# PhD opportunities at the UCL Research Department of Primary Care and Population Health

#### Who are we?

- Clinicians (doctors, nurses, physios, pharmacists, dentists...)
- Psychologists
- Epidemiologists
- Statisticians
- Sociologists
- Health economists
- Patients and the public (through user groups)

#### **Topics**

- E-Health
- Ageing
- Mental Health
- Sexual health
- Infectious disease including HIV
- Electronic health records research
- Epidemiology (health of populations)
- Drug safety
- Cardiovascular disease
- Health behavior
- Health promotion
- Health communication
- Health Services Research
- Medical education
- Society, culture and health
- New methods for analysis of data

### Methods and study designs

- Qualitative methods (e.g. interviews, focus groups)
- Cross-sectional survey research
- Intervention design (in consultation with users)
- Statistical techniques for large databases
- Epidemiology (analysing data on populations)
- Observational studies using electronic health records
- Randomised controlled trials
- Quasi-experimental designs
- Discourse analysis, conversation analysis
- Economic evaluation including decision modelling
- Action research

#### Why join us?

- Research with clear links to patient health problems
- Very wide choice of topics relating to patients or healthcare
- Enthusiastic, supportive PhD student groups
- Internationally recognised research teams
- Expertise from many different disciplines
- Excellent support from supervisors
- Freedom to pursue your own research ideas
- Opportunities to present and publish
- Support for your future career

# Research groups in the Research Department of Primary Care and Population Health

The University College London Research Department of Primary Care and Population Health (PCPH) is multi-disciplinary and internationally competitive. We research health and disease in individuals and populations. We have a multidisciplinary approach to research and teaching with expertise within the department in clinical primary care, epidemiology, medical statistics, medical sociology, health economics and health psychology. We have particular methodological strengths in quantitative and qualitative research, analysis of large clinical databases and clinical trial methodology. PCPH is one of the leading Departments of Primary Care in the UK. We are a member of the NIHR School of Primary Care Research, which is formed by the nine top Departments of Primary Care in England.

www.ucl.ac.uk/pcph

#### eHealth Unit

Supervisors: Professor Elizabeth Murray, Dr Fiona Stevenson, Dr Julia Bailey, Dr Fiona Hamilton

The eHealth Unit is internationally recognised, with a strong multi-disciplinary focus and expertise across a wide range of research methods. It focuses on the use of digital technologies to improve health and health care. Areas of interest include developing and evaluating digital interventions to promote self-management for patients with long term conditions (e.g. diabetes, heart disease) and for health promotion / behaviour change (e.g. alcohol, sexual health). The unit also undertakes research on implementation of digital technologies in the NHS and the impact of eHealth on health care professional - patient interactions.

**Project:** Apps and websites for sexual health promotion

Supervisor: Dr Julia Bailey

Students are welcome to propose any projects which involve digital media for sexual health promotion. Projects can cover intervention design, qualitative and quantitative evaluation, digital health implementation, and/or online research methodologies.

**Project:** Digital media for sex and relationships education in schools

Supervisor: Dr Julia Bailey

School sex and relationships education (SRE) can be a challenge to teach. Teachers and students can find it embarrassing, and students may not be willing to discuss some topics in classroom lessons. E-Health interventions such as tailored websites or mobile phone interventions can offer private, convenient access to SRE. This project is to help to develop digital resources for school children, teachers and parents, and to evaluate their feasibility and acceptability using qualitative interviews with children, parents and teachers.

**Project:** Digital tools for GP patients

Supervisor: Dr Julia Bailey

There are a huge range of digital tools and e-resources for health promotion and management of illness, for example interactive websites, online decision-aids, behaviour change interventions, electronic reminders and prompts. This project is to explore the barriers and facilitators to clinicians recommending e-health resources to patients. The project involves a literature review and evidence synthesis and qualitative interviews with stakeholders (patients, clinicians, commissioners). The output will be guidance for clinicians on good practice in recommending e-health resources to patients.

Project: Use of the internet in GP consultations

Supervisor: Dr Fiona Stevenson

One of our ongoing projects is to consider how the internet is used in consultations by both GPs and patients and whether or not internet resources are raised by either patients or GPs as a source of information. The research design is a brief questionnaire prior to consultations, videotaping of consultations and interviews with GPs and patients after consultations. Students would have access to these data and have the opportunity to develop a project related to their own interests in relation to communication about, and use of, digital resources.

Project: Doctor-patient communication on 'sensitive' topics

Supervisor: Dr Julia Bailey

Clinicians strive to be 'non-judgemental', but it is not clear what this actually means in practice. This project is a qualitative discourse analysis of clinician-patient communication on topics such as sexual risk, smoking or alcohol, to explore how clinicians balance being non-judgemental with giving advice about lifestyle factors. It will involve analysis of video recorded consultations and interviews with clinicians and patients.

Contacts: Elizabeth.murray@ucl.ac.uk Julia.bailey@ucl.ac.uk f.stevenson@ucl.ac.uk f.hamilton@ucl.ac.uk

## Primary Care Mental Health Research Group

The Primary Care Mental Health Research group offers studentship opportunities on a range of topics in mental health (including severe mental illness/psychosis, common mental disorders such as anxiety and depression, medically unexplained symptoms and somatisation) and using a variety of methodologies including both quantitative and qualitative research. Contact Marta Buszewicz: <a href="mailto:m.buszewicz@ucl.ac.uk">m.buszewicz@ucl.ac.uk</a>

#### Project: Improving the mental well-being of frail older people

Supervisors: Dr Kate Walters, Dr Rachael Frost, Dr Marta Buszewicz, Dr Rebecca Gould

Our current work has shown that depression and anxiety in frail older people is often poorly addressed, with very low levels of referrals and uptake of psychological therapies in this group. We have undertaken several systematic reviews and are interviewing frailer older people with depression or anxiety on how we can better address these needs. There is an opportunity to build on this work, and undertake a qualitative study with health care professionals to understand how current services and psychological therapies need to be better adapted to meet the needs of older people with health impairments affecting their everyday activities. This would particularly suit someone with a background in psychology.

#### **Project: Public Mental Health**

Supervisors: Dr Kate Walters, Prof David Osborn, Dr Fiona Hamilton

The NIHR School for Public Health has prioritised Public Mental Health as one of its three key themes in a 4-5 year programme of work starting 2018. There is an opportunity to join the team of people at UCL working to develop ideas for the key research questions within this theme, and develop a linked PhD project. Potential topic ideas include: evaluating early years and school-based approaches to promote child and adolescent mental well-being; reducing inequalities experienced by people with poor mental health; better integration of care for people with poor mental health; new approaches to reducing loneliness and promoting resilience; the built environment and mental well-being outcomes; mental health and the workplace.

Contact: k.walters@ucl.ac.uk

# Clinical Epidemiology and Electronic Health Records Research group

Supervisor: Dr Irene Petersen

The Clinical Epidemiology and Electronic Health Records Research group works on a range of epidemiological projects using different types of electronic health records. For example The Health Improvement Network (THIN) and the Clinical Practice Research Datalink (CPRD).

**Project:** Depression and postnatal depression – what's the difference?

Supervisor: Dr Irene Petersen

This project will explore differences and similarities between depression and postnatal depression in a cohort of women from The Health Improvement Network primary care databases.

**Project:** Medicines in pregnancy and potential adverse outcomes

Supervisor: Dr Irene Petersen

This project will examine a range of medicines prescribed in pregnancy and evaluate adverse outcomes using a well-established cohort of linked mothers and children in The Health Improvement Network primary care data base.

Project: Missing data and methods to deal with missing data in large electronic health records

Supervisor: Dr Irene Petersen

This project will examine the use patients' longitudinal electronic health records for multiple imputation of missing data when patients initiate new drug treatments such as statin or blood pressure lowering medication

Project: Communication of harms and benefits of psychotropic medication in pregnancy

Supervisor: Dr Irene Petersen

This project will develop and evaluate different methods to communicate harms and benefits of antidepressants used in pregnancy. The project will include both quantitative and qualitative methods.

Contact: i.petersen@ucl.ac.uk

### **British Regional Heart Study**

Supervisor: Professor Goya Wannamethee

The Cardiovascular Epidemiology Group includes major longitudinal research on risk factors for cardiovascular disease, in particular the British Regional Heart Study (BRHS) of over 7000 men recruited through general practice. The successful candidate will work within a team principally of statisticians and epidemiologists, with strong links to collaborators who are applied methodologists and experts in primary care. The projects will suit a candidate with a background in medical statistics or epidemiology and experience in analysing large datasets. The BRHS is a prospective cohort of men with over 35 years of follow-up and allows investigations on prevention and prediction of a range of chronic diseases from middle to older ages. Possible areas of investigation include CVD (coronary heart disease, heart failure and stroke), diabetes, risk factors (diet, physical activity, novel biomarkers), and a range of ageing conditions (disability, frailty, poor oral health).

Project: The role of diet and nutritional status in the prevention of heart failure

Supervisor: Professor Goya Wannamethee

It is well recognised that a healthy diet in particular a Mediterranean diet prevents coronary heart disease. Incidence of heart failure (HF) increases steeply with age. While previous myocardial infarction (MI) is a major risk factor for development of HF, HF in the elderly is not often preceded by an MI. Less has been studied on the role of diet in the prevention of HF in older adults. There is suggestion that the Mediterranean diet and diet high in antioxidants may also be protective against HF. Emerging evidence suggests that fatty acids may have a protective role but the findings have been inconclusive. Prospective data from the British Regional Heart Study (BRHS) will allow the opportunity to investigate the relationship between diet quality, dietary patterns and nutritional factors (blood markers of fatty acids, antioxidants, magnesium) in relation to risk of incident HF in a prospective study of 4000 men followed up for over 12 years.

Project: Vitamin D and healthy ageing

Supervisor: Professor Goya Wannamethee

Epidemiological studies suggest that vitamin D insufficiency is related to increased mortality and a number of diseases and disorders including cardiovascular disease (CVD), cancers, hypertension, functional decline and declining cognitive function. Although intervention trials have failed to find a beneficial effect of vitamin D supplements on CVD risk, there is likely evidence from meta-analyses of randomized controlled trials that vitamin D may improve overall mortality in elderly people. Vitamin deficiency is common in older people over 65 and a greater understanding of the relationship between vitamin D status and health outcomes in the elderly is needed and to identify the level (thresholds) for vitamin D which is associated with poor health outcomes. Prospective data from the BRHS will allow the opportunity for the investigation of the association between serum 25(OH)D levels (the best indicator of vitamin D status) and a wide range of diseases and health outcomes including CVD (CHD and stroke), cancers, all-cause mortality and functional decline in an established population of men >60 years and identify threshold levels associated with poor outcome.

**Project:** Life's simple 7 and cardiovascular aging

Supervisor: Professor Goya Wannamethee

The incidence of cardiovascular disease and heart failure increases steeply with age and are major contributors to disability and mortality. Life's Simple 7 is a new metric based on modifiable health behaviors and factors that the American Heart Association uses to promote improvements to cardiovascular health (CVH). The metric includes body mass index (BMI), blood pressure, cholesterol, glucose, physical activity (PA), cigarette smoking, and diet. Prospective data from the

BRHS will allow opportunities to investigate the impact of Life's simple 7 over the lifecourse on cardiovascular disease and related disability in older age.

Project: Oral health of older people

Supervisor: Dr Sheena Ramsay

There are also opportunities to investigate oral health of older people in the BRHS, including life-course social, environmental and biological determinants of oral health in later life, and interrelationships with other ageing conditions.

Contact: g.wannamethee@ucl.ac.uk

## Centre for Ageing and Population Studies (CAPS)

Supervisors: Dr Kate Walters, Dr Nathan Davies, Dr Greta Rait, Dr Rachael Frost, Dr Christina Avgerinou, Jane Wilcock

Our Centre undertakes a broad range of research on effective healthcare for older people, health promotion/behaviour change in later life, self-management of long-term health conditions, the epidemiology of ageing and age inequalities. Particular areas of interest are frailty, dementia, Parkinson's Disease, mental well-being, loneliness, health promotion in later life, and end-of-life care. CAPS is a multi-disciplinary research group with expertise in the development and testing of complex interventions, health service research methodology, epidemiology of ageing and mixed methodology including qualitative methods. We are happy to work on new ideas in these themes with students, or projects linked to our ongoing work as detailed below.

**Project:** Personalised care for Parkinson's Disease (PD-Care)

Supervisors: Dr Kate Walters, Dr Nathan Davies, Prof Elizabeth Murray

There is an opportunity to join this new five-year programme of work funded by the NIHR due to start in Sept 2018, which will develop a new approach to support self-management for people with Parkinson's Disease (PD), integrating new technologies. Work includes a series of systematic reviews, qualitative studies, co-production of an intervention with people with PD and their carers, and ultimately a Randomised Controlled Trial (RCT). There are several opportunities to develop PhD ideas linked to this work within the themes of self-management of long-term health conditions, preventing hospital admissions/improving non-specialist care for complex conditions and co-morbidities and integrating new technologies into health care management.

**Project:** Predicting the onset of Parkinson's Disease (PD)

Supervisors: Dr Kate Walters, Prof Anette Schrag

This study would build on our work which explored prodromal symptoms for PD using routinely collected healthcare data, to examine risk factors for future PD and the role of potentially neuro-protective drugs. There is potential to develop a PhD in this field, suitable for someone who has quantitative analysis skills.

**Project:** Primary care-led post diagnostic Dementia care (PriDem): developing evidence-based, person-centred sustainable models for future care

Supervisors: Dr Kate Walters; Dr Greta Rait, Jane Wilcock

We have recently been funded as an Alzheimer's Society 'Centre for Excellence' in dementia research with the University of Newcastle to develop and evaluate improved models for dementia care in the community. There is an opportunity to join our team for this 4 year programme of work starting April 2018. This work includes systematic reviews, qualitative studies, co-production of an intervention and a pilot RCT. Possible project ideas include work to gain a better understanding of what person-centred care means for someone with dementia and/or how we can improve the care of physical health conditions in the context of dementia.

Project: Nutrition, hydration and care for people with dementia at the end of life

Supervisor: Dr Nathan Davies

There is an opportunity to join a Marie Curie funded project which starts in Jan 2019. The study is exploring the difficulties with nutrition and food intake among people with dementia at the end of life and how families manage this at home. The work includes a systematic review of nutrition and hydration in advanced dementia; a scoping review and mapping exercise of existing information resources for families; interviews with family carers, people with mild dementia and practitioners. Finally, through co-design methods the development of a new resource for families. There is scope to take part in a number of these pieces of work as well as additional pieces of work which may compliment the study.

**Contact**: k.walters@ucl.ac.uk n.m.davies@ucl.ac.uk

## Community Based Randomised Trials and Methodology

Supervisors: Dr Greta Rait, Professor Irwin Nazareth, Dr Kate Walters

PRIMENT Clinical Trials Unit (CTU) is a partnership between the UCL Research Department of Primary Care & Population Health, Division of Psychiatry and the Department of Statistical Science. PRIMENT CTU collaborates with internal and external researchers to develop and/or evaluate complex interventions in primary care, psychiatric and community settings. The unit has a particular focus on mental health and behavioural change interventions, and on evaluative methodology. Possible research topics include studies embedded within existing funded randomised trials run through the CTU and methodological questions which aim to enhance the scientific quality of trials or elicit effects of treatment exposure using alternative methodologies.

**Project**: Economics and frailty

Supervisors: Dr Kate Walters, Rachael Hunter

Frailty is associated with significant economic costs to patients, carers and health and social care services. Current methods for evaluating these methodologies as part of economic evaluations though fail to capture the full benefit of addressing frailty. The aim of this project would be to develop methodologies for evaluating the cost-effectiveness of frailty related interventions including identifying suitable outcomes and predictors of costs. There is the potential to use data from Priment trials as well as exploring innovative methods using large data sets.

Contact: g.rait@ucl.ac.uk i.nazareth@ucl.ac.uk k.walters@ucl.ac.uk

### Infections in Primary Care Research Group

Supervisors: Dr Greta Rait, Dr Lorraine McDonagh

We are an interdisciplinary team of researchers and clinicians from primary care, psychology, epidemiology, and public health. We work across different disease areas, populations, and institutions. The majority of our work focuses on adolescent health and sexually transmitted infections (STIs). We also collaborate on research in other areas, such as malaria, e-health, respiratory and gastrointestinal infections. Our projects include epidemiological research (including working with electronic health records), clinical trials, qualitative research and online questionnaires. We have excellent collaborative links with Brighton and Sussex Medical School and work closely with Public Health England (PHE).

We are part of the NIHR Health Protection Research Unit (HPRU) in Blood Borne Viruses and STIs led by UCL, in partnership with PHE, in collaboration with London School of Hygiene & Tropical Medicine. (<a href="http://bbsti.hpru.nihr.ac.uk/">http://bbsti.hpru.nihr.ac.uk/</a>). PhD fellows would have the opportunity to join the HPRU Academy. This offers a unique environment to those wishing to gain exposure to interdisciplinary research within an organisation pursuing a highly acclaimed international research agenda.

We have numerous project individuals can become involved with.

Project 1: Factors associated with HIV PrEP awareness, uptake, and adherence

Supervisors: Dr Greta Rait, Dr Lorraine McDonagh

Oral HIV Pre-Exposure Prophylaxis (PrEP) is a biomedical prevention intervention whereby HIV negative individuals take antiretroviral medication daily. Several clinical trials have found PrEP to be highly effective at reducing HIV acquisition and it is recommended as part of a comprehensive approach to HIV prevention. In England, PrEP can be acquired through an NHS doctor, online pharmacies, or an ongoing research study (the IMPACT Trial) funded by NHS England. The IMPACT Trial will run until 2020 in sexual health clinics collecting biomedical outcome data. Many questions will not be addressed, however, such as psychosocial factors associated with the PrEP care-continuum; awareness, uptake, adherence and retention in care. The aim of this study is explore barriers/facilitators to PrEP awareness, uptake, and adherence across patient, provider, and service levels.

Project 2: Approaches to young person's health in primary care

Supervisors: Dr Greta Rait, Dr Lorraine McDonagh

Good health care during adolescence is the foundation for good health and wellbeing in later life. Particular issues sexual health (e.g., testing for STIs) as well as mental health and physical health (e.g., alcohol, smoking, drugs, nutrition, exercise). For example, young people account for a substantial proportion of new sexually transmitted infection diagnoses. Youth-friendly primary care services, which can quickly and accurately assess (and address) their needs, are needed to improve the health and wellbeing of young people. The aim of this project is to qualitatively explore how primary health care professionals currently approach young people in practice and what has been (or could be) done in general practice to promote young people's health. Semi-structured individual interviews and focus groups will be conducted with key stakeholders (e.g., GPs, practice nurses), guided by a theoretical model of behaviour. Questions will focus on sexual health (e.g., testing for STIs) as well as mental health and physical health (e.g., alcohol, smoking, drugs, nutrition, exercise). This will inform the development of an intervention to improve young people's health via general practice.

Project 3: Chlamydia retesting and digital interventions

Supervisors: Dr Greta Rait, Dr Lorraine McDonagh

Young people (ages 16-24 years) who test positive for chlamydia are at high risk of repeat infection. Chlamydia reinfection is common and increases the risk of reproductive complications. Possible reasons for such repeat infections include non-compliance with treatment, incomplete or unsuccessful partner notification, unsafe sexual behaviours and treatment failure. Guidelines recommend retesting three months after a positive result, but often these individuals do not return for repeat testing. This project seeks to identify the key factors associated with resting-test. Quantitative methodologies will be employed (large online questionnaire). A psychological theory of behaviour and behaviour change will be used to guide the methodologies and analyses. Ultimately, this project will inform the development of a digital intervention to increase re-testing rates among those who have been previously treated for chlamydia.

**Project 4:** Health and well-being needs of young lesbian, gay, bisexual, and transgender individuals

Supervisors: Dr Greta Rait, Dr Lorraine McDonagh

Lesbian, gay, bisexual, transgender (LGBT) and other sexual and gender minority have unique health care needs. Social environments and structural factors (created through stigma, prejudice, and discrimination) cause poor health outcomes for this population. They bear a disproportionate burden of poor health and wellbeing in terms of sexual health and HIV, mental health, behavioural health (substance use). The situation is exacerbated by a lack of orientation-appropriate health and wellbeing support and services. The aim of this study is to qualitatively examine young sexual and gender minority people's attitudes towards the provision of health care via general practice, and explore the best means through which to improve this. This will inform the development of effective interventions to improve the provision of health care service via general practice for this population

### **Primary Care Educational Research Group**

Supervisor: Dr Sophie Park

The Primary Care Educational Research Group is an active collaboration including a number of current doctoral students; research assistants; and clinical and non-clinical academic staff. Examples of work include the NIHR School of Primary Care Research funded 'Evidence Synthesis Working Group' (ESWG): a collaboration across Schools of Primary Care research to produce systematic reviews using a variety of methods. We use both qualitative and quantitative methods across the group. UCL was one of the first medical schools to submit for the REF 2012. We collaborate with colleagues in the UCL Research Department of Medical Education (RDME) and Institute of Education, including the Best Evidence in Medical Education (BEME) International Collaboration Centre ('the London BICC'). There are also active collaborations between clinical academic staff and PCPH PhD students who co-supervise intercalating medical students for the iBSc in Primary Care. The group aims to promote scholarly teaching, and research about primary care and educational research. There are opportunities for presentation of work at conferences including the Association of Medication Education (ASME – publisher of Medical Education), European Association of Medical Education (AMEE – publisher of Medical Teacher), Researching Medical Education Autumn conference (ASME –IOE collaboration) and attendance at clinical education research seminars. Collaboration with this group offers opportunities for a range of projects.

Project: Evidence Synthesis Working Group: Service Re-design in Primary Care

Supervisor: Dr Sophie Park and / or Ruth Abrams

https://www.spcr.nihr.ac.uk/projects/evidence-synthesis

We are collaborating across the Schools of Primary Care to conduct a number of reviews, using a variety of synthesis methodologies. These include realist and scoping systematic reviews. Topics include examining the roles of care navigators; community HUBs; delegated home visits; and service innovation. There are opportunities to get involved with a variety of these projects. We are also planning a number of follow-on projects developing these topics further empirically + initiating public engagement and translation of findings into practice.

Project: Decision-making in A+E postgraduate trainees

Supervisor: Dr Sophie Park and Fiona Stevenson

This is a collaborative project with the e-health unit and Institute of Education colleagues. This project will specifically examine interactions between patients and A+E trainee doctors. This is part of a series of studies which examine interactions between Consultant supervisors and A+E trainee doctors within the A+E setting, looking in particular at processes of decision-making. We have video and audio recordings, as well as field notes. We are an inter-disciplinary research group and are using a variety analytic techniques to approach this data including conversation analysis, narrative analysis and Foucauldian Discourse Analysis.

**Project:** Active learning in General Practice placements

Supervisor: Dr Sophie Park (in collaboration with Dr Hugh Alberti, Newcastle University).

This project examines the role of patient, student and GP in facilitating active learning during general practice placements. This work builds upon previous systematic review and empirical studies exploring the role of patients and their interactions with students and GPs during clinical teaching encounters. This work is intended to consider and inform future resources and recommendations about patient participation in general practice medical education.

**Project:** Knowledge Translation

Supervisor: Dr Sophie Park

We are members of the Best Evidence in Medication Education (BEME) International Collaboration Centre (the London BICC). We recently completed a BEME systematic review of medical education in the UK general practice setting. There are exciting opportunities to work with the BICC on projects about research translation and changing practice in clinical education. This includes examination of available research evidence and consideration of the relationship between research and practice contexts. There may also be opportunities for contributing to a systematic review of medical education literature.

Contact: <a href="mailto:sophie.park@ucl.ac.uk">sophie.park@ucl.ac.uk</a>

# Potential funding sources

### **Funding at UCL**

- <u>UCL Graduate Research Scholarships</u>
- UCL Overseas Research Scholarships
- UCL Chinese Scholarships Council
- Soc-B Centre for Doctoral Training in Biosocial Research
- ESRC PhD Studentships in Life course and Social Epi (UBEL)
- MRC PhD Studentships in Populations, People and Data Across the Life Course
- NIHR School for Primary Care Fellowships

#### **External sources:**

- National Institute for Health Research pre-doctoral, doctoral and advanced fellowships <u>www.nihr.ac.uk/funding-and-support/funding-for-training-and-career-development/fellowship-programme.htm</u>
- Wellcome Trust Doctoral Studentships
- Natural Environment Research Council London NERC DTP (pan-disciplinary)
- Find-a-PhD (searchable database) www.findaphd.com
- Charitable funding (e.g. British Heart Foundation)

Contact **Dr Julia Bailey** for more information on PhD and post-doctoral opportunities julia.bailey@ucl.ac.uk