Statistician / Epidemiologist, University of Dundee

Dundee, Scotland

Division of Population Health Sciences & Dundee Epidemiology and Biostatistics Unit (DEBU)

Vacancy for Statistician / Epidemiologist

Grade 7.33, £34,233 | 20 months | Full time

For informal enquiries, please contact: Prof Peter Donnan (p.t.donnan@dundee.ac.uk ) or Prof Emma Reynish (emma.reynish@stir.ac.uk)

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Further Particulars

1. Job Title and Reporting

Job Title: Statistician / Epidemiologist

Reporting to: Prof Peter Donnan, Professor of Epidemiology and Biostatistics, Dundee Epidemiology & Biostatistics Unit (DEBU), Division of Population Health Sciences

Duration of employment: 20 months full-time starting July 2015

2. Job Purpose

We wish to appoint a statistician / epidemiologist to a 20 month, full-time post based in the Division of Population Health Sciences to be supervised by Professor Peter Donnan (Director Dundee Epidemiology & Biostatistics Unit, and Co-Director Tayside Clinical Trials Unit, The Mackenzie Building, Medical School, University of Dundee, Kirsty Semple Way, Dundee, DD2 4BF). The aim is to employ a medical statistician, who may have recently completed an MSc in applied statistics or
equivalent experience, for two years to provide analysis of an NIHR awarded study; 'Understanding the outcomes of people with cognitive impairment and/or dementia admitted to the general hospital' led by Professor Emma Reynish, University of Stirling. The ideal candidate should be somebody who is conversant with the necessary statistical modelling methods applied to cohorts and time to event methods and familiar with routine healthcare datasets.

The project is observational in nature and utilises unique datasets in Fife. One of the study’s aims is to improve understanding of the outcomes of emergency hospital admission in people with cognitive impairment and/or dementia by data-linkage and analyse of a unique routine population based healthcare dataset to measure healthcare and economic outcomes following hospital admission of older people with and without cognitive impairment and dementia.

Older people admitted as medical emergencies in NHS Fife have been routinely screened for cognitive spectrum disorder (cognitive impairment, delirium or dementia) using structured instruments since 2011. This unique dataset will be linked to routine hospital and place of residence data by the University of Dundee Health Informatics Centre, and used to examine how a range of outcomes vary between those with and without cognitive spectrum disorder on admission. The analysis will measure associations between these different patterns of cognitive impairment and important health and social care outcomes, which will inform the design and targeting of interventions and power calculations for future trials and other interventional studies. The results will be combined with the cost analysis to better understand the additional costs of those with cognitive impairment in the general hospital.

The statistician will need to define a cohort of patients from the Fife region of Scotland aged 65 or over admitted to hospital with and without cognitive spectrum disorder and so time to event models will be utilised. The incidence of the primary outcome of living at home within 30 days of discharge (Yes, No) will be analysed for the index admission and for those discharged from hospital separately. Analysis is likely to incorporate Cox Proportional hazards models and possibly competing risks models along with adjustment for many covariates such as co-morbidity and deprivation.

3. Skills, Knowledge & Experience Required

- Skills, knowledge and experience in statistical analysis, ideally including analysis of cohorts and time to event designs based on analysis of record-linkage of large routine health datasets
- Extensive experience of using statistical programmes such as SAS, MLwiN, SPSS, Stata or others, and the ability to write syntax
- Capacity for innovative and original thinking, and motivation to deliver rigorous and high-quality academic work
- Ability to exercise a high degree of personal initiative in organising own work, and work to tight deadlines calmly and efficiently
- Ability to respond quickly and flexibly to new developments and opportunities
- Ability to work in a multi-disciplinary research team
- Good communication skills to convey statistical issues to non-statisticians

4. Qualifications

- Good first degree in a relevant field (2.1 or better)
- MSc in statistics / epidemiology or MPH or relevant quantitative discipline with extensive other relevant experience
5. Summary – Person Specification

Essential Desirable

Qualifications & Education

Good first degree in a relevant field (2.1 or better)

MSc in statistics / epidemiology or relevant quantitative discipline with extensive other relevant experience

or MPH PhD in statistics / epidemiology

- Experience of complex quantitative analysis on large record-linked datasets using statistical software such as SAS, MLwiN, Stata, etc. Cohort models Cox PH regression model Competing risks modelling
- Experience of analysing large and complex datasets, especially prescribing information
- Skills Ability to write syntax in statistical programmes such as SAS and Stata
- Ability to prioritise and organise workload efficiently and effectively
- Ability to communicate effectively in multi-disciplinary teams Report and paper writing skills
- Skills in communicating statistical concepts to a non-statistical audience
- Knowledge Regression modelling, survival modelling Understanding of NHS context and biostatistics
- Personal Qualities Capacity for innovative and original thought
- Motivated to deliver rigorous, high quality work Interest in developing a career in applied medical statistics

6. Division responsibilities to you

- We take our responsibility for helping you develop your career very seriously, with a strong focus on developing the knowledge and skills you will need for a successful academic career.
- The Division will identify a senior academic mentor appropriate to your career intentions, and research and teaching interests, and will support you in obtaining appropriate training.
- The Division will help enable you to keep up to date with the field through participation in relevant workshops, national and international meetings.
- You will take part in the Divisional system for annual formative appraisal to promote your longer term career development
- The Division provides a good physical and social working environment.

7. The Division of Population Health Sciences

The Division of Population Health Sciences is part of the College of Medicine, Dentistry and Nursing which consists of the Medical School, the Dental School, and the School of Nursing and Midwifery. The Medical School has been a leader in medical education and research since its beginnings in the 18th century, and was ranked 4th in the 2012 Guardian University Guide, and the university itself was ranked the best in the UK in the 2011/12 Times Higher Education Student Experience Survey. The College with around 2,400 students is one of the largest in Scotland, and among the largest in Europe concerned with healthcare studies.

As a division we are dedicated to improving patient care by research, education and clinical service. Most of our core academic, administrative and support staff work on the Ninewells campus both in the hospital itself and the Mackenzie building, where the Quality, Safety and Informatics Research Group and the Dundee Epidemiology and Biostatistics Unit are located. Our activities extend far
beyond Tayside with teaching extending all over Scotland and research involving national and international collaboration. In the most recent research assessment exercise most of our research was considered Internationally Excellent or World Leading. Teaching is highly rated by students and in national surveys. We have weekly divisional research seminars with a stimulating programme of speakers, both internal and invited external speakers.

PHS includes four research groups; Quality, Safety & Informatics (QSI), Disease Prevention, Chronic Pain and Diabetes Epidemiology. Depending on further project funding and performance of the post-holder there may be opportunities for extension of the contract. DEBU consists of a group of biostatisticians and epidemiologists that form one of the Core Research Facilities within the Dundee University Medical Research Institute. The Unit is led by Professor Peter Donnan and includes collaboration with biostatisticians from across the College of Medicine, Dentistry & Nursing. The University of Dundee is world leading in anonymised linkage of health informatics data. Data security is a priority and all analysis is carried out in a virtual Safe Haven environment. Both PHS and DEBU have close links with the Health Informatics Centre (HICH¥http://medicine.dundee.ac.uk/health-informatics-centre) and associated recent developments: Health eResearch Centre (HeRC) Scotland, led by Dundee, and Farr Dundee, one of the four major UK centres comprising the Farr Institute, funded by the MRC and 9 other funders.

Dundee Epidemiology and Biostatistics Unit (DEBU)

DEBU is a group of biostatisticians and epidemiologists that form one of the Core Research Facilities within the Dundee University Medical Research Institute. The Unit is led by Professor Peter Donnan and includes biostatisticians from across the College of Medicine, Dentistry & Nursing. The group provides collaborative input for design, and analysis to numerous national and regional trials.

May 2015