NUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES

Job description and selection criteria

Job title	**Intern, Medical Statistics Group**
Division	**Medical Sciences**
Department	**Primary Care Health Sciences**
Location	**Radcliffe Observatory Quarter, Woodstock Road, Oxford, OX2 6GG**
Grade and salary	**Grade 4.1, £20,989 (£11.06 per hour)**
Hours	**Full-time (36.5 hours/week)**
Contract type	**Fixed term for two months**
Reporting to	**Dr Thomas Fanshawe**
Vacancy reference	**RMI2016**
Addition Information	

Introduction

The University

The University of Oxford is a complex and stimulating organisation, which enjoys an international reputation as a world-class centre of excellence in research and teaching. It employs over 11,000 staff and has a student population of over 22,000.

Our annual income in 2013/14 was £1,174.4m. Oxford is one of Europe's most innovative and entrepreneurial universities: income from external research contracts exceeds £478.3m p.a., and more than 80 spin-off companies have been created.

Oxford is a collegiate university, consisting of the central University and colleges. The central University is composed of academic departments and research centres, administrative departments, libraries and museums. There is a highly devolved operational structure, which is split across four academic divisions, Academic Services and University Collections and University Administrative Services. For further information, please see: www.ox.ac.uk/staff/about_the_university/new_to_the_university/structure_of_university

For more information please visit www.ox.ac.uk/about

Medical Sciences Division

The Medical Sciences Division is an internationally recognised centre of excellence for biomedical and clinical research and teaching. We are the largest academic division in the University of Oxford.

World-leading programmes, housed in state-of-the-art facilities cover the full range of scientific endeavour from the molecule to the population. With our NHS partners we also foster the highest possible standards in patient care.

For more information please visit: http://www.medsci.ox.ac.uk/

Nuffield Department of Primary Care Health Sciences
We lead world-class research and training to rethink the way healthcare is delivered in general practice and other primary care settings, both across the UK and globally. Integrating evidence and innovation, our main research focus is on the prevention, early diagnosis and management of common illness.

Our research is led by internationally renowned clinical and non-clinical researchers, many of whom are practicing GPs. Our multi-disciplinary team cover a broad range of clinical issues including cancer, behavioural medicine, cardiovascular and metabolic diseases, childhood illness and infection. We lead programmes to advance evidence-based medicine, health in low and middle-income countries and patient self-management, and through patient engagement our research into health experience aims to inform policy and improve services.

The department was established in October 1998 (as the Department of Primary Health Care) with the appointment of a foundation chair in general practice. We provide a strong multi-disciplinary training environment, a full programme of academic support and good IT facilities. Our ability to collaborate with other epidemiological and community-based research groups across the University and with local GP surgeries enable us to utilise a broad range of relevant expertise into our teaching and research.

The department has recently developed a new stream of clinical research which seeks to improve the conceptual understanding and use of monitoring in a number of chronic diseases. We have an international reputation for developing research methodologies to ensure that research findings have a positive impact on clinical practice.

We are home to the Oxford Centre for Evidence-Based Medicine; the international Cochrane Tobacco Addiction Group which collates and summarises research evidence from across the world to underpin governmental health policies on smoking; and the qualitative social science focussed Health Experiences Research Group (HERG), which publish video and audio extracts of patient experience on www.healthtalkonline.org through a close working experience with the charity DIPEx.

The Department is a founding member of the National Institute for Health Research (NIHR) School of Primary Care Research and houses both the NIHR Collaboration for Leadership in Applied Health Research and Care Oxford and the NIHR Diagnostic Evidence Cooperative Oxford.

Our staff are currently located across two sites: the Gibson Building and New Radcliffe House on the Radcliffe Observatory Quarter (ROQ) just north of the city centre (see http://www.ox.ac.uk/roq/ for more information).

Car parking is very restricted at both sites with only a small percentage of staff being granted an annual parking permit. Bus Pass, Train Pass, bicycle loans and Season Ticket Loan Schemes are all in operation for staff.

For more information on the department please visit: http://www.phc.ox.ac.uk/

The University of Oxford is a member of the Athena SWAN Charter and holds an institutional Bronze Athena SWAN award. The Nuffield Department of Primary Care Health Sciences holds a departmental Silver Athena SWAN award in recognition of our efforts to introduce organisational and cultural practices that promote gender equality in SET to create a better working environment for both men and women.

Job description

Overview of the role

Project information

'Meta-analysis' is a mathematical method used to combine the results of many studies, obtained from systematic reviews, into a single summary (or 'pooled') result. Often, medical treatments that appear promising in initial studies show weaker results when the studies are replicated, an effect known as the 'Proteus phenomenon'. The reasons for this effect are likely to be complex, but may require different statistical methods to be used when assessing the results of meta-analyses.

This project will investigate the available methods for detecting the Proteus phenomenon, using a large data-set consisting of all systematic reviews published in the Cochrane Library (http://www.cochranelibrary.com). The objective of the project is to determine the proportion of treatments that demonstrate the phenomenon, and to identify factors that may indicate whether it is likely to apply to new treatments.

The project will require development of statistical code for the implementation of the methodology. This will be conducted in *R,* an open-source implementation of the statistical programming language *S-plus*, or in *Stata,* a high end, proprietary, fully programmable statistical software application. We do not require prior experience in either language provided the Intern has demonstrable ability to learn new programming languages.

Purpose of the post

The Research Methods Internship from the National Institute of Health Research (NIHR) has been awarded to the department, to support the training and development of a medical statistician, for a period of two months over the summer vacation. As well as developing the programming and methodological skills required for completion of the project, the Intern will gain experience working within a large, supportive medical statistics group of more than 15 members, making this post particularly suitable for those considering a career in medical statistics or a related field.

The Intern will be supervised by Dr Thomas Fanshawe (Senior Statistician, Nuffield Department of Primary Care Health Sciences), who will act as line manager, and Dr Graeme Spence, who holds the NIHR Research Methods Fellowship that the Intern will help to support. Professor Richard Hobbs (Head of Department) is the overall lead for the Research Methods project.

Main Duties

Responsibilities/duties

The Intern will:

- Learn the necessary statistical programming skills in *R* and/or *Stata* for the completion of the project;
- Review and summarise relevant statistical methods, and implement them in software;
- Apply the statistical methods to the data from the Cochrane Library;
- Contribute towards a report, for potential publication in an academic journal, describing the main findings from the project;
- Assist with additional related projects within the Medical Statistics group, as required by the Senior Statistician and the NIHR Research Methods Fellow.

For any queries regarding the position, please email Tom Fanshawe on thomas.fanshawe@phc.ox.ac.uk.

Selection criteria

Candidates will be judged on the basis of the following criteria and should try to ensure that their application shows how they meet the criteria. Candidates will be expected to give examples of relevant experience, which need not be work experience, but can be experience gained from other activities.

Essential

- Enrolled on a degree course in mathematics or closely-related scientific discipline, preferably including a statistics component (the Internship is particularly suited for those who will have completed two years of a three-year undergraduate course, or equivalent).
- Ability to express mathematical ideas clearly and succinctly, in both technical and non-technical language.
- Interest in collaborating with team members from multiple scientific disciplines.
- Good standard of written English communication.
- High level of organisational skills required to meet deadlines.

Desirable

- Mathematics at A-level, or equivalent.
- Experience using a statistical or general programming language (such as *R, Stata* or *C*), or a track of self-taught learning of new programming languages.
- Interest in the application of statistical and mathematical techniques to medical research.

Pre-employment Requirements

Please note that the appointment of the successful candidate will be subject to standard compulsory pre-employment screening, such as right to work checks.

Please click here to read the candidate notes on the University's pre-employment screening procedures.

How to apply

Please apply via email to recruit@phc.ox.ac.uk, with the subject heading 'Research Methods Internship application', and attach the following documents:

- CV
- Covering letter explaining how you meet the criteria for the post
- Supporting statement from personal tutor or equivalent