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| Host department: Oxford |
| Project Title: |
| Where there is no pharmacist: technological solutions for medicines supply in underserved locations |
| Proposed supervisory team:  |
| Primary Supervisor: Trisha Greenhalgh, Professor of Primary Care Health Sciences, University of OxfordSecond supervisor: Claire Anderson, Professor of Pharmacy, University of Nottingham and President of the Royal Pharmaceutical Society Other members of the supervisory team will include Dr Joe Wherton, specialist in human-computer interaction and interest in patient-centred co-design |
| Potential for cross consortium networking and educational opportunities: |
| This PhD, around the accessibility of medicines in underserved communities, will bring together three professional groups (GPs, pharmacists and design experts) and three academic disciplines (clinical primary care, organisation and delivery of services, and the patient experience). Cross-consortium working will be essential because Oxford does not have a school of pharmacy but Nottingham has strengths in this area. Co-design is an emerging area of interest across all areas of healthcare. We hope that this joint project will oil the wheels for further collaboration between our joint schools, especially in relation to how more patient-centred primary care services can be designed and evaluated.  |
| Project description: |
| Patients assessed by GP out-of-hours services via telephone or video (outside standard office hours) and/or the urgent care telephone helpline NHS 111 may need to start medication promptly, but may have trouble getting this medication in a timely way following a telephone consultation. Some patients in remote localities (e.g. parts of Wales and Scotland) have to make a round trip of up to 3 hours purely to collect medication. In addition, because many local street-corner pharmacies are closing or limiting their hours some localities (typically the most deprived ones) are left with no provision, necessitating a journey by car or public transport. This represents a source of inequity in the provision of health care in the UK and may generate costs elsewhere in the system (e.g. when delayed medication leads to complications), or when NHS resources are used to make individual deliveries. The problem has become more acute over the last year due to large scale closures of community pharmacies across the UK. Preliminary work has identified a potential technological solution: a remotely controlled medication issuing machine, a modification of the Pharmaself 24 device. It employs a similar principle to a remote controlled vending machine with additional safety measures to make sure the right medication gets to the right patient. The adapted Pharmaself 24 device allows a clinician to select a medication such as an antibiotic and supply the patient with a PIN code, allowing them to collect this medication from a local machine following a telephone or video consultation. MHRA agreement has been obtained and the project has the support of all four UK Chief Pharmaceutical Officers. Whilst the installation of ‘vending machines’ to provide urgently required medication is appealing, this innovation is unlikely to be implemented in a straightforward and seamless way because, even if it is technically fairly simple, it potentially involves major changes in relationships and workflows and raises questions about risk and safety. The assumed ‘freeing up’ of out of hours clinicians through these machines may have unintended consequences such as reducing availability of face to face appointments at remote or deprived locations. The anticipated increased convenience for patients may result in exacerbation of existing inequalities as patients without transport or technological competencies may struggle to receive the PIN code and access the machine. Some patients living in such localities may be especially in need of face to face input when they develop a medical issue requiring urgent treatment such as antibiotics. From a theoretical perspective then, the innovation has many layers of complexity and its downsides need to be explored as well as its potential benefits. The doctoral project will be a theoretically-informed comparative case study of the implementation of a medication vending machine in two contrasting localities, one in Scotland and one in Wales. Each site has already decided to purchase a machine and implement it within GP out-of-hours settings, and has agreed to be a research site for our team. The two sites differ in geographical, operational and demographic factors. Empirical work will be mixed-method and include quantitative data on usage and qualitative data (interviews with staff and patients, ethnographic observation), analysed using Greenhalgh et al’s NASSS (nonadoption, abandonment and challenges to scale-up, spread and sustainability) framework.The research findings will contribute to the academic and policy literature on the opportunities and challenges of using technologies to substitute for human input in healthcare. It is timely because a large number of other settings have expressed interest in this technology, including Emergency Departments (where using the devices are seen as potentially freeing up clinician time) and international settings.  |
| Indicative project costs:  |
| Since the design of the empirical study is a naturalistic case study of two projects that are happening anyway, costs will be limited to the Fellow’s salary along with: laptop (estimated at £700), transcription services (£2100), digital recording equipment (£420), travel and subsistence for attending the sites in Scotland and Wales (£5000), conference budget (registration, travel and subsistence) (£5000), interpreter services for Welsh-language patients (£1500) along with modest payments to local staff participating in focus groups and interviews and PPIE activities (£6000). We also seek a budget of £4000 for international collaboration to undertake networking visits to other countries where this innovation is being implemented. Total £24470  |
| Training and development provision by host: |
| *Formal training:*Student and supervisors will meet monthly or as needed for formal supervisions with an agenda and followed up with a written account of issues discussed and plans for next steps. A programme of doctoral level short courses (planning, organisation, methods, data analysis etc) will be personalised according to needs. Of particular note is the Technological Innovation and Digital Health module of the Translational Health Sciences MSc. The student will also be expected to attend the RPS conference and World Pharmacy Congress (FIP). An independent College Advisor (mainly pastoral role) will be assigned.  |
| *Informal training:* The Fellow will be part of a large and diverse cohort of DPhil students who will learn together in the Nuffield Department of Primary Care Health Sciences. They will enjoy the unparalleled learning opportunities of the University of Oxford, the Department, and the Interdisciplinary Research In Health Sciences (IRIHS) research group. All DPhil students are expected to join in seminars, workshops and practice presentations at unit, departmental and college level. Library and IT support is outstanding.  |
| *PPIE*: The Nuffield Department of Primary Care Health Sciences has an established programme of training in PPIE, run in collaboration with NIHR Oxford Biomedical Research Centre. The Fellow will be expected to attend the Introduction to PPIE course and to engage with the regular training events hosted by the department. There has been a strong focus on PPIE throughout this project, with a patient representative present for visits to the vending machine showroom and patient representation on the external reference group. The Healthboards implementing the project also have local PPIE and communication workstreams and the Fellow will be able to observe their activites. |