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| **Host department:**  |
| Nottingham |
| **Title:** |
| Addressing the challenge of medication adherence in patients with multimorbidity |
| **Proposed supervisory team:** |
| Dr Jennie HancoxProfessor Kavita Vedhara[Grazziela Figueredo](https://www.nottingham.ac.uk/computerscience/people/g.figueredo) |
| **Project description:** |
| **Background**Multimorbidity (the coexistence of two or more conditions) affects almost one-third of people in the UK. Between 20-50% of patients with multiple conditions do not take their medications as prescribed. By not taking their medication as intended patients do not realise the full benefits of the treatment and are at greater risk of negative health outcomes (e.g., hospitalisation, premature death). It is also very costly for the NHS due to medications being wasted and patients needing additional, unplanned treatment. Research is needed to identify the key factors influencing whether patients with multiple conditions take their medications as prescribed or not. Previous interventions designed to support patients with taking their medications have been ineffective because they have not taken into account the factors influencing patients’ medicine-taking. What is needed is an intervention which is tailored to the specific needs of the patient and which is practical to deliver within the NHS. Aims:1. Identify the key factors influencing whether patients with multiple conditions take their medications as prescribed or not.
2. Identify groupings of patients with similar factors influencing their medicine-taking which can be used in future to design a brief tailored medication adherence intervention for delivery within Primary Care.

**Methods**A mixed-method approach will be employed: 1. Observational cross-sectional questionnaire to ascertain the core influences on medication adherence (e.g., socio-economic, disease, treatment, healthcare and patient-related factors) and develop an adherence taxonomy which identifies patient groupings based upon determinants of medication adherence.
2. Semi-structured interviews with a subsample of patients who completed the questionnaire to examine the face-validity of the adherence taxonomy groupings.
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| **Potential impact**This study will create an adherence taxonomy through the identification of clusters of patients with similar adherence determinants. This adherence taxonomy will help us to understand the key factors influencing medication adherence in patients with multimorbidity and can be used to develop an intervention in which GPs are guided as to how to most effectively tailor medication review consultations based upon each patients’ adherence taxonomy grouping.  |
| **Training plan:** |
| **Formal training:**A programme of formal training is available to Postgraduate research students within the School of Medicine at the University of Nottingham**.** Training will focus on research skills and career development and will be tailored to the individual’s needs. Postgraduate students also have the opportunity to attend national and international conferences and external training courses (e.g., statistical data analysis, qualitative interview skills). **Informal training:**Informal training will be provided via mentoring and peer support. The supervisory team will act as a support network providing mentoring on all aspects of the research process. There will also be the opportunity to be involved in peer support groups.  |
| **PPIE:**An established multimorbidity PPI group will be involved in the proposed research. The PPI members will contribute to the topics to be included in the interview guide. They will also review patient facing documents such as the participant information sheet, consent form and questionnaire. The findings will be presented to PPI members in lay terms, and they will help disseminate the study locally and nationally via social media.  |