PhD Opportunity: Centre for Academic Primary Care, University of Bristol

<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Using economic valuation methods to develop a preference-based measure for capturing benefits of primary healthcare</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date Registered</strong></td>
<td>9th December 2020</td>
</tr>
<tr>
<td><strong>Proposed Supervisors</strong></td>
<td>Professor Jo Coast, Dr Paul Mitchell, Dr Mairead Murphy</td>
</tr>
</tbody>
</table>

**Summary**

A range of outcomes matter to primary care patients, especially to those with long-term conditions. Existing outcome measures (e.g. EQ-5D) mostly focus on symptoms and function and fail to capture other key benefits of primary healthcare. This PhD will use economic valuation methods to develop a preference-based measure for use in primary care.

**Background**

Primary care is changing rapidly in response to the COVID-19 pandemic. Re-organisation of GP services, task-shifting from GPs to other health professionals, and the implementation of e-consultations were already in the NHS long-term plan and have been accelerated by the pandemic. All these are complex interventions which should ultimately be evaluated. The EQ-5D, which is used to measure outcomes and assess cost-effectiveness in the NHS using Quality Adjusted Life Years (QALYs), primarily focuses on physical function. Primary care patients, who often have long-term conditions (LTCs), experience a wider range of outcomes which are not captured by EQ-5D scores (e.g. 3D trial, BMJ 2018). The 24-item Primary Care Outcomes Questionnaire (PCOQ) was designed in 2017 to measure a wider range of outcomes and to provide a more sensitive measure for primary care. The overall construct measured is “primary-care related health capability”, with scores in 4 domains: Health & Wellbeing; Health Knowledge & Self-care; Confidence in Health Provision; and Confidence in Health Plan.

The PCOQ is currently recommended as a secondary measure only. To update the PCOQ scoring mechanism, so QALYs can be generated from it would require preferences to be elicited from patients or members of the public. Richardson (2009) assessed the relative values placed by patients with LTCs on the EQ-5D dimensions, alongside self-efficacy, access to GPs and level of isolation. Participants were willing to trade substantial reductions in HRQoL for improvements in self-efficacy, highlighting the value patients with
LTCs place on benefits beyond health, and thus the limitations of the EQ-5D.

The aim of this PhD is to develop and validate a preference-based scoring system for the PCOQ for use in primary care patients, most of whom have LTCs.

| Proposed Methods | 1. **Systematic literature review**: Review of preference-based outcomes used in primary care specific economic evaluations, to demonstrate need and determine valuation methods and sampling (e.g. patient versus general population).

2. **Constructing a classification system**: Selection of a reduced set of uncorrelated items from the 24-item PCOQ via factor analysis, Rasch analysis or other psychometric methods on existing PCOQ data from 2016 (n=600)

3. **Valuation**: Data collection and valuation analysis of the primary care-specific preference-based measure using method and population established in step 1 (e.g. time-trade off or discrete choice experiments).

4. **Validation**: Assessment of the validity of the new preference-based measure compared with existing generic preference-based measures (e.g. EQ-5D).

| Potential Impact | This represents an original study, which is likely to lead to changes in the way benefits are measured in future primary care research. The PhD should result in high impact journal articles and presentations at national/international conferences and has potential to be highly influential to future primary care research and policy.

| Required student Skills | MSc in a related discipline with a strong quantitative component (health economics, economics, statistics, public health or psychology/psychometric theory).

| Training available | Free training is available through BRMS Short Course Programme. Through this programme, training is available in systematic reviews, STATA software, statistics, research governance and health economics. Specialized training in conducting valuation and in psychometric theory are not available at the University of Bristol, but are available at a cost at other universities, and supervision will be provided in these skills.

| Contact | Dr Mairead Murphy – mairead.murphy@bristol.ac.uk