

Project Title: Productivity costs in health economic evaluations: an application in women diagnosed with gynaecological cancers at working age

Principal Supervisor: Dr Suping Ling

Secondary Supervisor: Dr Isobel Ward, Professor Luke Vale

Department & Institution: Department of Health Services Research and Policy, London School of Hygiene and Tropical Medicine

Collaborative Organisation: The Office for National Statistics

Project Description:

The goal of the project is to draw on linked health, social and census data sources to estimate the labour market participation and productivity costs and to explore to what extent the new government agenda on reducing waiting times may affect cost-of-illness, including productivity costs, in women with gynaecological cancers.

There are more women than men who are economically inactive due to long-term sickness, and other sociodemographic factors may also lead to inequalities in labour market participation among working-aged women with gynaecological cancers. Productivity costs, the economic impact associated with the loss of productivity due to illness, disability, or premature death, can be accurately estimated using population-based earning and employment data, which will support future cost-of-illness studies and health economic evaluations. Backlogs in cancer waiting time have led to worse outcomes and increased productivity loss. The new government intended to speed up people's return to work by cutting waiting time, to boost economic growth.

The project will use population-level linked data, including data on earnings and employment, census, hospital inpatient, cancer registry, cancer waiting time, and radiotherapy and systemic anti-cancer treatment to address following research questions:

- How may labour market participation change by time and differ by sociodemographic factors in women diagnosed with gynaecological cancers?
- What are productivity costs associate with gynaecological cancers in short-, medium-, and long-term by different characteristics of women?
- How may reducing cancer waiting times affect cost-of-illness including productivity costs associated with gynaecological cancer?

In addressing these questions, the PhD will review and build on the health economics methodologies and gynaecological cancer epidemiology literature. Throughout the project, the PhD will need to conduct large-scale data linkages and data processing to prepare for data analyses and apply advanced statistical methods in the field of health economics and cancer epidemiology.

The project will be co-supervised by epidemiologists, statisticians, and health

economists at the London School of Hygiene & Tropical Medicine (LSHTM) and the Office of National Statistics (ONS). The PhD will be expected to work at ONS for part of the time. This project will therefore offer a rare opportunity to conduct research with an important policy organisation, advance epidemiological and economic analysis on productivity costs in women with gynaecological cancers and contribute to policy evaluations in the area of health and social care.

Candidate Requirements:

We are seeking a highly motivated individual who has a strong interest in health economics, cancer epidemiology, or health data science.

The candidate must have

- Substantial training in or experience with quantitative methods;
- Excellent written and oral English communication skills.

The candidate should have a background in statistics, health economics, epidemiology, health data science or a related discipline. Some experience with health economic modelling will be of advantage.

[Government security clearance level](#) vetting will need to be secured prior to the research. This process is expected to take 6 weeks. To allow for meaningful checks to be carried out, the candidate will normally need to have lived in the UK for the 3 consecutive years immediately prior to applying.

Please also note the requirements by ESRC regarding the award of the studentship: <https://www.ukri.org/publications/esrc-postgraduate-funding-guide/>

Key References:

Krol M, Brouwer W, Rutten F. Productivity Costs in Economic Evaluations: Past, Present, Future. *Pharmacoeconomics* 2013; 31(7): 537-49.

Hanly P, Maguire R, Drummond F, Sharp L. Variation in the methodological approach to productivity cost valuation: the case of prostate cancer. *Eur J Health Econ* 2019; 20(9): 1399-408.

Ortega-Ortega, M., Hanly, P., Pearce, A. et al. Projected Impact on Labour Productivity Costs of Cancer-Related Premature Mortality in Europe 2018–2040. *Appl Health Econ Health Policy* 21, 877–889 (2023).

Chauvin, P., Josselin, JM. & Heresbach, D. The influence of waiting times on cost-effectiveness: a case study of colorectal cancer mass screening. *Eur J Health Econ* 15, 801–812 (2014).

O'Dowd A. Risk to patients' lives grows as cancer treatment delays double in past year. *BMJ* 2024; 385: q1316.

Department of Health and Social Care, The Rt Hon Wes Streeting MP. Secretary of State makes economic growth a priority. 2024.

Further details about the project may be obtained from:

Dr Suping Ling, suping.ling@lshtm.ac.uk; Dr Isobel Ward, isobel.ward@ons.gov.uk; Professor Luke Vale, luke.vale@lshtm.ac.uk

Deadlines and how to apply:

The deadline for application is: **Monday, 3rd March 2025, 23.59**

To apply, please fill in this web application form

https://ucl.smapply.io/prog/2025_student_application_co-funded_and_collaborative_studentship

In the web application form, please follow these instructions.

In the **main form**, tick the appropriate project and add your personal information.

Study route: select *3.5 award*

AQM: select yes

In the **training plan**, please describe your training needs based on your background and the project description. This will be indicative at this stage.

CV upload: Please upload a **500-word (max) letter of motivation** and your **CV** with two academic referees.