

# PhD Proposal for Wellcome Doctoral Fellowship for Primary Care

**PhD Title:** Primary care based interventions for those with multimorbidity: Taking health literacy into account.

**Supervisory team:** Dr Emma Healey (Lead), Prof Jo Protheroe, Prof Clare Jinks.

## Background

Multimorbidity, the co-occurrence of two or more long term conditions (NICE, 2016), has received growing interest in primary care literature over the past few years and is now widely acknowledged as a research priority (Fortin et al. 2012). Patients with multimorbidity seen in primary care represent the rule rather than the exception (Uijen et al. 2008). Observational research has shown that having multimorbidity is associated with poorer outcomes in terms of health, quality of care and costs (Williams et al. 2016, Vogeli et al. 2007).

In 2016, the NICE multimorbidity guidelines were published (NICE, 2016). The aim of these guidelines were to optimise care for adults with multimorbidity by reducing treatment burden and unplanned care. The guideline sets out which people are most likely to benefit from care that takes into account multimorbidity. The concept "treatment burden" covers everything that patients must do to manage their medical conditions (Eton et al. 2012). This includes medication-taking, obtaining prescriptions, organising and attending healthcare appointments, implementing lifestyle changes, and self-monitoring their condition (Eton et al. 2012). Such self-management responsibilities may require a significant amount of time, effort and skills, such as numeracy and literacy (May et al. 2014).

Recent research has demonstrated that patients with multimorbidity who have difficulties in understanding health information (low health literacy) have an increased risk of experiencing a high treatment burden (Friis et al. 2019). Health literacy is defined as the social and cognitive skills that determine a person's motivation and ability to gain access to, understand, and use information in ways that promote and maintain good health (Nutbeam et al. 1986). The World Health Organization has identified health literacy as a critical determinant of health that empowers individuals, enables their engagement in health, and must be an integral part of the skills developed over a lifetime.

The increasing burden and complexity of multimorbidity challenges existing standards of care, which often focus on single-disease management rather than patient centred care (Pefoyo et al. 2015, Sinnott et al. 2013). Over recent years a number of interventions have been designed for patients with multimorbidity. However, evaluations to date have shown minor and negligible effects on important outcomes such as health-related quality of life and function (Salisbury et al., 2018; Smith et al., 2016).

The link between treatment burden and health literacy is important, but it is unclear whether this is taken into account in primary care based interventions for multimorbidity. This PhD aims to examine previous research and work together with key stakeholders (patients, healthcare professionals and experts) to develop a new, inclusive model of better support for people with multimorbidity and low health literacy, for whom management can be more challenging. The resulting model from this PhD project will be used in future research to further design and then test potential interventions.

## Objectives

1. To examine whether previous multimorbidity interventions take into account and/or measure health literacy and to identify components of interventions that are likely to work well in patients with multimorbidity and low health literacy.
2. To explore community based individuals with multimorbidity and professional stakeholder's experiences and views of multimorbidity management in the context of varying levels of health literacy.
3. To gain consensus of professional stakeholders on multimorbidity management intervention components.

## **Methods**

### **Objective 1: Systematic review (months 1-6)**

An extensive systematic review will be conducted. A literature review will be undertaken to gather evidence from previously published studies of primary care based multimorbidity interventions to determine whether they take into account and/or measure health literacy. From these studies, we will also identify components of interventions that are likely to work well in patients with multimorbidity and low health literacy. The search will focus on articles, grey literature and other sources. A range of databases will be targeted including PsychInfo, Cochrane, Evidence Based Practice (EBP), NICE Guidelines, PubMed, Medline etc.

### **Objective 2: Qualitative research (semi-structured interviews) (months 7-18)**

Semi-structured interviews of community based adults with multimorbidity (up to 15), health care practitioners, service commissioners (up to 15), and third sector providers and health literacy experts (up to 15) The topic guide will be informed by a PPIE group (n=8) and the output from objective 1. Interviews will be carried out by telephone or face-to-face and will be recorded, transcribed verbatim and anonymized. Analysis will be guided by framework analysis (Gale et al. 2013) to consider multiple perspectives together and comparison of data within and between groups, using NVivo software.

### **Objective 3: An online Modified Delphi Study (months 19-25)**

An online Modified Delphi Study, using Keele Health Survey, will be conducted to gain consensus of professional stakeholders on components of a multimorbidity intervention, for patients with varying levels of health literacy. The findings from the Delphi study will enable a theory and evidence based logic model to be produced to summarise the findings of the PhD.

### **Training Plan:**

We will develop an individualised training plan together with the PhD student, identifying specific training needs, gaps and accessing opportunities that arise. Where possible training opportunities will be identified within Keele University. We anticipate that the following training will be required:

#### Formal training

- Systematic review skills (Health Library, Keele course and 'in house' from Systematic Review team)
- Qualitative Interviewing and analysis and Delphi study training (Keele or Oxford course)

#### Informal training

- Participation in external and internal seminars and journal clubs within the Faculty
- Tutorials from other staff members (e.g. reference manager, systematic review)
- Participation in the School postgraduate research student group seminars
- Presenting work at the annual Faculty PGR symposium
- PPIE training