Programme Overview: Research for the Specialty Trainee

An understanding of study design is necessary for doctors to evaluate existing research evidence and to conduct their own research. This is advocated in the GMC document 'Promoting excellence: standards for medical education and training' (2015), which states that medical graduates must be able apply scientific methods and approaches to medical research.

This course will provide the Specialty Trainee with a broad overview of the relevance and application of research in the clinical setting. It will aim to increase knowledge of using quantitative and qualitative research study designs to answer health related questions that are important to both the NHS and the patient.

Delegates will be given time to formulate their own research questions and develop an outline proposal that could be undertaken, as a research project (or adapted for an audit or service evaluation), within their clinical setting.

Course outcomes

- An understanding of the fundamental principles of defining a research question.
- The ability to define the critical issues in the design of a research study, utilising quantitative and qualitative methodology, with an emphasis of choosing the most appropriate design to answer the question.
- An overview of key statistical concepts such as randomisation, sample size, treatment effect and choosing outcome measures.
- An awareness of the ethical issues involved in research.
- Information on when and how to apply for research ethics and governance approval.
- Guidance on appraising research results reported in the medical literature and applying the evidence within the context of the NHS.
- An overview of the current and future sources of funding for Specialty Trainee.
- The ability to apply the learning from to develop an outline of a clinical research project.

Timetable: Research for the Specialty Trainee

Day 1

9.30-9.45 Welcome and introductions

9.45-10.00 Setting the scene for the course

10.00-10.30 Group discussion: How is research important to the NHS and your role as a Specialty Trainee?

10.30-10.45 What is a research protocol?

Brief overview of the general headings to be covered and issues to be addressed and completion of the workbook.

10.45-11.00 Break

11.00-12.30 Defining the research question

Using a series of clinical scenarios and current research to demonstrate the key components of developing a research question.

Trainees will be expected to work individually or in small groups to develop their research questions.

12.30-1.30 Lunch Break

1.30-4.00 Selecting the most appropriate quantitative method to answer a specific research question

This will include using the five study designs: ecological, cross-sectional, case control, cohort and controlled trials to explore the

- Rationale for choice of design
- Advantages and disadvantages of each
- Analysis and interpretation of results
- Selecting the study population
- Intervention and comparison group

We will also address key fundamental issues and distinctions to include

- Use of information from population/individuals

- Prevalence and incidence, association and causation
- Experimental v non-experimental
- Cross sectional v longitudinal
- Retrospective v prospective
- Relationship between study design, the data you can collect, the analysis and the research claims you can make
- Dealing with confounding

4.00-4.30 Interpreting evidence and applying it to clinical practice

Introducing checklists used to support the critical appraisal of primary research.

Information on the article review for group discussion in Day 2.

Day 2

9.30-10.00 Interpreting evidence and applying it to clinical practice

Group discussion: Following discussion of the quality of the evidence, consideration will be given to the process involved in implemented research findings in clinical practice.

10.00-10.30 Basic statistical concepts

- Practical issues regarding randomization
- Estimating the treatment effect
- Determining the sample size
- Deciding on outcome measures

10.30-10.45 Break

10.45-12.00 Introduction to qualitative research methods

This session will cover the following topics

- An introduction to qualitative research, its approaches and epistemology
- Design, validity and reliability in qualitative research
- Introduction to interviews and focus groups
- Introduction to qualitative analysis
- Ethical considerations in qualitative research

12.00-12.30 Group discussion: Identify the relative advantages and disadvantages associated with their chosen study design.

12.30-1.30 Lunch Break

1.30-2.30 The ethics of research

- Approaches to ethical problems in clinical practice and research
- Informed consent and confidentiality
- How to determine if your work is research, audit or service evaluation
- Ethical issues related to recent development in the use of electronic sources of
- patient data, Genomics, medical devices and technology
- Applying to the Health Research Authority for ethical and governance approvals

2.30-2.45 Sources of funding for research

An overview of the sources of funding for the Specialty Trainees as their career

develops and how to access support to develop research applications.

2.45-3.00 Break

3.00-3.30 Writing a grant proposal – Top ten tips

Essential considerations when developing a research grant proposal for funding.

3.30- 4.00 Group Discussion: Translating the information to the individual research projects

and next steps.

4.00-4.15 Review and close

Certificates:

To obtain your attendance certificate for this course you must complete the on-line evaluation form within Maxcourse. This option will become available a few working days after the course, please allow time for the NHSE team to record your attendance.