

RESEARCH FELLOW



Job Title:	Research Fellow
Department:	Health Services Research & Policy
Faculty:	Public Health & Policy
Location:	Tavistock Place
FTE:	1.0
Grade:	G6
Accountable to:	Head of Department through Principal Investigator (Kate Walker)
Job Summary:	Member of research team on project to improve the emergency care of patients with bowel cancer using the first ever linkage of four national clinical datasets.

An exciting opportunity is available for an ambitious statistician /epidemiologist to undertake methodological research related to the use of linked national datasets. This innovative NIHR-funded 3-year research project will exploit the first ever linkage of four national clinical datasets covering patient and pathology information, peri-operative care, critical care and mortality to construct the care pathway.

The aim of the research is to develop methods that can be used to construct care pathways with minimum bias from data linkage errors, incomplete capture of patients into each audit, and confounding due to patient selection.

The research will also help to identify which processes of care reduce mortality and complications in bowel cancer patients undergoing emergency surgery. The clinical findings will support hospitals and clinicians to improve patient care, and will provide much-needed evidence for new clinical guidelines.

Methods will need to be developed to minimise bias from data linkage errors, incomplete capture of patients into each audit, and confounding due to patient selection. Together with members of a multidisciplinary team of statisticians, epidemiologists and clinicians, novel statistical techniques will be required which will have wide applications for observational studies and for data linkage.

The work will require the successful candidate to carry out probabilistic linkage methods, advanced regression modelling techniques, multiple imputation methods and propensity score methods. The role requires excellent statistical analysis skills. Experience of working on observational health care studies would also be helpful but the job could suit someone with experience of analysing clinical trials or someone with a background in (quantitative) clinical epidemiology.

GENERAL INFORMATION

The London School of Hygiene & Tropical Medicine

The London School of Hygiene & Tropical Medicine is a world-leading centre for research and postgraduate education in public and global health. Our mission is to improve health and health equity in the UK and worldwide; working in partnership to achieve excellence in public and global health research, education and translation of knowledge into policy and practice.

Founded in 1899, the School has expanded in recent years at its two main sites on Keppel Street and Tavistock Place. Our staff, students and alumni work in more than 150 countries in government, academia, international agencies and health services. Research income has grown to more than £110 million per year from national and international funding sources including UK government and research councils, the European Union, the Wellcome Trust, Gates Foundation and other philanthropic sources. The School's multidisciplinary expertise includes clinicians, epidemiologists, statisticians, social scientists, molecular biologists and immunologists, and we work with partners worldwide to support the development of teaching and research capacity.

Our education provision has expanded to more than 1,000 London-based Master's and Research students, 3,000 studying postgraduate courses by distance learning, and 1,000 each year on short courses and continuous professional development. Our free online courses (MOOCs) are studied by more than 30,000 participants globally.

The School performs well in various global university league tables. In the US News Best Global Universities Ranking 2017, we are ranked sixth in the world (together with Oxford University) in the fields of social sciences and public health. In the 2016 CWTS Leiden Ranking, the School was ranked fifth in the world for research impact across all disciplines, based on the share of institutions' outputs within the top 1% of papers by citation in all areas of science and independent of size of output.

The School was named University of the Year 2016 by Times Higher Education, in recognition of our response to the Ebola epidemic. The School is a member of the M8 Alliance of Academic Health Centres, Universities and National Academies, the Association of Schools of Public Health in the European Region, and the Consortium of Universities for Global Health.

FACULTY INFORMATION

The Faculty of Public Health and Policy has around 290 staff and 150 research students. It focuses on health policy, health systems and services, and individual, social and environmental influences on health. The Faculty is the largest multi-disciplinary public health group in Europe, and its interests and activities embrace the health needs of people living in countries at all levels of development. It uses multidisciplinary and multi-method approaches to generate new knowledge for specific contexts and engages with policy-makers and providers of health care to ensure research is relevant and translated into practice. The Faculty holds the Athena Swan Silver award from the UK Equality Challenge Unit.

The Faculty of Public Health and Policy is responsible for organizing a one year Master's courses in Public Health, which allows students to take a general MSc in Public Health, or to follow one of the following streams: Health Services Management, Health Promotion, Environmental Health or Health Services Research. The Faculty also jointly teaches MSc Public Health in Developing Countries and MSc Control of Infectious Disease (with the Faculties of Infectious and Tropical Diseases and Epidemiology and Population Health), and MSc Health Policy, Planning and Financing (with the LSE). Master's courses are organised in a modular format across the whole School. One of the growing areas of Faculty teaching is in the distance-based MSc in Public Health, introduced in 2005/6, and Global Health Policy, introduced in 2011/12.

Department of Health Services Research and Policy

The aim of the Department is to carry out research that helps to improve the quality, organisation and management of health services and systems. This extends from establishing what care should be provided and how services should be organised, through assessing the quality of existing services, to how improvements can be brought about. Most of the research is in high income countries and, in particular, the UK. Our staff reflect both the multi-disciplinary (epidemiology, public health, sociology, psychology, economics, statistics, social and public policy) and multi-professional nature of our work (<http://www.lshtm.ac.uk/php/hsrp/index.html>).

Establishing what care should be provided and how services should be organised involves primary evaluative research (on particular health care interventions and policies), reviews of existing research evidence and modelling possible options. In addition to specific projects, we run the Clinical Effectiveness Unit at the Royal College of Surgeons of England, support a similar unit at the Royal College of Obstetricians & Gynaecology. HSRP is furthermore home to PIRU (<http://www.piru.ac.uk/>), PRUComm (<http://www.prucomm.ac.uk/about-us>), and the LSHTM hub of the NIHR School for Public Health Research (<http://sphr.nihr.ac.uk/>). The Department is part of the School's European Centre on Health of Societies in Transition (ECOHST) (<http://www.lshtm.ac.uk/ecohost/>) which, in turn, is a major partner in the WHO-funded European Observatory on Health Systems and Policies (<http://www.euro.who.int/observatory>).

Clinical Effectiveness Unit / The Royal College of Surgeons of England

The Clinical Effectiveness Unit (CEU) is a leading centre for national clinical audit and epidemiological research, and is internationally recognised for its expertise on the methods, organisation, and logistics of large-scale studies into the quality of hospital care. It has undertaken national projects on vascular surgery, joint replacement, breast cancer, oesophago-gastric cancer, emergency bowel surgery, tonsillectomy, and the treatment of children with a cleft lip or palate. The findings from these projects have directly influenced medical practice as well as clinical policy in the UK.

The CEU was established in 1998 as a collaboration between the Royal College of Surgeons of England and the Department of Health Services Research & Policy of the London School of Hygiene and Tropical Medicine (LSHTM). Its strategic aims are

- to encourage and support rigorous research and surgical audit performed to a high scientific standard;
- to lead and enhance research and surgical audit in the UK, in cooperation with surgical specialist associations and in collaboration with sister Royal Colleges

A key feature of the CEU approach to evaluating health care is to consider projects as epidemiological studies into the quality of care. Studies are designed using epidemiological methods, and aim to generate high quality evidence on the processes and outcomes of care as well as on their determinants. The CEU's strategy emphasises joint clinical and methodological leadership, and the Unit has established collaborative links with many Royal Colleges and medical associations, as well as the Department of Health and other NHS organisations, to achieve this. It is a project-based organisation and has a multidisciplinary character, consisting of over 20 staff members of various backgrounds, from health services research, medical statistics, epidemiology, public health to medicine and psychology, six of whom have academic appointments at the LSHTM. Prof David Cromwell, Professor of Health Services Research at the LSHTM, has been the CEU's Director since May 2011.

JOB DESCRIPTION

Main Activities and Responsibilities

KNOWLEDGE GENERATION

1. Work collaboratively with the project team to:
 - a. Obtain the linked national clinical datasets to be used for the research
 - b. Develop methods for linking multiple datasets, including probabilistic linkage and linkage using indirect identifiers
 - c. Assess a new approach to data linkage which makes use of existing linkages between national clinical datasets and the Hospital Episode Statistics dataset as the “spine”.
 - d. Identify which processes of care have the greatest impact on outcomes of patients with bowel cancer undergoing emergency surgery, using appropriate risk adjustment methods
 - e. Assess the impact the choice of methods for data linkage has on the findings
 - f. Disseminate the findings of the research, in particular formulate recommendations and implications for bowel cancer surgery services
 - g. any other research-related tasks, as required
2. To apply, as appropriate, advanced statistical techniques such as multilevel modeling, propensity score methods and multiple imputation of missing data
3. To independently carry out statistical analyses of complex datasets using techniques such as multiple linear / logistic regression or survival analysis;
4. Publish (or contribute to publications) in peer-reviewed and prestigious journals (as well as other appropriate professional and public media), and help prepare project reports for the NIHR.
5. Communicate research findings at international and national conferences, mass media and through engagement with medical professionals, health services researchers / statisticians, and national stakeholders, as appropriate.
6. To undertake high quality research & scholarship, including contributing to drafting major grant proposals and/or leading on drafting small grant proposals
7. To make a contribution to research degree student supervision, as appropriate to qualifications and experience

EDUCATION

1. Contribute to the delivery of high quality, research-informed teaching and assessment in relation to your specific subject and within the broader area covered by your Faculty and disciplinary field (up to a maximum of 15% of available time) which may include
 - a. tutoring 2-3 MSc students (or Distance Learning equivalent)
 - b. teaching seminar groups
 - c. undergoing training in teaching skills
2. To contribute to the improvement of the quality of the School’s education, by participating in the development of new and updated learning and teaching materials or approaches

INTERNAL CONTRIBUTION

1. Undertake activities that support the Department, Faculty or the School;

2. Participate in the School's PDR process.

EXTERNAL CONTRIBUTION

1. Demonstrate good external citizenship by contributing to learned society/conference events, journal and grant reviews etc.

PROFESSIONAL DEVELOPMENT & TRAINING

1. Keep up to date with the latest research/thinking in your academic field and with changes to pedagogic practice within the School and more generally;
2. Register for and complete a doctoral degree (if not already acquired)
3. Undertake and successfully complete the mandatory training required by the School appropriate to the role.

GENERAL

All academic staff are free within the law to question and test received wisdom, and put forward new ideas and controversial or unpopular opinions, to enable the School to engage in research and promote learning to the highest possible standards.

All staff at LSHTM are also expected to:

1. Act at all times in the School's best interests;
2. Treat School staff, students and visitors with courtesy and respect at all times;
3. Comply fully with School policies, procedures and administrative processes relevant to the role, including when acting as Principal Investigator, accepting academic, managerial, financing and ethical responsibility for a project
4. Uphold and support the School's values (as set out in the School Strategy document);
5. Act as ambassadors for the School when hosting visitors or attending external events.

The above list of duties is not exclusive or exhaustive and the role holder will be required to undertake such tasks as may reasonably be expected within the scope and grading of the role.

Role descriptions should be regularly reviewed to ensure they are an accurate representation of the role.

PERSON SPECIFICATION

This form lists the essential and desirable requirements needed by the post holder to be able to perform the job effectively.

ESSENTIAL CRITERIA

- A Master's degree in medical statistics, epidemiology, operational research or a related field, or equivalent working experience in these fields
- Experience in independently carrying out statistical analyses of complex health care datasets using statistical techniques such as multiple linear / logistic regression or survival analysis;
- Knowledge and experience of advanced statistical techniques such as multilevel modelling, Bayesian analysis and multiple imputation of missing data
- Proven ability to contribute to the writing up of research findings for reports and for articles in peer reviewed or professional journals and to communicate results at conferences.
- Ability to collaborate effectively as part of a research team, and to maintain effective collaborative relationships
- Ability to work with periodic supervision and to use appropriate initiative, in order to deliver research outputs to project deadlines
- Experience of using Stata, R, or similar package

DESIRABLE CRITERIA

- A PhD in medical statistics, epidemiology, operational research or a related field, or equivalent working experience in these fields
- Experience in the design of large-scale (multi-centre) cohort studies
- Knowledge and experience of data linkage methods
- Undergraduate and postgraduate teaching experience

SALARY AND CONDITIONS OF APPOINTMENT

The post is full time and fixed-term until 30 September 2021 (with the possibility of further extension). The salary will be on the Academic pathways Grade 6 scale in the range £39,304 - £44,634 per annum (inclusive of London Weighting). The post will be subject to the LSHTM terms and conditions of service. Annual leave entitlement is 30 working days per year, pro rata for part time staff. In addition to this there are discretionary "Director's Days". Membership of the Pension Scheme is available. The position will be based in LSHTM's Tavistock Place campus in Bloomsbury, London.

For more information, interested applicants are strongly encouraged to contact Dr Kate Walker (kate.walker@lshtm.ac.uk) or Professor Jan Van der Meulen (jan.vandermeulen@lshtm.ac.uk).

Applications should be made on-line via our website at <http://jobs.lshtm.ac.uk>. Applications should also include the names and email contacts of 2 referees who can be contacted immediately if shortlisted. Online applications will be accepted by the automated system until 10pm of the closing date. Any queries regarding the application process may be addressed to jobs@lshtm.ac.uk. Please quote reference REF

The supporting statement section should set out how your qualifications, experience and training meet each of the selection criteria. Please provide one or more paragraphs addressing each criterion. The supporting statement is an essential part of the selection process and thus a failure to provide this information will mean that the application will not be considered. An answer to any of the criteria such as "Please see attached CV" will not be considered acceptable. Please note that if you are shortlisted and are unable to attend on the interview date it may not be possible to offer you an alternative date.

ASYLUM AND IMMIGRATION STATEMENT

The School will comply with the Immigration, Asylum and Nationality Act 2006, which requires all employees to provide documentary evidence of their legal right to work in this country prior to commencing employment. Candidates will be required to bring their passport (and visa if applicable) to interview so that it can be copied and verified.

Applications from candidates who require sponsorship to work in the UK will be considered alongside other applications. Applicants who do not currently have the right to work in the UK will have to satisfy UK Visas & Immigration regulations before they can be appointed.

Further information about Certificate of Sponsorship and eligibility to work in the UK, can be found at: www.ukba.homeoffice.gov.uk/employers/points

Date compiled: Sept 2018