



THE POST

College:	College of Medicine & Health
Post:	Postdoctoral Research Fellow
Reference No:	P47520
Grade:	F
HERA:	RFEL
Reporting To:	Prof Martin Pitt
Responsible For:	N/A

The above full-time post is available immediately on a 2-year fixed term contract with PenARC (<http://arc-swp.nihr.ac.uk>) in the College of Medicine and Health (<http://medicine.exeter.ac.uk>).

Job Description

Main purpose of the job:

The College of Medicine and Health seeks to appoint a Postdoctoral Research Fellow with an interest in operational research and data science. This post has been funded by the NIHR Applied Research Collaboration (ARC) South West Peninsula, one of fifteen NHS/academic collaborations funded by the National Institute for Health Research (NIHR) to address local NHS questions of national importance.

This post will involve working in the Peninsula Collaboration for Health Operational Research and Development (PenCHORD), a multi-disciplinary team, based in Exeter, using operational research (OR) and data science methods (such as modelling, simulation, forecasting, machine learning, natural language processing etc.) for applied healthcare research in Devon, Cornwall and Somerset. The post will appeal to anyone with a keen interest in seeing these methods used directly to improve health service delivery.

The post-holder will join PenCHORD and, working with other researchers, play a key role in maintaining it as a centre of research excellence. The primary aims of PenCHORD are:

- to be a national and international centre of excellence in applied health operational research and data science;
- to increase regional and national awareness of the potential of OR and data science in healthcare;
- to apply effective solutions using OR and data science which demonstrate improvements to health and care service delivery.
- to promote exchange of knowledge between OR/data science researchers and the NHS;
- to develop the facility to a point that it becomes self-sustaining through external funding (e.g. through the Knowledge Transfer Partnerships scheme and the NIHR Health Service and Delivery Research programme); and
- to disseminate research findings via appropriate journals and local / regional NHS and academic networks.

Working with NHS staff, PenCHORD prioritises projects in relation to the:

- scale of potential improvement in public health;
- relevance to provider and commissioning organisations in health and care;
- size of the management challenge and potential efficiency savings to the Trust (e.g. extent of sunk costs in any change; impact on patient flows; complexity and size of commissioning agenda);
- potential for shared learning between Trusts; and
- potential for development of specific individuals within Trusts (for skills development and future Trust benefits).

PenCHORD demonstrates its benefit to the NHS through:

- improved effectiveness and efficiency of systems, leading to best use of public money and higher quality patient care;
- solutions to complex problems;
- objective advice, training, information, options and risk estimates on which to base more effective decisions;
- delivering capacity building programmes for health service professionals;
- faster and more accurate business decision-making through relevant and timely provision of information and analysis;
- knowledge of relative benefits of expenditure in different areas of healthcare;
- increased awareness, knowledge and understanding of OR/data science methods, their power to solve problems and the wide range of potential applications;
- gain in knowledge and skills through collaborative working, e.g. placements for suitably skilled NHS managers as project workers;
- opportunities to disseminate and share best practice by connecting with national resources;
- securing additional external funding to support projects; and
- recognition of regional work and best practice through publication and dissemination.

The post-holder will be supported by academics at NIHR ARC South West Peninsula and collaborating NHS staff. He/she will have ample opportunity to extend his or her own skills in operational research in order to contribute to improving methods used in modelling health services and their application, resulting in real improvement in the NHS.

Project outputs are expected to lead to peer-reviewed publications and the post-holder will contribute as an author where appropriate.

Main duties and accountabilities:

1. To undertake research as appropriate to the field of study including:
 - Acting as principal investigator on research projects;
 - Developing research objectives, projects and proposals;
 - Conducting individual or collaborative research projects;
 - Identifying sources of funding and contributing to the process of securing funds;
 - Extending, transforming and applying knowledge acquired from scholarship to research and appropriate external activities;
 - Writing or contributing to publications or disseminating research findings using media appropriate to the discipline;
 - Making presentations at conferences or exhibiting work in other appropriate events;
 - Assessing, interpreting and evaluating outcomes of research;
 - Developing new concepts and ideas to extend intellectual understanding;
 - Resolving problems of meeting research objectives and deadlines;
 - Developing ideas for generating income and promoting research area;
 - Developing ideas for application of research outcomes;
 - Deciding on research programmes and methodologies, often in collaboration with colleagues and sometimes subject to the approval of the head of the research programme on fundamental issues.
 - Participating in meetings of clinicians, researchers, and other stakeholders with an interest in developing health services research projects within PenCHORD.
 - Liaising with NHS colleagues using requirements analysis to develop clear specifications for viable project work.
 - Presenting to senior NHS staff (eg. board members) key outputs of project work through presentations and reports
 - Providing appropriate documentation and written reports as required for the project team, the PenARC Executive Group, the PenARC Management Board and external bodies as appropriate.
 - Maintaining awareness of key issues surrounding data confidentiality, ethical and research governance approval and dissemination of outputs.
2. To contribute to teaching and learning programmes in the College and to supervise postgraduate research students.

To support teaching on the innovative PenCHORD Health Service Modelling Associates (HSMA) Programme, building capacity within the health service and training local NHS staff to use operational research and data science methods to improve patient care.

3. To act as research team leader including:
 - Mentoring colleagues with less experience and advising on their professional development;
 - Coaching and supporting colleagues in developing their research techniques;
 - Supervising the work of others, for example in research teams or projects;
 - Supporting capacity building initiatives for health and care staff
 - Developing productive working relationships with other members of staff;
 - Co-ordinating the work of colleagues to ensure equitable access to resources and facilities;
 - Dealing with standard problems and helping colleagues to resolve their concerns about progress in research.

4. To routinely communicate complex and conceptual ideas to those with limited knowledge as well as to peers using high level skills and a range of media and to present the results of scientific research to sponsors and at conferences.

5. To plan, co-ordinate and implement research programmes including:
 - Managing the use of research resources and ensure that effective use is made of them;
 - Managing research budgets;
 - Helping to plan and implement commercial and consultancy activities;
 - Planning and managing own consultancy assignments.

This job description summarises the main duties and accountabilities of the post and is not comprehensive: the post-holder may be required to undertake other duties of similar level and responsibility. Please visit the Human Resources website to view the Research Fellow role profiles.

Person Specification

Competency	Essential	Desirable
Attainments/Qualifications	PhD or equivalent qualification / experience in a relevant field of study. Be a nationally recognised authority in operational research and/or data science.	Higher degree in a relevant area including: <ul style="list-style-type: none"> • Operations research • Data Science • Computer Science • Healthcare or Biomedical Research.
Skills and Understanding	Possess sufficient specialist knowledge of operational research to develop research programmes and methodologies. Record of research output in nationally recognised publications or equivalent level of impact in health sector Ability to become familiar with new software platforms for decision analytic modelling	Experience in management and supervision of other staff Awareness and understanding of basic health economics concepts and methods Awareness of data protection requirements and research ethics considerations
Prior Experience	Experience of working in health service research or management.	Experience of postgraduate teaching and supervision.

	<p>Experience of teaching at undergraduate level.</p> <p>Experience of analysing, processing, and modelling data.</p> <p>Experience of managing research projects and research teams.</p> <p>Successful in obtaining grant funding.</p> <p>Experience of writing for publication</p> <p>Experience of developing decision-analytic models within tight timescales</p> <p>Experience in developing decision-analytic models in relation to healthcare and public health problems, particularly involving interactive working with clinicians and policy makers to address emerging aspects of a policy decision</p> <p>Experience in project management</p> <p>Experience of using Free and Open Source frameworks.</p>	<p>Experience of acting as principal investigator on research projects.</p> <p>Basic computer programming experience</p> <p>Experience of Machine Learning</p>
Behavioural Characteristics	<p>Excellent written and verbal communication skills.</p> <p>Able to communicate material of a specialist or highly technical nature to a range of groups, including presenting project outputs to senior NHS staff.</p> <p>Evidence of the ability to collaborate actively within the Institution and externally to complete research projects and advance thinking.</p> <p>Able to build contacts and participate in internal and external networks for the exchange of information and collaboration.</p> <p>Able to identify sources of funding, generate income, obtain consultancy projects, or build relationships for future activities.</p> <p>Able to balance the pressures of research, administrative demands and competing deadlines.</p> <p>Engage in continuous professional development.</p>	<p>An understanding of the importance of equality and diversity within an organisation and a commitment to helping create an inclusive culture.</p>

	<p>Understand equal opportunity issues as they may impact on areas of research content</p> <p>An understanding of the importance of equality and diversity within an organisation and a commitment to helping create an inclusive culture.</p>	
Circumstances	Willingness to travel independently within the South West region	

Informal Enquiries

Before submitting an application you may wish to discuss the post further by contacting Prof Martin Pitt, telephone (01392 726082) or email m.pitt@exeter.ac.uk.

Terms & Conditions

Our Terms and Conditions of Employment can be viewed [here](#).

Further Information

Please see our [website](#) for further information on working at the University of Exeter.