



# EVIDENCE SYNTHESIS IRELAND

## An introduction to systematic reviews of diagnostic test accuracy (Online)

### Background

As for any healthcare intervention, medical tests require thorough evaluation. Identifying the accuracy of a test is a key step in the evaluation process. Understanding other ways in which tests affect the clinical management of patients is also important – a new test may be more acceptable to patients, easier to administer, or provide a faster diagnosis or treatment.

The accuracy of a test is a measure of how well it differentiates those with a disease or condition from those who do not. Different, sometimes complex, study designs can be used to evaluate diagnostic accuracy. Measures of accuracy are also not fixed properties of a test and may not be transferable across different populations and settings. A systematic review aims to provide an overview of currently available evidence about a test's diagnostic accuracy. A basic understanding of study designs, potential sources of bias, and factors that might affect the applicability of a study's findings, are essential to ensure that the included studies answer a relevant review question.

### Aim

To provide an introduction to systematic reviews of diagnostic test accuracy.

### Objectives

The objective of this workshop is to provide an understanding of study designs to evaluate the accuracy of a test and the essential components of a systematic review of diagnostic test accuracy.

### Date:

**29th April 2024**

### Time:

**10:00 – 12:00**

### Skill Level:

**Introductory**

### Facilitator:

**Jac Dinnes, PhD**

Senior Research Fellow  
in Test Evaluation  
Test and Prediction group,  
Institute of Applied Research,  
University of Birmingham UK

### Places:

**30 places available for  
individuals who are  
resident on the island of  
Ireland**

### Fee:

**General €50**

**Student €25**

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### Learning outcomes

In this course participants will be enabled to:

- describe the key differences between systematic reviews of interventions and systematic reviews of test accuracy
- be aware of study designs used to estimate and compare the accuracy of tests
- be aware of the sources of bias and variation that occur in test accuracy studies
- be aware of the approaches used for meta-analysis of test accuracy and interpretation of meta-analytic estimates

The workshop does not cover how to conduct a meta-analysis of test accuracy studies.

### Teaching strategies

The workshop will consist of a mixture of short presentations and practical exercises.

### Course content

- a. What is diagnostic test accuracy and why does it vary?
- b. Defining the clinical testing pathway (formulating a review question)
- c. Quality assessment of test accuracy studies
- d. Understanding meta-analyses of test accuracy studies

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