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| Host department:Manchester |
| Project Title: |
| A human-centred design approach to medication safety in primary care |
| Proposed supervisory team: |
| Dr Denham Phipps (The University of Manchester) is a Lecturer in Patient Safety, with a background in occupational psychology and human factors/ergonomics. His expertise is in the application of human factors knowledge to health services research; in particular, regarding patient safety and practitioner fitness to practise. He works with the NIHR Greater Manchester Patient Safety Research Collaboration.  Prof. Anthony Avery (University of Nottingham) is a GP and Professor of Primary Health as well as being an NIHR Senior Investigator and National Clinical Director for Prescribing for NHS England. He has an honorary chair from The University of Manchester and is medication safety theme co-lead for the NIHR Greater Manchester Patient Safety Research Collaboration. He has longstanding interest and expertise in research into prescribing and patient safety.  Prof. Matthew Boyd (University of Nottingham) is a Professor of Medicines Safety and a registered pharmacist. His research covers a breadth of medicines safety topics including medicines optimisation, technology supported practice and enhancing system and service design in both primary and secondary care. He is also a collaborator with the NIHR Greater Manchester Patient Safety Research Collaboration. |
| Potential for cross consortium networking and educational opportunities: |
| This project links to the work of the NIHR Greater Manchester Patient Safety Research Collaboration. Being affiliated to this centre will provide the candidate with many training and networking opportunities.  In addition, the candidate will have the opportunity to participate in the local primary care research networks at Manchester and Nottingham. These networks in provide links to external partners in industry and healthcare organisations, as well as in academia. |
| Project description: |
| *Background*: Medicines management is a key activity across primary care. That it is carried out in the context of increasing patient complexity, multidisciplinary working, and opportunities for new technology, presents primary care with clinical and organisational challenges. Meeting these challenges depends on various aspects of the healthcare organisation – tasks, tools, technologies and the working environment –coming together effectively.1 The overarching need is for a *human-centred* approach, in which the design of these elements is informed by the requirements, capabilities and limitations of the people who are carrying out the work.2  Previous studies suggest that such an approach has yet to be fully realised in medicines management. For example, deficiencies in the general practice work system often occur, to the potential detriment of patient safety.3 Meanwhile, research in community pharmacies has identified the challenges of thoroughly reviewing and reliably dispensing medication in the face of increasing task complexity and demand.4  The project proposed here will contribute to our broader programme of work seeking to understand and address human factors issues in primary care medication safety.  *Aim*: to (i) investigate the role of human factors in primary care medicines management, (ii) generate recommendations for the human-centred design of primary care work.  *Methods*: The specific methods will be agreed with the candidate given their skills and interests, but they may include some of the following:   * Systematic or realist review of medication safety literature; * Collection of qualitative data (e.g. interviews; focus groups) about healthcare professionals’ and service users’ involvement in medicines management; * Field observation of medicines management activities (e.g. prescribing, dispensing, administration); * Laboratory-based observation of simulated medicines management tasks; * Design and evaluation of work design interventions (e.g. human-computer interaction; task allocation).   *References*  1. Holden RJ, et al. SEIPS 2.0: a human factors framework for studying and improving the work of healthcare professionals and patients. *Ergonomics* 2013; 56: 1669-86.  2. Sutherland A, Phipps DL. The rise of human factors in medication safety research. *Jt Comm J Qual Patient Saf* 2020; 46: 664-666.  3. Avery T, et al. Investigating the prevalence and causes of prescribing errors in general practice: the PRACtICe study. Report to the General Medical Council. Nottingham: The University of Nottingham, 2012. <https://www.gmc-uk.org/about/what-we-do-and-why/data-and-research/research-and-insight-archive/investigating-the-prevalence-and-causes-of-prescribing-errors-in-general-practice>  4. Ashour AA, et al. Mind the gap: examining work-as-imagined and work-as-done when dispensing medication in the community pharmacy setting. *Appl Ergon* 93: 103372. |
| Indicative project costs: |
| Salary: 36-month full-time salary (pro rata if part time) £73,367 – £95,104 pa.  Tuition and training: £10k pa  Research costs: £10k |
| Training and development provision by host: |
| *Formal training:*  Postgraduate course units in qualitative and quantitative research from The University of Manchester  Courses in researcher skills (e.g. project management; research computing; dissemination and impact) from The University of Manchester staff and researcher training portfolio |
| *Informal training:*  Supervision in the learning and use of human factors/ergonomics methods  Training in specific research methods and tools as required |
| *PPIE*:  The candidate will benefit from our previous experience of integrating PPIE into our research, and our existing links with PPIE representatives and organisations. Training and support will be provided to plan and conduct PPIE for this project. |