BBS MINOR MODULE IN GENERAL PRACTICE AND PRIMARY CARE RESEARCH

MODULE HANDBOOK 2017-18

Prepared by: Dr John Benson, GPEG, School of Clinical Medicine, University of Cambridge August 2017
FOREWORD

This new course is available to third-year Medical, Veterinary and Natural Sciences Students as a ‘minor’ module. Launched in 2017 by Dr John Benson, it will offer students the opportunity to gain the knowledge, skills and practical experience to understand the importance and challenges of GP and Primary Care research.

This module offers a platform for developing further expertise in academic primary care during clinical studies and beyond. Students can develop themes that they have begun to explore in this BBS module through Student Selected Components in year 4 of the Cambridge clinical course.

About the course

The course has two core components and one elective component.

Core Component 1: Lecture / Seminar Programme

Michaelmas term

Weekly Lectures (1 hour):

Develop knowledge and understanding of primary care research. Topics include:

- The nature/importance of GP/Primary Care
- Ethics and Research Governance in GP & Primary Care Research
- Patient participation in research
- Primary Care research methods – a map, complex interventions, introduction to the MRC framework
- Observational studies (surveys), mixed methods
- Evidence synthesis
- Social Science Approaches
- Experiments / Trials – 1
- Experiments / Trials – 2
- Observational studies (CPRD), case control studies, cohort studies

Weekly Group Seminars (2 hours)

Develop your new knowledge in the context of practical research issues and develop skills required for critical appraisal.

Both lectures and seminars will be delivered in the Primary Care Unit, to the cohort of students as a single group. Students will be guided to read relevant material and to self-direct their learning within this guidance framework.
Core Component 2: Current research issues & methods: the applied component

Second half of the Michaelmas term and throughout the Lent term:

Choose one of the Primary Care Unit research groups:

- Applied Social Science Group
- Behavioural Science Group
- Behaviour and Health Research Unit
- Cancer Group
- Cardiovascular Group
- Clinical Nursing Research Group
- Cambridge Centre for Health Services Research
- Palliative & End of Life Care Group
- Prevention Group

Deepen your study and critical appraisal of current research questions and methods, view the application of methods in relevant studies, and the challenges and rewards of conducting studies in primary care.

Attend weekly one to one supervisions with a supervising member of the research group, attend project team meetings, observe data collection and analysis.

Elective Component: Dissertation

Students can undertake their Part 2 Dissertation in this module: they may prepare a 6,000 word Research Protocol derived from this period of study.

All students (whether they elect to undertake their dissertation in this Module or not) will have the opportunity to return to their chosen Research Group to continue their studies during Student Selected components of their Clinical Course.

Find out more about research in the Primary Care Unit

Facebook @pcucambridge
Twitter: https://twitter.com/PCU_Cambridge

More information about the BBS options

About the course fair for second year MVST students
See more about the BBS courses and how they are organised here
The aim of the module is to provide students with knowledge, skills and practical experience to understand the importance and challenges of GP and Primary Care research and to offer a platform for developing further expertise in it during their clinical studies and beyond. Should they wish, students will be able further to develop their work in this module, through Student Selected Components in year 4 of the Cambridge clinical course, to which all pre-clinical medical students now progress.

The module draws on local strengths in working with large databases, primary care-based clinical trials and a range of other appropriate methods of quantitative and qualitative data collection and analyses. Throughout the course, students are able to draw on the research expertise within the Primary Care Unit and wider expertise in the University. A variety of teaching and learning methods are used, including lectures, group seminars, one to one/two supervisions and self-directed learning.

The course is open to applicants from both MVST and NST, although it is anticipated that it is likely to appeal more to the former. There are no essential or desirable pre-requisite courses that applicant students should have studied previously in either Tripos. The maximum number of students per year is eight.

Students have the option to undertake an additional dissertation, supplementary to the course’s core material.

2. MODULE ORGANISATION

2.1 Module Organiser
Dr John Benson, Senior Lecturer in General Practice
Institute of Public Health, Forvie Site, Robinson Way, CB2 0SR
jab62@medschl.cam.ac.uk

2.2 Module Secretary
Lynda Haines MA Ed, GP Education Group Seminar Administrator
Institute of Public Health, Forvie Site, Robinson Way, CB2 0SR
ldh31@medschl.cam.ac.uk

3. MODULE ENVIRONMENT

3.1 The Primary Care Unit (http://www.phpc.cam.ac.uk/pcu/ )
Established in 1997 by the Foundation Professor of General Practice, Ann Louise Kinmonth, the Primary Care Unit (PCU) encompasses a number of multidisciplinary research groups and those responsible for undergraduate teaching in General Practice and Primary Care. The PCU forms part of the Department of Public Health and Primary Care (DPHPC), and is a member of the Cambridge Institute of Public Health (IPH).

The PCU has doubled in size in the last five years, with the appointment of five new professors and the acquisition of over £42m of research funds. We are one of the most productive primary care units in the UK, with a high volume of publications in peer reviewed scientific journals and a high level of impact on clinicians, NICE guidelines, central and local government health policies and the work of charities and NGOs plus a wide range of activities to inform the public and patients and carers.

The PCU has established itself as one of the UK’s strongest research groupings in behavioural
science and primary care, and has built an international reputation for its work on the development and trial evaluation of theory-based preventive interventions, particularly in the areas of diabetes and cardiovascular disease.

The research strategy of the PCU is core to that of the overall DPHPC. We focus on understanding the determinants of behaviour, translating knowledge about risk factors and mechanisms into preventative and management strategies for chronic diseases, and testing these strategies in populations and settings representative of primary care. Particular areas of interest are risk communication, behaviour change, and randomised controlled trials of interventions in primary care settings. We work with other units and departments across the University of Cambridge that have complementary skills to our own, for example in conducting trials, measuring behaviour, statistics, development of innovative diagnostic tests and neuroscience. We also benefit from strategic partnerships nationally and internationally.

Our research is organised into five research areas: Behaviour and Health, Cardiovascular Disease and Diabetes, Cancer, Health Services Research and End of Life Care.

Our research has had a major impact on primary care practice and health policy. It has influenced national and international guidelines on atrial fibrillation, heart failure, hypertension, diabetes, and end of life care. It has informed government policy (e.g. on alcohol use) and underpinned the way in which quality of care in general practice is now measured. Examples of key studies include MoleMate, which was a randomised trial of different ways for primary care to diagnose melanoma, and ADDITION-Cambridge, which was the first randomised trial of screening for type 2 diabetes.

Over this time period, there has been a parallel expansion of our research training: We have trained, or are training, 20 junior academic general practitioners through the NIHR Academic Clinical Fellowship (ACF) Scheme; notably they have published over 30 papers from their ACF research. There is also an integrated education programme for doctoral and pre-doctoral postgraduate students – 19 PhDs were awarded during 2008-13 in primary care, and we currently have 15 further students registered for PhDs. We have developed a bespoke Masters in Primary Care Research which we now deliver alongside the existing Masters in Public Health and Epidemiology.

3.2 Department of Public Health & Primary Care (http://www.phpc.cam.ac.uk/)

The Department of Public Health and Primary Care (DPHPC) is one of Europe’s leading academic departments of population health sciences. It has been headed by Professor John Danesh since 2001 and comprises over 350 staff and graduate students. Groups in the Department are underpinned by major programme grants, such as those from the UK Medical Research Council (MRC), the Wellcome Trust, the British Heart Foundation (BHF), Cancer Research UK, the UK National Institute of Health Research, the European Union, the US National Institutes of Health, industrial partnerships, and several other sources. Examples of major developments in recent years have included:

The DPHPC takes great pride in its contributions to academic capacity in epidemiology, public health and primary care. It provides excellent training and educational programmes in biostatistics, epidemiology, public health, and primary care, at both undergraduate and graduate levels, including training of Academic Clinical Fellows. Presently, there are about 48 doctoral students and about 30 Masters' students. Students in the DPHPC are typically supported by prestigious awards, such as studentships from the MRC, BHF, CRUK, Gates-Cambridge Trust, NIH-Cambridge Fellowships and GSK.

The DPHPC's overall research objective is to generate scientific evidence that will inform the prevention of premature death and disability, the promotion of health, and provide evidence-based health policy. There is a particular focus on common chronic conditions such as common cancers, cardiovascular disease, neurodegenerative diseases, osteoporosis, and metabolic diseases. Key
strategies involve establishing large-scale population resources to enable investigation of the separate and combined influences of genetic and lifestyle factors in chronic diseases. The goal is to translate this evidence into the development and evaluation of preventative interventions.

4. MODULE OBJECTIVES

Following this module, all participating students will be able to demonstrate:

1. Knowledge and understanding of the primary care research context, its distinctive nature and the strengths, weaknesses and applicability of a range of research methods in key areas of the field.
2. Ability to critically appraise a paper describing research undertaken in General Practice & Primary Care.
3. Ability to critically discuss current issues, challenges and methods in a specific field of General Practice & Primary Care Research

Students undertaking their Part II dissertation in this module will, in addition, be able to demonstrate:

4. Ability to write a protocol for a research project in GP & Primary Care, applying contemporary research methods to a clinically relevant area of investigation in primary care.

5. MODULE OVERVIEW

The module will comprise two core components and one elective component:

5.1 Core Component 1: Lecture / Seminar Programme

During the Michaelmas term, students will attend weekly lectures and group supervisions. Lectures will offer a basis of knowledge and context. Group supervisions will develop this knowledge in the context of practical research issues and teach skills required for critical appraisal. Both lectures and seminars will be delivered within the Primary Care Unit to the cohort of students as a single group. Students will be guided to read relevant material and to self-direct their learning within this guidance framework.

5.2 Core Component 2: Study of current research issues, challenges and methods in a selected field: the applied component

During the second half of the Michaelmas term and throughout the Lent term, students will work with one of the nine PCU research groups, chosen by them, in whose field they will deepen their study and critical appraisal of current research questions and methods, view the application of methods discussed in relevant studies, and the challenges and rewards of conducting studies in primary care.

Students will attend weekly one to one supervisions with a supervising member of the research group. Students may also have the opportunity to attend project team meetings, and to observe data collection and analysis. There will be no requirement for new ethical or research governance approval for students to undertake this work. Students will be guided to read relevant material and self-direct their learning within this guidance framework. There will be no requirement for additional supervisions in addition to those delivered by the PCU.

5.3 Elective Component: Dissertation

Students wishing to undertake their Part 2 Dissertation in this module will be able to do so by preparing and submitting a 6,000 word Research Protocol derived from this period of study. Students considering this option should start planning as soon as possible, once the module
begins, by visiting the Primary Care Unit website at: http://www.phpc.cam.ac.uk/pcu/research/research-groups/, to explore research groups whom they may wish to approach for dissertation supervision. All students (whether they elect to undertake their dissertation in this Module or not) will have the opportunity to return to their chosen Research Group to continue their studies during Student Selected components of their Clinical Course.

6. MODULE ASSESSMENT

Module assessment will be set and marked by a University internal senior examiner. Marking will be supported by a University second examiner. The assessment process will be reviewed by a University external examiner. Examiners will follow the Faculty of Biology Examiner Code of Conduct, available at: https://www.biology.cam.ac.uk/undergrads/exams/exam-conduct.

6.1 Core Assessment: All Students

Core modules will be assessed by a 3-hour written examination, set and marked by UTOs.

Question 1 (1 Hour):
Question area: Research methods, their strengths, weaknesses and applicability as taught on the course
Question format: Three component questions, marked out of 10 each
Mark Scheme: Agreed by examiner team, questions double marked, final mark agreed between examiners.

Question 2 (1 hour):
Question area: Critical appraisal of a Primary Care research paper.
Question format: Several component questions, marked out of a total of 30
Mark Scheme: Agreed by examiner team, questions double marked, final mark agreed between examiners.

Question 3 (1 Hour):
Question area: Current issues, challenges and methods in a specific field of GP & Primary Care Research
Question format: One essay question, based upon student learning with their chosen research group, marked out of a total of 30
Mark Scheme: Agreed by examiner team, question double marked, final mark agreed between examiners.

Final stratification of overall results will be based upon the Faculty of Biology guidance for marking Tripos essays, available at: https://www.biology.cam.ac.uk/undergrads/exams/marking-tripos-essays/marking-tripos-page

One formative practice question paper, marked and returned to students with feedback, will be set at the beginning of the Lent Term.

General advice for students about how to approach examinations is available at: https://www.biology.cam.ac.uk/undergrads/exams/skills.

6.2 Elective Dissertation Assessment

Students who elect to take their Part II Dissertation in this module will be required to write a 6,000 word written Project Protocol addressing a Primary Care Research question.

Guidance for dissertation supervisors is available at:
Students will be expected to follow the Faculty of Biology dissertation guidelines, available at: https://www.biology.cam.ac.uk/undergrads/nst/bbs/dissertations.

Specifically, according to these guidelines, students should receive a maximum of four supervisions with their dissertation supervisor. Students are expected to meet with their supervisor a minimum of two times during the preparation of their dissertation. Supervisors are only permitted to view a single draft of a dissertation prior to submission.

Dissertations will be double marked. Final stratification of overall results will be agreed between examiners and based upon the Faculty of Biology guidance for marking Tripos essays, available at: https://www.biology.cam.ac.uk/undergrads/exams/markig-part-ii-dissertations/markig-diss

It is anticipated that the structure of a research protocol will include the following sections: Summary (300 words maximum), Background, Aims, Methods, Timeline, and References. Students are not obliged to use these actual headings and may choose to further divide some of these components into contributory sections. Students may find it helpful to use or adapt templates for research protocols in different research areas, available at: http://www.equator-network.org/.

Advice the recommended structure for a dissertation is available at: https://www.biology.cam.ac.uk/undergrads/nst/bbs/dissertations#section-9

Further advice, specific to this module is as follows:

1. Follow the Faculty of Biology style guide and be sure to take special care in setting out your tables and figures. Be certain to run your text through a spell checker. Back your work up.
2. Your ‘summary’ (300 words maximum) should crisply encapsulate your entire research protocol for a reader who is intelligent, but unfamiliar with your field.
3. Your ‘background’ section should establish the starting point for your enquiry by summarising the current state of knowledge relevant to the specific question you are addressing, (which will be stated in your subsequent ‘Aims’ section).
4. Your ‘background’ section will include a review of the existing literature. This should clearly demonstrate an ability to find the relevant literature and to critically appraise its content. However, your background section should not be expanded uncritically to fit in as much background knowledge as you can manage. Keep it in balance with the other sections.
5. Your ‘background’ section should conclude with a summary that bridges to the work that is to follow, with clear statements of your aim and, if appropriate, the hypothesis to be tested e.g. “Because of the uncertainty about the role of X in condition Y, we set out to see whether levels of X were associated with risk of Y in our study population Z.
6. Your ‘aims’ section should state your central question(s) clearly at the beginning and serve as the basis on which you plan your methods and timeline. If your research question involves a hypothesis, be sure to state it clearly here.
7. Your ‘methods’ section should describe your research plans in sufficient detail for a reader to replicate them. Explicitly consider ethical issues and ways of addressing them. Clearly describe your analytic strategy. It is important that the statistical or qualitative methods used to analyse data should be described clearly, with references when appropriate.
8. Your timeline should be realistic in relation to the work proposed.
7. MODULE SCHEDULE

7.1 Core Component 1 – Lecture / Seminar Programme: Research Context, Methods and Critical Appraisal in GP & Primary Care Research

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Timing</th>
<th>Topic</th>
<th>Developed and delivered by</th>
<th>Teaching</th>
<th>Reading</th>
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</thead>
<tbody>
<tr>
<td>Lecture: 14.00-15.00 Mon 9/10/17</td>
<td>Mic'mas Wk 1a</td>
<td>The Nature/Importance of GP/Primary Care</td>
<td>Dr John Benson</td>
<td>1hr Lecture</td>
<td>2hr</td>
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<tr>
<td>Lecture: 14.00-15.00 Tues 10/10/17</td>
<td>Mic'mas Wk 1b</td>
<td>Ethics and Research Governance in GP &amp; Primary Care Research</td>
<td>Ricky Mullis, Senior Research Associate</td>
<td>1hr Lecture</td>
<td>2hr</td>
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<tr>
<td>Lecture: 14.00-15.00 Thurs 12/10/17</td>
<td>Mic'mas Wk 1c</td>
<td>Patient Participation in Research</td>
<td>Dr Stephen Barclay</td>
<td>1hr Lecture</td>
<td>2hr</td>
</tr>
<tr>
<td>Lecture: 14.00-15.00 Mon 16/10/17 Seminar: 14.00-16.00 Thurs 19/10/17</td>
<td>Mic'mas Wk 2</td>
<td>Primary Care research methods – a map, complex interventions, introduction to the MRC framework</td>
<td>Prof Christi Deaton</td>
<td>1hr Lecture 2hr Seminar</td>
<td>4hr</td>
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<tr>
<td>Lecture: 14.00-15.00 Mon 23/10/17 Seminar: 14.00-16.00 Thurs 26/10/17</td>
<td>Mic'mas Wk 3</td>
<td>Social Science Approaches</td>
<td>Dr Robbie Duschinsky</td>
<td>1hr Lecture 2hr Seminar</td>
<td>4hr</td>
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<td>Lecture: 14.00-15.00 Mon 30/10/17 Seminar: 14.00-16.00 Thurs 2/11/17</td>
<td>Mic'mas Wk 4</td>
<td>Evidence Synthesis</td>
<td>Dr Fiona Walter &amp; Dr Ian Wellwood</td>
<td>1hr Lecture 2hr Seminar</td>
<td>4hr</td>
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<tr>
<td>Lecture: 14.00-15.00 Mon 6/11/17 Seminar: 14.00-16.00 Thurs 9/11/17</td>
<td>Mic'mas Wk 5</td>
<td>Observational Studies (surveys), mixed methods (NB 9/11/17 is deadline for Dissertation titles)</td>
<td>Prof Mary Dixon-Woods &amp; Dr Chris Gibbons</td>
<td>1hr Lecture 2hr Seminar</td>
<td>4hr</td>
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<tr>
<td>Lecture: 14.00-15.00 Mon 13/11/17 Seminar: 14.00-16.00 Thurs 16/11/17</td>
<td>Mic'mas Wk 6</td>
<td>Experiments / Trials - 1</td>
<td>Prof Simon Griffin</td>
<td>1hr Lecture 2hr Seminar</td>
<td>4hr</td>
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<tr>
<td>Lecture: 14.00-15.00 Mon 20/11/17 Seminar: 14.00-16.00 Thurs 23/11/17</td>
<td>Mic'mas Wk 7</td>
<td>Experiments / Trials - 2</td>
<td>Prof Stephen Sutton</td>
<td>1hr Lecture 2hr Seminar</td>
<td>4hr</td>
</tr>
<tr>
<td>Lecture: 14.00-15.00 Mon 27/11/17 Seminar: 14.00-16.00 Thurs 30/11/17</td>
<td>Mic'mas Wk 8</td>
<td>Observational Studies (CPRD), case control studies, cohort studies</td>
<td>Prof Jonathan Mant</td>
<td>1hr Lecture 2hr Seminar</td>
<td>4hr</td>
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* This timing is correct

Total time: 10hr Lecture 14hr Seminar 34hr Reading
7.2 Core Component 2: Study of current issues, challenges and methods in a specific field of GP & Primary Care Research

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<tr>
<th>Timing</th>
<th>Topic</th>
<th>Developed &amp; delivered by</th>
<th>Teaching</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar: 14.00-16.00 Tues 24/10/17</td>
<td>Mic'mas Wk 3</td>
<td>Research Group Fair</td>
<td>Reps from the Primary Care Unit Research Groups</td>
<td>2hr Seminar /</td>
</tr>
<tr>
<td>Student-Directed</td>
<td>Mic'mas Wks 3-4</td>
<td>Choosing &amp; organising attachment to a research group</td>
<td>Self-directed activity</td>
<td>/ /</td>
</tr>
<tr>
<td>Seminar: 14.00-16.00 Tues 28/11/17</td>
<td>Mic'mas Wk 8</td>
<td>How to develop a research question</td>
<td>Prof M Roland</td>
<td>2hr Seminar 2hr</td>
</tr>
<tr>
<td>Tues or Thurs PM, negotiated with host research team</td>
<td>Mic'mas Wks 5-8 Lent Wks 1-8</td>
<td>Study of current issues, challenges and methods in a specific field</td>
<td>Experienced post-docs with UTO oversight</td>
<td>1hr / week supervision 10hr / week</td>
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<tr>
<td>Tues or Thurs PM</td>
<td>Total time</td>
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<td></td>
<td>4hr Seminar 12hr Supervision 122hr Reading</td>
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7.3 Elective Component: Dissertation

| Mic'Imas Weeks 5-8 Lent Weeks 1-8 | Development of a Research Protocol (NB 9/11/17 is deadline for Dissertation titles, Last day Lent Term is deadline for final title change) | Experienced post-docs with UTO oversight | 4 supervisions in total |
8. LECTURE / SEMINAR PROGRAMME CONTENT

8.1 The Nature/Importance of GP/Primary Care (Dr John Benson)

Lecture (1 Hr)

Although specialist practice in hospital seems to the engine needed to drive modern improvements in health care, there is good evidence that that is not entirely true. We will examine evidence that strong primary care is not only the bedrock for healthcare in developing countries, but is also associated with excellence of outcomes in the developed world. We will discuss this, the nature of primary care itself and the place of primary care in academic clinical practice.

Reading (2 Hr)


Browse two websites to get a flavour of current events:

Royal College of General Practitioners: http://www.rcgp.org.uk/
School for Primary Care Research: https://www.spcr.nihr.ac.uk/
8.2 Ethics and Research Governance in GP & Primary Care Research (Ricky Mullis)

**Lecture (1 Hr)**

This interactive session will provide an introduction to the ethical concepts, legislative requirements and practical considerations when carrying out research in a primary care setting. We will consider the legal and ethical issues surrounding clinical research and the principles of research governance including: the history of research ethics, the process to gain relevant study approvals; gaining “informed” consent, good clinical practice and regulatory compliance during active phase of the study.

**Reading (2 Hr)**


Browse this website: Health Research Authority [http://www.hra.nhs.uk](http://www.hra.nhs.uk)

8.3 Patient participation in research (Dr Stephen Barclay)

**Lecture (1 Hr)**

This lecture will be interactive, with contributions from Dr Barclay, a current member of the Palliative Care Research Group’s PPI (Patient and Public Involvement) Group and students. After an introduction to the principles of PPI, students will consider:
- the ways in which PPI members can contribute to all the stages of the research process
- the benefits of PPI involvement
- the potential pitfalls of PPI involvement
- the key factors that lead to successful PPI involvement

**Reading (2 Hr)**

The patient voice in research: evolution of a role
Johnson et al. Research Involvement and Engagement (2016) 2:6

Practical considerations in improving research through public involvement
Jenner et al. Research Involvement and Engagement (2015) 1:3
DOI 10.1186/s40900-015-0002-y

More than just ticking a box…how patient and public involvement improved the research design and funding application for a project to evaluate a cycling intervention for hip osteoarthritis
DOI 10.1186/s40900-015-0013-8
8.4 Primary Care Research Methods – a map, complex interventions, 
Introduction to the MRC framework (Prof Christi Deaton)

Lecture (1 Hr)
The lecture will provide students with an introduction to methods used in primary care research and complex interventions. Students will gain an appreciation of the value of theory and multiple methods in developing, testing, implementing and evaluating interventions in primary care. Content will provide context and a basic understanding on which to build in subsequent methodological lectures in the term. The Medical Research Council (MRC) Framework for Complex Interventions, and process evaluation of complex interventions will be discussed. Students will consider the reasons why interventions and service improvements fail, or cannot be replicated or scaled.

Reading (4 Hr)
[Note full report available from: www.mrc.ac.uk/complexinterventionsguidance]


Seminar (2 Hr)
The seminar will reinforce the key messages of the lecture through critical appraisal of development and testing of a complex intervention in primary care. Students will read two papers on the same complex intervention, and discuss the development, theoretical frameworks, and methods used to evaluate the intervention. Group discussion will guide the students in critical appraisal of the intervention, study methods and results.


8.5 Social Science approaches (Dr Robbie Duschinsky)

**Lecture (1 Hr)**

The lecture will provide an introduction to the use of social science methods and theories within primary care research. The lecture will begin by considering different kinds of knowledge, and their role within research. The advantages of social science approaches will be highlighted for studying patient perspectives, and for exploratory research addressing processes and practices. Qualitative and quantitative social science methodologies discussed will include interviews, observational measures and longitudinal study. The lecture will also consider reasons why it is important to think about primary care within the context of wider social forces and social values, and how social theory can help with this. The final part of the lecture will present a selection of exemplar social science studies, demonstrating the diversity and value of what can be achieved through such approaches, whether on their own or within a wider primary care research programme.

**Reading (4 Hr)**

+ one of the papers listed below.

**Seminar (2 Hr)**

Students are asked to select one from among of the varied group of papers below. In the seminar, each student will present briefly on: a) how the methodology facilitates the contribution or value of the paper; b) the kind of knowledge the paper offers; c) the paper’s implications. Group discussion will explore the advantages and limitations of particular approaches within the social science toolkit for research on challenges within general practice and primary care.

8.6 Evidence synthesis (Dr Fiona Walter & Dr Ian Wellwood)

Lecture (1 Hr)
The basic concepts of systematic reviews and evidence synthesis for primary health care will be described, including different types of research methods. The strengths and weaknesses of different study designs will be considered, as well as how to critically appraise evidence for sources of bias, and applying evidence to primary health care settings. Examples will range from quantitative systematic reviews to data synthesis (meta-analysis and qualitative), and realist reviews.

Reading (4 Hr)

Seminar (2 Hr)
The seminar will further explore the issues raised in the lecture through critical appraisal of a paper. Students will be provided with a short paper to be read in advance of the seminar, and expected to read around the topic area. Group discussion will focus on the methodological quality of the systematic review and how clinically relevant the findings are to primary care.

8.7 Observational studies (surveys), mixed methods (Prof Mary Dixon-Woods & Dr Chris Gibbons)

Lecture (1 Hr)
This lecture will identify the value of mixed-method approaches for addressing many research questions in primary care, including those that involve evaluation of complex interventions. It will explain the principles underlying programme evaluation, including how use of a theory-oriented approach supports clearer specification of interventions, mechanisms and outcomes as well as integration of multiple forms of evidence. The lecture will also introduce theories and approaches for the development and validation of questionnaire surveys for research and clinical practice.

Reading (4 Hr)


O’Cathain A, Murphy E, Nicholl J. Three techniques for integrating data in mixed methods studies. Bmj. 2010 Sep 17;341:c4587


Seminar (2 Hr)
The seminar will focus on a study of an intervention to improve management of polypharmacy in primary care. Students will specify a programme theory for the intervention and a plan for study, which will include a questionnaire. They will appraise commonly-used techniques for item generation, sampling, and statistical analysis of questionnaire data. Students will consider and define their target population, mode of administration, approach to recruitment, chosen risk prediction tool, questionnaire items, and analysis plan. They will consider how to integrate the questionnaire data with other forms of data.
8.8 Experiments / Trials – 1 (Prof Simon Griffin)

Lecture (1 Hr)

The lecture will provide a basic understanding of the commonly used designs of randomised controlled trials as well as the organisation, conduct, monitoring, analysis and reporting of a randomised clinical trial in primary care. It will focus on why clinical trials are performed in primary care, discover their advantages and disadvantages and the safeguards that are employed to ensure that participants are not exposed to unnecessary risk. It will offer insights into how qualitative work can contribute to clinical trials. It will also cover the need for evaluation of costs of treatment, some of the difficulties associated with this, and how data on effectiveness and costs are combined to determine cost-effectiveness. Examples will range from trials of medication used in General Practice through to behavioural and policy interventions.

Reading (4 Hr)


Seminar (2 Hr)

The seminar will focus on the critical appraisal of a clinical trial relevant to primary care. Students will be provided with a short paper in advance and expected to read around topic areas. Group discussion will focus on the methodological quality of the trial and whether the results are clinically relevant to primary care. Anonymised peer review comments will be used to support discussions.

8.9 Experiments / Trials – 2 (Prof Stephen Sutton)

Lecture (1 Hr)

This lecture will discuss randomised controlled trials of behavioural interventions and some of the special considerations that arise in this context. Frameworks for developing behaviour change interventions, including the role of theory, will be described. Risk of bias in behavioural intervention trials will be covered. The problems of measuring behavioural outcomes will be discussed, including measurement reactivity. The wider issue of trial participation effects will also be considered. Examples will include trials of interventions to increase physical activity in primary care.

Reading (4 Hr)


Seminar (2 Hr)

The seminar will focus on ‘digital’ interventions for behaviour change e.g. text messaging interventions, electronic monitoring and feedback, smartphone apps. Such interventions may require different methods of development and evaluation. For example, it has been suggested that the traditional randomised controlled trial may not be an appropriate method for evaluating the effectiveness of digital interventions. Students will be provided with a short paper in advance and expected to read around the topic.

8.10 Observational studies (CPRD), case control studies, cohort studies (Prof Jonathan Mant),

Lecture (1 Hr)

The purpose, design, analysis and limitations of case control and cohort studies will be described. The advantages and disadvantages of using these designs to explore effectiveness in the context of primary care will be considered. Examples will include studies using the Clinical Practice Research Datalink (CPRD), a large data-set derived from routine general practice data.

Reading (4 Hr)

Dawes M et al, Evidence based practice: a primer for health care professionals. 2nd edition, Chapter 8: Case control and cohort studies. Elsevier Ltd 2005

Seminar (2 Hr)

The seminar will further explore the issues raised in the lecture through appraisal of two papers, to be read in advance of the seminar.


8.11 How to develop a research question (Prof Martin Roland)

**Seminar (2Hr)**

Students will be asked each to bring two questions that occur to them about general practice. One should be clinical (e.g. ‘Why do GPs prescribe so many antibiotics?’) and one about the organisation of primary care (e.g. ‘Why can’t I get an appointment with my doctor’). These questions will then be used as the basis for discussion in the seminar which will focus around refining their questions into answerable research questions. Alongside this, we will discuss the various methods that might be used depending on how the question is refined or constructed. The aim of the session is for students to understand the process of moving from an interesting observation/question to an answerable research question, and the range of approaches that are relevant to answering particular types of question.

**Reading (2 Hr, to be done in advance of the seminar):**

Revising notes from previous sessions on observational studies, surveys, social science approaches and randomised controlled trials.

Reading notes on study design which will be provided to the students before the seminar.
9. GENERAL MATTERS

9.1 Attendance
You will be based for all teaching either at the Institute of Public Health on the Forvie site or the Clinical School, both on the Addenbrooke’s Hospital campus.

http://www.phpc.cam.ac.uk/pcu/files/2013/11/CBC-General_Sitemap_October-2016-LL.pdf

All students are expected to attend all lectures and related teaching sessions on time and may only be absent for unavoidable and valid reasons. Students are also expected to have undertaken background reading and other relevant work as preparation for each teaching session. It is the student’s responsibility to inform the Module Administrator (details below) and relevant lecturers of an unavoidable absence and to complete all work missed due to absence. To monitor attendance and for the purposes of course evaluation, a record of attendance will be maintained for all teaching sessions by paper feedback.

Module Administrator
Lynda Haines, General Practice Education Group (GPEG) Administrator
Institute of Public Health, Forvie Site, Robinson Way, CB2 0SR
ldh31@medschl.cam.ac.uk

9.2 Bus Service
There is a bus service (Uni 4) for University cardholders that runs during the working day (every 20 minutes) between Madingley Road Park and Ride, University West Cambridge Site and the Addenbrooke’s Hospital. Website: https://www.cuh.nhs.uk/finding-us

9.3 Calculators
Students are allowed to use a calculator in the examinations. Please contact the Assessment Administrator in the Primary Care Unit to obtain approval of your calculator.

9.4 Car Parking
There are no car parking facilities for students at the Institute of Public Health.

9.5 Computing Facilities
Computing facilities and black and white and colour printers are available within The Primary Care Unit. Printing is free up to a point. Please think carefully before you print in order to keep copies to a minimum as you will be charged for excessive printing. There is also a photocopier/scanner/fax in the Unit. You will need to be given a passcode in order to use this.

Please read the Use and Misuse of Computing Facilities document on the CSITSS website. Any technical problem with the PCs or printers should be referred to CSITSS Helpdesk (ext: 36261). Let the administrative office know when there is a serious problem, noting what the problem is and when you contacted the Helpdesk. Sometimes, the Helpdesk need to charge for their services in which case, this will need to be authorised by the Administrator in The Primary Care Unit before being carried out.

The University has a very well equipped Computing Service and Laboratory Centre http://www.cam.ac.uk/cs/about/.
9.6 Feedback and Evaluation
Your feedback is essential for continued development and evaluation of the programme. You will be asked to provide feedback on each lecture/seminar including rating of the sessions. Please help us by completing and returning the evaluation form promptly to the GPEG Administrator at the end of each session.

9.7 First Aid
First Aiders are available by contacting the IPH or Clinical School Receptions.

9.8 Libraries
The Medical Library in the Clinical School affords a wide spectrum of books and journals. All students will be taken on a visit to the Library to be introduced to the facilities. Students may also wish to use the main University Library on West Road, particularly in the area of government documents and more specialist material.

There are several other libraries within Cambridge University, e.g. the Scientific Periodical Library. Information on these is available on the University website http://www.cam.ac.uk/.

9.9 Toilet Facilities and Refreshments
Both The Institute of Public Health building and Clinical School have clearly signed accessible toilet facilities.

The Institute of Public Health has a constant hot and cooled water supply and snack vending machines. There’s also a microwave oven and toaster available for your use in the staff room. Students are required to bring their own mugs/plates but cutlery is supplied. Students are responsible for cleaning-up after themselves.

The Clinical School has a café on the ground-floor, and there is a wide variety of shops/cafes in the main Addenbrooke’s Concourse.

9.10 Stationery
You are expected to provide your own stationery.

9.11 Useful Websites
The Primary Care Unit:  http://www.phpc.cam.ac.uk/pcu/
General Practice Education Group: http://www.phpc.cam.ac.uk/pcu/education-and-training-overview/gpeg-gp-teaching-for-medical-students/
Clinical School:  http://medschl.cam.ac.uk
Medical Library:  http://library.medschl.cam.ac.uk/