UNIVERSITY OF EXETER

THE POST

College:	**College of Medicine & Health**
Post:	**Postdoctoral Research Associate**
Reference No:	**P47520**
Grade:	**E (sp26)**
HERA:	**ARF**
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 Associate with an interest in operational research and data science. This post has been funded by the NIHR Applied Research Collaboration (ARC) South West, 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 health and care;
- 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 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:

- Writing up research work for publication;
- Developing research objectives and proposals for own or joint research;
- Making presentations at national and international conferences and similar events;
- Dealing with problems which may affect the achievement of research objectives and deadlines;
- Analysing and interpreting the results of own research and generating original ideas based on outcomes;
- Using new research techniques and methods;
- Using initiative and creativity to identify areas for research, developing new research methods and extending the research portfolio;
- Using creativity to analyse and interpret research data and draw conclusions on the outcomes.
- To participate in meetings of clinicians, researchers, and other stakeholders with an interest in developing health services research projects within PenCHORD.
- To provide appropriate documentation and written reports as required for the project team, the PenARC Executive Group, the PenARC Management Board and external bodies as appropriate.
- To maintain awareness of key issues surrounding data confidentiality, ethical and research governance approval and dissemination of outputs.

2.   To contribute to teaching and to be involved in the assessment of student knowledge including assisting in the supervision of student projects and in the development of student research skills.

- 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 work in collaboration with colleagues as appropriate to the field of study including:

- Contributing to collaborative decision making within the research group;

- Contributing to the production of collaborative research reports and publications.
- Preparing papers and presenting information on research progress and outcomes to bodies supervising research, e.g. steering groups.

4. To communicate complex information, orally, in writing and electronically.

5. To prepare proposals and applications to external bodies, e.g. for funding and contractual purposes

6. To contribute to the planning of research projects.

7. To use research resources, laboratories and workshops as appropriate and to take responsibility for conducting risk assessments, reducing hazards and for the health and safety of others.

8. To monitor research budgets as appropriate.

9. To engage in continuous professional development and to be responsible for continually updating knowledge and understanding in field of study or specialism and for developing skills.

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 role profiles.

Person Specification

Competency	Essential	Desirable
Attainments/Qualifications	PhD (including those nearing completion) or equivalent qualification / experience in a relevant field of study.	Experience of working in health services research or management. Higher degree in a relevant area including: • Operations research • Data Science • Computer Science • Healthcare or Biomedical Research.
Skills and Understanding	Sufficient knowledge of operational research and of research methods and techniques to work within established research programmes. Ability to become familiar with new software platforms for decision analytic modelling.	Evidence of research activity and published research. Awareness and understanding of basic Operational Research and Data Science concepts and methods. Awareness and understanding of statistical methods relevant to health service modelling. Basic knowledge of Free and Open Source frameworks for Operational Research and Data Science. Awareness of data protection requirements and research ethics considerations.

Prior Experience	Experience of developing decision-analytic models	Experience of writing for publication
	Experience of conducting risk assessments and understanding of health and safety legislation	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
		Experience of analysing, processing, and modelling data.
		Basic computer programming experience
		Experience of contributing to research grant applications
		Experience in project management.
		Experience of undergraduate teaching
Behavioural Characteristics	Excellent written and verbal communication skills.	
	Able to communicate material of a specialist or highly technical nature.	
	Able to manage research and administrative activities and to balance the competing pressures of research and administrative demands and deadlines.	
	Able to liaise with colleagues and students.	
	Able to build contacts and participate in internal and external networks for the exchange of information and collaboration.	
	Able to identify potential sources of funding.	
	Actively participate as a member of a research team.	
	Engage in continuous professional development.	
	Understand equal opportunity issues as they may impact on areas of research content.	
	An understanding of the importance of equality and diversity within an organisation and a commitment to helping create an inclusive culture.	

| Circumstances | Willingness to travel independently within the South West region of England.

Willing to work flexibly to achieve project demands. | |

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.