Best Study Design

Draw a line or write the correct letter.

Clinical Question	Study Design
1. Therapy	—
2. Diagnosis	—
3. Prognosis	—
4. Harm (Etiology)	—
5. Prevention	—

Study Design Options

- A. Cohort Study
- B. Randomized Controlled Trial
- C. Diagnostic Accuracy Study
- D. Case-Control Study

Activity 2 – Choose the Best Study Design

Read each scenario and tick the single best answer.

Scenario 1

A researcher wants to compare two rehabilitation programmes for improving walking after stroke.

- ☐ Randomized Controlled Trial
- ☐ Cohort Study
- ☐ Case-Control Study
- ☐ Diagnostic Accuracy Study

Scenario 2

A physician wants to evaluate whether ultrasound accurately diagnoses rotator cuff tears compared with MRI.

- ☐ Randomized Controlled Trial
- ☐ Diagnostic Accuracy Study
- ☐ Cohort Study
- ☐ Case-Control Study

Scenario 3

Researchers follow patients with traumatic brain injury for five years to determine factors associated with recovery.

- ☐ Randomized Controlled Trial
- ☐ Diagnostic Accuracy Study
- ☐ Cohort Study
- ☐ Case-Control Study

Scenario 4

Researchers investigate whether smoking is associated with lung cancer by comparing people with lung cancer to those without lung cancer.

- ☐ Randomized Controlled Trial
- ☐ Cohort Study
- ☐ Case-Control Study
- ☐ Diagnostic Accuracy Study

Scenario 5

Researchers evaluate whether influenza vaccination reduces the incidence of influenza in healthcare workers.

- ☐ Randomized Controlled Trial
 - ☐ Cohort Study
 - ☐ Diagnostic Accuracy Study
 - ☐ Case-Control Study
-

Activity 3 – Think Like a Researcher

For each question below, write the best study design and explain your choice.

Question 1

“Does intensive physiotherapy improve upper-limb function after stroke?”

Best Study Design:

Why?

Question 2

“Does obesity increase the risk of developing knee osteoarthritis?”

Best Study Design:

Why?

Question 3

“Can serum procalcitonin accurately diagnose bacterial sepsis?”

Best Study Design:

Why?

Activity 4 – Challenge Question

Which study design generally provides the highest level of evidence when multiple high-quality studies addressing the same clinical question are available?

- ☐ Case Report
- ☐ Cohort Study
- ☐ Randomized Controlled Trial
- ☐ Systematic Review and Meta-analysis

Why?

Key Take-Home Messages

- ✓ Different clinical questions require different study designs.
 - ✓ Choosing the correct study design helps you search more efficiently.
 - ✓ Not every question should be answered using a randomized controlled trial.
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Self-Assessment

Tick the statements that apply to you.

- ☐ I can match Therapy questions with RCTs.
 - ☐ I can identify the best design for Diagnosis questions.
 - ☐ I understand why Prognosis questions often use Cohort Studies.
 - ☐ I recognize that Harm questions may use Cohort or Case-Control Studies.
 - ☐ I know that Systematic Reviews summarize evidence from multiple studies.
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Evidence Pearl

The best study design depends on the question being asked. Selecting the appropriate design is an essential step in finding trustworthy evidence.

Faculty Notes (Instructor Version)

Answer Key

Activity 1

Clinical Question	Correct Study Design
Therapy	Randomized Controlled Trial
Diagnosis	Diagnostic Accuracy Study
Prognosis	Cohort Study
Harm	Cohort Study / Case-Control Study
Prevention	Randomized Controlled Trial

Activity 2

Scenario	Correct Answer
1	Randomized Controlled Trial
2	Diagnostic Accuracy Study
3	Cohort Study
4	Case-Control Study
5	Randomized Controlled Trial

Teaching Tips

- Emphasize why each study design is chosen rather than memorizing pairs.
- Introduce the idea that ethical and practical considerations influence study design (e.g., you would not randomize people to smoke cigarettes to study harm).
- Reinforce that systematic reviews and meta-analyses synthesize evidence from primary studies and often provide the highest level of evidence for many clinical questions.

Clinical Decision Pathway

Clinical Problem

↓

Clinical Question

↓

Question Type

↓

Best Study Design



Best Database



Best Evidence

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