Applications are invited for a PhD studentship in Health Economics as part of the ESRC/NIHR-funded programme of research, Promoting Independence in Dementia (PRIDE). The studentship is based in the Department of Applied Health Research at UCL. UCL is one of the world’s leading research universities, dedicated to developing, disseminating, disseminating and applying original knowledge to transform society and benefit the world of the future.

PRIDE aims (a) to identify how social and lifestyle changes may help reduce risk of developing dementia and disability and to better understand the social consequences of dementia, and (b) to develop and evaluate an effective social intervention to support independence and quality of life for people with early stage dementia and their carers. PRIDE works with INTERDEM, a large international dementia collaboration in dementia care research.

The aim of the studentship is to investigate the impact of cognitive function on quality of primary care received. The studentship will (i) review the relevant literature, (ii) develop a theoretical economic model to describe the factors affecting the quality of care and the role of cognitive function, (iii) assemble and format data from the English Longitudinal Study of Aging (ELSA) and other sources for analysis, (iv) theoretically analyse the impact of cognitive function on the quality of care, and (v) investigate the impact of cognitive function on socioeconomic-related inequality in the quality of primary care using a concentration index approach.

The studentship will be supervised by Professor Stephen Morris, Professor of Health Economics, and Dr Elena Pizzo, Senior Research Associate in Health Economics.

For further information about the studentship please contact Professor Stephen Morris (steve.morris@ucl.ac.uk). For further details about the PRIDE Programme please contact the Programme Manager, Dr Emese Csipke (e.csipke@ucl.ac.uk).

Funding

Funding is available for three years (+3), to cover PhD registration fees (UK/EU), a stipend (currently £16,057 per annum, which includes a £2,000 London enhancement), and funding for research expenses.

Department of Applied Health Research

The Department of Applied Health Research (DAHR) evaluates health care/population health interventions, services, systems and national policies which are most likely to have a substantial impact on health and on health / health care inequalities. The Department’s focus is on:

- The need to tackle the social gradient in health and to improve health and health care across all social groups;
- Interventions, programmes and pathways which are most likely to have a substantial impact in terms of health outcomes and reductions in health and health care inequalities;
- Interests that span health care and public health services and measures to influence policy, clinical decisions and health related behaviour;
• Evaluating the quality (effectiveness, cost effectiveness, equity and appropriateness) of health care and public health interventions;
• Developing the knowledge base about the adoption, implementation and dissemination of evidence based health care and public health interventions.

The Head of the Department is Rosalind Raine, Professor of Health Care Evaluation. The Deputy Head is Stephen Morris, Professor of Health Economics.

The studentship will be based in the Health Economics Group in DAHR. The student will have access to a wide range of academic activities and to a wide range of disciplines. Within the Department there is excellent support for staff and students, with a variety of seminars, training and conference opportunities. The student will also benefit from the networks offered by the wider research programme team.

Further information on DAHR can be found at: http://www.ucl.ac.uk/dahr/

Institute of Epidemiology and Health Care

The Institute of Epidemiology and Health Care (IEHC) is part of the Faculty of Population Health Sciences within the UCL School of Life and Medical Sciences (incorporating UCL Medical School)

The Institute comprises of five Research Departments, as follows:

Applied Health Research http://www.ucl.ac.uk/dahr/
Epidemiology and Public Health http://www.ucl.ac.uk/epidemiology/
Infection and Population Health http://www.ucl.ac.uk/iph/
Primary Care and Population Health http://www.ucl.ac.uk/pcph/
MRC Lifelong Health & Ageing Unit at UCL http://www.nshd.mrc.ac.uk

The Institute has an internationally competitive research programme focused on:

• Understanding the determinants of health and disease across the life-course in populations and in patients in clinical settings, including the investigation of genetic, biological, behavioural, psychosocial and cultural processes;
• Evaluating strategies for the prevention and treatment of physical and mental ill-health;
• Monitoring and surveillance of health and health care nationally and internationally;
• Carrying out innovative work on behaviour change and on the practice of primary care;
• Developing and implementing new technologies in teaching and research in population health;
• Teaching and capacity building in population health research and practice.
• Applied health and health policy research

The staff of the Institute is multidisciplinary, with expertise across the in clinical, public health, and primary care medicine, epidemiology, medical statistics, health psychology, sociology, health economics, public policy, information technology, genetics, physiology, and improvement
science. As an Institute we have strong national and international interdisciplinary collaborations with a large portfolio of international research linked to the UCL Global Health Initiative.

IEHC offers world-class education and training in a wide range of subjects including contributions to all years of the MBBS curriculum and an extensive portfolio of post graduate taught and research programmes.

IEHC holds an Athena SWAN Charter Silver Award in recognition of its commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.

The Institute Director is Professor Andrew Steptoe.

Further information on IEHC can be found at: http://www.ucl.ac.uk/iehc/

Eligibility

In order to receive ESRC studentship funding applicants must have qualifications/experience equal to the standard of a good honours degree at a first or upper second class level from a UK academic research organisation.

In addition, successful applicants for this studentship will have already completed appropriate research training (usually through obtaining a good Master’s degree in a relevant subject).

Degree qualifications gained from outside the UK, or a combination of qualifications and/or experience that is equivalent to a relevant UK degree, may be accepted.

Due to funding restrictions, to be eligible for a full award (stipend and fees), applicants must:

* Have settled status in the UK, meaning there are no restrictions on how long they can stay.
* Have been ‘ordinarily resident’ in the UK for three years prior to the start of the studentship grant. This means they must have been normally residing in the UK (apart from temporary or occasional absences).
* Not have been residing in the UK wholly or mainly for the purpose of full-time education. This does not apply to UK and EU nationals.

Due to funding restrictions, to be eligible for a fees only award, applicants must:

* Be ordinarily resident in an EU member state, in the same way as UK students must be ordinarily resident in the UK.

Successful candidates must also satisfy UCL’s entry and English language requirements to undertake a PhD. Further details can be found at: http://www.ucl.ac.uk/prospective-students/graduate.

Application process

Please submit: (1) a two page CV including details of two academic or professional referees; (2) a one page covering statement outlining your motivations for applying for this studentship; and, (3) a one page outline of how you would approach this project. Applications should be submitted
by email to Floriana Bortolotti (email address f.bortolotti@ucl.ac.uk), stating “PRIDE Studentship” as the subject of the email.

**Deadline for applications:** 12 noon Friday 4 March 2016

**Interviews:** Friday 18 March 2016

**Start date:** May 2016, or as soon as possible thereafter
Title: Impact of cognitive function on quality of care

Primary supervisor: Prof. Stephen Morris, UCL
Secondary supervisor: Dr. Elena Pizzo, UCL

Background and aims

Improving the quality of health care received by patients, and reducing inequality in that health care, are important concerns for the NHS in England. These issues are likely to be especially pertinent for people with cognitive impairment, who may have difficulties accessing high quality health care services. The aims of this PhD studentship are to investigate:

1. The impact of cognitive function on quality of primary care received; and,
2. The impact of cognitive function on socioeconomic-related inequality in the quality of primary care received.

Data and main variables

The main data source for this studentship is the English Longitudinal Study of Aging (ELSA). ELSA provides data from a representative sample of adults aged 50 or more living in private households in England. The sample was drawn from households that had previously responded to the Health Survey for England (HSE) in 1998, 1999 or 2001. Individuals selected for the ELSA survey have been interviewed every two years since 2002. The studentship will use data from several waves of ELSA providing detailed information on the quality of health care received as well as measures of cognitive function as well as health status, demographic and socioeconomic factors. Area level factors may affect the demand for, and supply and quality of health care and these could be linked to ELSA using geographical area codes obtained under special license.

Quality of care indicators
ELSA contains 35 indicators of quality of care covering 13 medical conditions (see box for examples). These were derived to assess the care of vulnerable older people across a number of conditions (Steel et al., 2008). The conditions were chosen according to their prevalence, impact, effectiveness of available prevention/treatment, importance in older people, feasibility of measurement, and the potential for quality improvement. The indicators were designed to represent processes of care that have been linked to improved outcomes in each of these conditions, and were constructed with input from an expert panel of clinicians, who were asked to review and score the degree to which the indicators reflected good practice in the UK. All indicators were intended to assess the quality of the delivery of care to a minimum acceptable standard, rather than the optimal level (Steel et al., 2008), and are based on individual self-reported by patients.

Cognitive function
ELSA includes a range of measures of cognitive function memory, executive function, numerical ability, and literacy measured in face to face interviews at each wave.
Overview of research

(i). Systematic literature reviews of studies investigating (i) the impact of cognitive function on the quality of primary care; (ii) the impact of cognitive function on health care use; (iii) factors affecting the quality of primary care.

(ii). Develop a theoretical economic model to describe the factors affecting the quality of care and the role of cognitive function.

(iii). Assemble data for analysis, including: obtain ELSA data with area codes; manipulate these data into an appropriate format for estimation; and, link area level demand- and supply-side variables.

(iv). Explore the impact of cognitive function on the quality of care at the individual level by estimating the following relationships using regression analysis:

\[ q_{it} = f \left( \delta_{i}, C_{it}, Z_{1it}, Z_{2it} \right) + \epsilon_{it} \]  

Eq. [1]

where \( q_{it} \) is the quality of care received by individual \( i \) at time \( t \), \( C \) is cognitive function, \( Z_{1} \) and \( Z_{2} \) are individual and area level factors (respectively) likely to affect quality such as age, gender, schooling, wealth and GP supply (each individual \( i \) is located in area \( j \)), the \( \delta \)'s are the coefficients to be estimated and \( \epsilon \) is an error term.

(v). Investigate the impact of cognitive function on socioeconomic-related inequality in the quality of primary care using a concentration index approach (see, e.g., Wagstaff et al., 1991). This will measure the concentration of appropriate quality of care against wealth rank. The contribution of cognitive function to the measured inequality may be quantified by decomposing the calculated concentration index (van Doorslaer and Koolman, 2004), based on the regression model in Eq.[1].

Examples of quality of care indicators included in ELSA

**Diabetes mellitus**
IF a person aged 50 or older has diabetes, THEN his or her glycosylated haemoglobin or fructosamine level should be measured at least annually.

**Urinary incontinence**
IF a person aged 50 or older has new urinary incontinence that persists for over 1 month or urinary incontinence at the time of a new evaluation, THEN a dipstick urinalysis and/or mid-stream urine sample should be obtained.

**Pain**
IF a person aged 50 or older has a newly reported chronic painful condition, THEN treatment should be offered.

Publication and wider dissemination

It is expected that the results of the PhD research will be publishable in good quality, peer-reviewed academic journals and communicated at conferences. In addition, the research would be expected to generate outputs that are tailored to public health practitioner and policy making audiences.
References

