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Masters level Health Economics and Health Technology Assessment teaching in the United Kingdom (UK)

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Report

UK China Health and Economy Partnership

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Simon leads the Sheffield component of the UK-China Health and Economy Partnership. He is an expert in economic evaluation and health technology assessment methods. He spent 10 years on a NICE Technology Assessment panel applying these methods to real world decision making. He leads modules on SchARR's Masters in Public Health (MPH) and MSc International Health Technology Assessment and Reimbursement.



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Darrin is a health economist with over 25 years' experience of delivering well-designed, professionally managed evaluation studies that meet funder needs and help improve patient lives. He specialises in health policy and the evaluation of health systems and is published widely in international journal. Professor Baines is currently the coordinating lead of the UK-China Health and Economy Partnership, as well as the academic lead of a British Council funded Newton project currently transferring health economics expertise to pharmacists in Egypt.



Professor Sun Qiang, *Shandong University*

Professor Sun leads the Shandong component of the UK-China Health and Economy Partnership. He serves as the chief expert of the key new think tank (health management and policy research) in Shandong Province and the deputy chairman of the Public Health Economics Branch of the Chinese Health Economics. He is an expert in health economy and health policy. Over the past two decades, he has been committed to promoting the rational use of antibiotics, conducting health economic evaluation, and accelerating the reform of medical insurance payment methods. His series of research results provide a strong basis for the formulation of national health policy.



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Executive Summary

The United Kingdom China Health and Economy Partnership (UK-CHEP) is a novel knowledge transfer partnership funded by GlaxoSmithKline that promotes long-term collaboration between UK and Chinese universities.

The purpose of this report is to provide an overview of the Masters-level teaching of Health Economics and Health Technology Assessment by UK Universities. It will act as a reference document for Chinese students and Chinese universities in order that they can:

- Identify those courses that best meet the needs of students who wish to study with a UK University
- Identify UK universities with particular teaching expertise in order to explore possible Transnational Education (TNE) initiatives
- Provide information on the curricula of Health Economics courses to help with the development of teaching in Chinese universities

UK universities provide a wide range of opportunities to study Health Economics and Health Technology Assessment at Masters level, both face-to-face and online. Seventeen courses were identified, which were taught between ten universities. Five universities provide online courses. Examination of curricula suggest that courses can be grouped in terms of their relative concentration of six key topics; Economics, Decision Analysis, Health Policy and Management, Financing and Systems, HTA, and Social Sciences.

This information should be used in tandem with more detailed information on the universities and courses in question. It is also important to recognise that other postgraduate courses, at the certificate and diploma level, are available.

Background

The United Kingdom China Health and Economy Partnership (UK-CHEP) is a novel knowledge transfer partnership that promotes long-term collaboration between Bournemouth University, University of York, University of Sheffield and University of Leeds in the UK and Fudan University, Shandong University and Zhejiang University in China.

The partnership aims to create long-term, sustainable collaboration in health economics, which will give UK and Chinese academics the means to work together on world-class educational and research projects that would otherwise not be possible working in isolation.

This partnership was originally launched in Jinan, Shandong province in November 2017 by Bournemouth University. GlaxoSmithKline and the British Council have extended the partnership for a further two years, from January 2019. As part of this extension, the partner universities are working closely together through the provision of Masterclasses, collaboration on research projects and writing research papers.

Memoranda of Understanding exist between the universities and UK-CHEP has delivered the collaboration that these agreements set in place. As part of UK-CHEP, Shandong University and the University of Sheffield are to sign a 1+1+1 Teaching Agreement that provides a link between their world-leading Masters Programmes. With this expert knowledge of Health Economics (HE) and Health Technology Assessment (HTA), a review of UK Masters Programmes was undertaken so that students and other universities can better understand the variety of teaching available.



Introduction

The UK is a world leading centre for Health Economics (HE) and Health Technology Assessment (HTA) teaching. This is due to the influence of early economists such as Professor Alan Williams and Professor Mike Drummond, together with its formalisation of HTA within national reimbursement systems through the creation of the National Institute for Health and Care Excellence (NICE). As well as teaching Health Economics since the 1970s, a critical mass of health economists has led to the development of Masters-level Health Economics courses across several universities.

The purpose of this report is to provide an overview of Masters-level teaching of Health Economics and Health Technology Assessment by UK Universities. It will act as a reference document for Chinese students and Chinese universities in order that they can:

- Identify those courses that best meet the needs of students who wish to study with a UK University
- Identify UK universities with particular teaching expertise in order to explore possible Transnational Education (TNE) initiatives
- Provide information on the curricula of Health Economics courses to help with the development of teaching in Chinese universities

The report is based on an analysis of UK universities that teach Masters degrees in Health Economics or HTA. It provides three main sets of results. First, a list of all HE/HTA Masters degrees that recruited students in 2018/9. Second, a qualitative analysis of the defining features of the different courses. Third, a comprehensive listing of the core and optional modules that are studied as part of each Masters Degree.



HE/HTA Masters Degrees in the UK

Courses were identified within the data collected by the UK Higher Education Statistics Agency (HESA) using a course title keyword search. We searched for courses which included the following keywords in their course title, as returned to HESA:

- Health & Economics
- Health & Technology

Courses were excluded from our reporting if they were not Masters Degrees, for example, Postgraduate Certificates or Diplomas, or if they were considered too specialist.

The courses identified are shown in Table 1, with a footnote listing those courses excluded. Ten universities were found to teach Masters Degrees in HE/HTA. Six taught more than one distinct degree, with Sheffield teaching three distinct degrees. There were seventeen Masters Degree programmes in total.

Table 1: Health economics and HTA courses in the UK (2018/19)

London School of Economics and Political Science

MSc Health Economics, Policy and Management
MSc International Health Policy (Health Economics)

University of York

MSc Health Economics
MSc Economic Evaluation for Health Technology Assessment (Online)

University College London

MA Philosophy, Politics and Economics of Health
MSc Health Economics and Decision Science

City University

MSc Economic Evaluation in Healthcare
MSc Health Economics

University of Sheffield

MSc Health Economics and Decision Modelling
MSc International Health Technology Assessment and Reimbursement (Online)
MSc Economics and Health Economics

University of Aberdeen

MSc in Health Economics for Health Professionals (Online)

University of Birmingham

MSc Health Economics and Health Policy
MSc Health Economics and Econometrics

University of Glamorgan

MSc Applied Health Economics (Online)

University of East Anglia

MSc Health Economics

University of Glasgow

MSc Health Technology Assessment (Online)

Excludes:

MSc Health Economics, Outcomes and Management in Cardiovascular Sciences, LSE
MSc Health Economics and Policy (With Chicago), LSE
MSc Nanotechnology for Medicine and Health Care, Oxford

Format

In terms of their format, five are online courses, with these being provided by York, Sheffield, Aberdeen, Glamorgan and Glasgow. The majority of courses require the completion of a dissertation in addition to the modules; these generally contributed one third of the credits needed for the degree. Most courses provided options for some modules, with considerable variety in the number and topics of the optional modules.

Overall content

Module information was extracted from course websites and this is summarised in Appendix A. The module information was analysed qualitatively and six topic areas were identified: economics, decision analysis, health policy/management, systems/financing, HTA and social sciences. This grouping was then used to characterise each programme in terms of their content. This characterisation is semi-quantitative; a five-level indicator is shown for each topic area and each course is scored against these, with zero indicating no significant content on that topic and five indicating substantial content on that topic. All courses are given a total of 15 marks across the six areas (in order to equalise the assessment).

The results of the analysis for face-to-face and online courses are shown in Tables 2 and 3, respectively. There is considerable variation in courses, with only two being characterised as having the same balance of topics; Sheffield's MSc Economics and Health Economics and East Anglia's MSc Health Economics.

Several universities provide more than one course, which appears to allow a degree of specialisation in the courses they provide, for example, one being economics focussed and another being policy focussed.

Five universities provide online courses, which tend to have less focus on economics and more focus on economic evaluation and HTA.



Table 3: Focus of topic content in UK Health Economics Online Masters courses

University Programme	Economics	Decision analysis	Health policy and/or management	Systems and/or financing	HTA	Social sciences and other
University of York MSc Economic Evaluation for Health Technology Assessment	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
University of Sheffield MSc International Health Technology Assessment and Reimbursement	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
University of Aberdeen MSc In Health Economics for Health Professionals	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
University of Glamorgan MSc Applied Health Economics	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
University of Glasgow MSc Health Technology Assessment	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

Specialist training

As well as the overall balance of course content, it is worth considering which courses appear to provide specialist training in specific topics. We assess this by looking at which courses are rated as 'four or above' for a particular topic. These are listed in Tables 4-9.

Table 4: Courses providing specialist training in Economics

London School of Economics and Political Science MSc Health Economics, Policy and Management MSc International Health Policy (Health Economics)
University of York MSc Health Economics
University College London MA Philosophy, Politics and Economics of Health
City University MSc Health Economics
University of Sheffield MSc Economics and Health Economics
University of Birmingham MSc Health Economics and Econometrics
University of East Anglia MSc Health Economics

Table 5: Courses providing specialist training in Decision Analysis

University of York MSc Health Economics
University College London MSc Health Economics and Decision Science
City University MSc Health Economics
University of Sheffield MSc Health Economics and Decision Modelling
University of Glasgow MSc Health Technology Assessment (Online)

Table 6: Courses providing specialist training in Health Policy and Management

London School of Economics and Political Science MSc Health Economics, Policy and Management
University College London MA Philosophy, Politics and Economics of Health

Table 7: Courses providing specialist training in Financing and Systems

London School of Economics and Political Science MSc Health Economics, Policy and Management MSc International Health Policy (Health Economics)
University of York MSc Economic Evaluation for Health Technology Assessment (Online)

Table 8: Courses providing specialist training in HTA

City University MSc Economic Evaluation in Healthcare
University of Sheffield MSc Health Economics and Decision Modelling MSc International Health Technology Assessment and Reimbursement (Online)
University of Glamorgan MSc Applied Health Economics (Online)
University of Glasgow MSc Health Technology Assessment (Online)

Table 9: Courses providing specialist training in Social Sciences and other topics**University College London**

MA Philosophy, Politics and Economics of Health

Other features

As well as differences in topic focus, there are other differences in the Universities and their courses which may be relevant to Chinese students and Chinese universities wishing to use this information. These are:

- Research focus of the entire university. The leading research-led universities in the UK are known as the Russell Group (<https://russellgroup.ac.uk/about/our-universities/>). Only Birmingham, Glasgow, LSE, Sheffield, UCL and York of the universities considered in this report are in the Russell Group.
- World standing of the university. Only Birmingham, Glasgow, LSE and Sheffield of the universities considered here are in the Top 100 Universities based on the QS Ranking 2021 (<https://www.topuniversities.com/university-rankings/world-university-rankings/2021>) ranking.

There are also other features of the courses that students may wish to consider. These are:

- Whether the course requires a dissertation.
- Whether the course allows options to be taken, and if so, how many.
- The method of assessment used in each of the modules.



Conclusions

UK universities provide a wide range of opportunities to study Health Economics and Health Technology Assessment at Masters level, both face-to-face and online. Seventeen courses were identified, which were taught between ten universities. Five universities provide online courses, which tend to have less focus on economics and more focus on economic evaluation and HTA. Examination of curricula suggest that courses can be grouped in terms of their relative concentration of six key topics; Economics, Decision Analysis, Health Policy and Management, Financing and Systems, HTA, and Social Sciences.

There are some limitations with the information within this report. Firstly, the information presented represents that which is publicly available, which is not always as detailed as we would have liked. Second, the summary tables are based on rating that are subjective, albeit ratings that were assigned jointly by two experienced professors of Health Economics.

This information should be used in tandem with more detailed information on the universities and courses in question. It is also important to recognise that other postgraduate courses, at the certificate and diploma level, are available. New Masters courses may also have started since 2018/19.



Appendix: Module Information by Course

London School of Economics and Political Science

MSc Health Economics, Policy and Management

Core

- Financing Health Care
- Health Economics
- Health Administration and Management
- Resource Allocation and Cost-effectiveness Analysis

Options

- Pharmaceutical Economics and Policy
- Health Care Quality Management
- Measuring Health System Performance
- Principles of Evidence-Based Medicine and Clinical Trials
- Advanced Health Economics
- Behavioural Science for Health
- Statistical Methods in Health Care Economic Evaluation
- Introduction to Management in Health Care
- Principles of Health Technology Assessment

MSc International Health Policy (Health Economics)

Core

- Financing Health Care
- Statistical Methods in Health Care Economic Evaluation
- Health Care Economic Evaluation
- Advanced Health Economics
- Applied Health Econometrics

Options

- Public Economics
- Introduction to Health Policy and Politics
- Measuring Health System Performance
- Health Systems and Policies in Developing Countries
- Global Health Policy: Institutions, Actors and Politics
- Social Determinants of Health
- Evidence Review and Synthesis for Decision Making
- Global Health Security
- Health Economics
- Economic Analysis for Health Policy in Low- and Middle-Income Countries
- Pharmaceutical Economics and Policy
- Randomised evaluations of health programmes: from design to implementation
- Behavioural Incentive Design in Health and Health Care
- Mental health policy
- Health care regulation

University of York

MSc Health Economics

Core

- Evaluation of Health Care
- Health Economics
- Clinical Decision Analysis

Options

- Econometrics
- Applied Microeconomics
- Statistics and Econometrics
- Econometric Methods for Research
- Advanced Microeconomics
- Applied Microeconomics
- Evaluation of Health Policy
- Health and Development
- Public Sector Economics
- Public Finance
- Design and Analysis of Mechanisms and Institutions
- Advanced Macroeconomics
- Applied Microeconomics
- International Macroeconomics
- Management Decision Analysis

MSc Economic Evaluation for HTA Online

Core

- Basic Economic Concepts
- Health Economics: Concepts and Analysis
- Introduction to Health Care Evaluation
- The Economics of Health Care Systems
- Statistics for Health Economics
- Advanced Topics in Economic Evaluation
- Assessing the Impact of Medical Technologies on Health
- Further Methods for Outcome Measurement
- Decision Analysis for Health Technology Assessment

University College London

MA Philosophy, Politics and Economics of Health

Core

- Philosophy, Politics and Economics of Health
- Health Policy and Reform
- Key Principles of Health Economics

Options

- Madness
- Illness
- How Does It Feel? Contemporary Fiction Between the Body and the World
- Politics and Ethics
- Multidisciplinary Social Research
- Multidisciplinary Social Research
- Global Politics of Gender, Sexuality and Security

MSc Health Economics and Decision Science

Core

- Health Systems in a Global Context
- Economic Evaluation in Health Care
- Statistics for Health Economics
- Econometrics for Health
- Microeconomics for Health

Options

- Modelling for Decision Science
- Bayesian Methods in Health Economics
- Health Economics
- The Social Determinants of Global Health
- Concepts and Controversies in Global Health
- Climate Change and Health
- Medical Statistics II
- Infectious Disease Epidemiology and Global Health Policy
- Research Methods and Evidence for Global Health
- Urban Health
- Evaluating Interventions
- Health Management: Planning and Programme Design
- Gender and Global Health
- Key Principles of Health Economics

City University

MSc Economic Evaluation in Healthcare

Core

- Quantitative methods
- Advanced Economic Evaluation in Health Care
- Economic evaluation
- Economic evaluation workshops
- Welfare economics
- Epidemiology
- Health Economics

MSc Health Economics

Core

- Economic Evaluation
- Advanced Economic Evaluation
- Health Economics

Options

- Economic Evaluation Workshops
- Welfare Economics
- Epidemiology
- Applied Econometrics
- Development Economics
- Economics of Regulation and Competition
- The Economics of Microfinance
- Cognitive and Economic Science of Rational Choice
- Experimental Economics and Game Theory

University of Sheffield

MSc Health Economics and Decision Modelling

Core

- Introduction to Health Economics
- Economic Evaluation
- Cost-effectiveness Modelling for Health Technology Assessment
- Medical Statistics and Evidence Synthesis
- Study Design and Systematic Review Methods
- Valuing the Benefits of Health Care
- Further Statistical Methods for Health Economic Analysis
- Advanced Simulation Methods

MSc International Health Technology Assessment and Reimbursement Online

Core

- Methods and Processes in International Health Technology Assessment
- Systematic Reviews and Evidence Synthesis Principles
- International Healthcare Systems and Reimbursement
- Cost-effectiveness Modelling in International Health Technology Assessment

Options

- Economic Evaluation in International Health Technology Assessment
- Randomised Controlled Trials to Support Reimbursement Decision Making
- Using Evidence in the Design and Development of Models
- Building Cost-effectiveness Models for Health Technology Assessment
- Utility and Patient-reported Outcomes Data in HTA

MSc Economics and Health Economics

Core

- Microeconomic Analysis
- Econometric Methods
- Health Economics
- Economic Evaluation
- Applied Microeconometrics
- Health Service Research Methods

Options

- Applied Macroeconometrics
- Industrial Organisation
- Public Economics

University of Aberdeen

MSc Health Economics for Health Professionals Online

Core

- Introduction to Economics and Health Economics
- Applied Statistics
- Fundamentals of Research Design

Options

- Economic Evaluation - Principles and Frameworks
- Economic Evaluation - Application and Policy
- Health Care Systems and Policy
- Economics of Health Behaviour
- Evidence-Based Health
- Designing Real-World Trials
- Qualitative Health Research
- Health Informatics

University of Birmingham

MSc Health Economics and Health Policy

Core

- Introduction to Health Economics
- Statistics for Health Economics
- Econometrics
- Economic Evaluation in Health Care
- Modelling for Health Economics
- Policy and Economics of Healthcare Delivery

Options

- Advanced Statistical Methods
- Clinical Trials
- Health Care Evaluation and Commissioning
- Health Information and Health Informatics
- Health Promotion
- Health Protection
- Principles of Health Technology Assessment
- Global Health
- Sociology and Social Policy
- Systematic Reviews and Evidence Synthesis
- Qualitative Research Methods

MSc Health Economics Econometrics

Core

- Microeconomics
- Econometrics
- Introduction to Health Economics
- Economic Evaluation in Healthcare
- Modelling for Health Economics

Options

- Statistics for Health Economics
- Advanced Statistical Methods
- Health Care Evaluation and Commissioning
- Health Information and Health Informatics
- Health Promotion
- Health Protection
- Principles of Health Technology Assessment
- Global Health
- Sociology and Social Policy

University of Glamorgan

MSc Applied Health Economics Online

Core

- Health Economic Decision Making and Health Technology Appraisal/Assessment
- Principles of Obtaining Patient Access
- Health Economic Modelling and Analysis
- Understanding the Use of Data in Health Technology Assessment
- National and International Health Economic Decision Making
- Sub-National Health Economic Decision Making
- Research Methodologies and Critical Appraisal

University of East Anglia

MSc Health Economics

Core

- Health Economics
- Economic Evaluation in Health Care
- Introduction to Research Methods

Options

- Econometric Methods
- Econometric Theory
- Further Quantitative Research Methods
- Welfare and Evaluation in Development
- Applied Econometrics
- Economic Theory
- Economic Concepts
- Systematic Reviews and Research Synthesis

University of Glasgow

MSc Health Technology Assessment Online

Core

- HTA: Policy and Principles
- Statistical Methods for HTA and EBM
- Health Economics for HTA

Options

- Foundations of Decision Analytic Modelling for HTA
- Outcome Measurement and Valuation for HTA
- Data Science
- HTA in a Global Context
- Survival Analysis for HTA
- Qualitative Research Methods for HTA
- Evidence Synthesis
- Maximising the Value of Clinical Trial Data



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