Name & email supervisor(s):
Dr Helen Wood
Dr Georgios Karampatakis
Dr Xiancheng Li

Length and dates of internship:
4 weeks, summer 2024 (July/August, as per student's availability)

Host department:
Centre for Primary Care and Public Health, Queen Mary University of London

How will the internship be conducted:

☐ In person at the university
☐ Virtual/ from home
☒ Both are possible, depending on preference of student

Title internship project:
Understanding engagement with respiratory online health communities (OHCs) and sentiment and behaviour changes associated with engagement.

Summary of the internship project: *(max 250 words, can include hyperlinks to further information)*
The NIHR-funded ADHOC Study aims to establish whether promoting engagement with an asthma OHC is effective in helping asthma patients to self-manage their condition (https://www.qmul.ac.uk/adhoc/). The internship project will involve analysing posts and threads from respiratory OHCs, including the Asthma + Lung UK (ALUK) Asthma OHC (https://healthunlocked.com/asthmalunguk-asthma) to explore how users engage and interact, using qualitative thematic analysis and machine learning and natural language processing (NLP) techniques. Thematic analysis may involve part of the method described by Braun and Clarke, especially familiarisation with data, generation of codes, and sorting codes into themes. Machine learning and NLP techniques will be applied to conduct sentiment analysis, focusing on determining whether the sentiment expressed in each post is positive, neutral or negative. Additional NLP techniques, such as topic modelling and text classification will also be applied to analyse the posts in detail. There may also be an opportunity to analyse quantitative and qualitative data collected during the feasibility study currently being conducted as part of the ADHOC Study (data relating to OHC activity of participating patients signed up with the ALUK OHC, as well as data from qualitative interviews with healthcare professionals (HCPs) and patients). Qualitative analyses of OHC activity data will set out to generate meaningful themes in relation to patterns of communication that can promote self-management behaviours. The feasibility study is designed to test the practicalities of patient recruitment, delivery of the study intervention by HCPs in primary care, and acceptability of the intervention to patients and HCPs.

Learning objectives:
Understand and apply thematic analysis using data from the ALUK asthma OHC and/or from the ADHOC feasibility study (e.g., data from qualitative interviews with HCPs and patients).
Understand and apply sentiment analysis using data from respiratory OHCs, including the ALUK asthma OHC.

Produce summary findings and a preliminary report on analysis undertaken.
Any further information: An interest in asthma and/or qualitative analysis would be beneficial, but not essential. It is likely that most of the project could be carried out remotely, with some in-person meetings. Working at the university can likely be accommodated if that is the student's preference, however, supervisors are unlikely to be present in-person full time.