

Methodology and Practical Application of Economic Evaluation in Health Care
August 29-September 3, 2016

1. Profile of facilitators

Name and title:	<ol style="list-style-type: none"> 1. Professor Michael Drummond 2. Marco Barbieri 3. Professor Urs Brügger
Current position and affiliation:	<ol style="list-style-type: none"> 1. Professor of Health Economics, University of York, United Kingdom. 2. Honorary Research Fellow, University of York, United Kingdom. 3. Director of the Winterthur Institute of Health Economics, Zurich University, Switzerland
Areas of interest:	Methodology and practical application of economic evaluation in health care
Curriculum Vitae:	<p>Dr. Mike Drummond is Professor of Health Economics and former Director of the Centre for Health Economics at the University of York. His particular field of interest is in the economic evaluation of health care treatments and programmes. He has undertaken evaluations in a wide range of medical fields including care of the elderly, neonatal intensive care, immunization programmes, services for people with AIDS, eye health care and pharmaceuticals. He is the author of two major textbooks and more than 600 scientific papers, has acted as a consultant to the World Health Organization and was Project Leader of a European Union Project on the Methodology of Economic Appraisal of Health Technology. He has been President of the International Society of Technology Assessment in Health Care, and the International Society for Pharmacoeconomics and Outcomes Research. He was previously a member of the Guidelines Review Panels of the National Institute for Health and Clinical Excellence (NICE) in the UK, and is a Principal Consultant for OptumInsight. His most important publications are:</p>

- Drummond, M.F., Sculpher, M.J., Torrance, G.W., O'Brien, B.J., Stoddart, G.L. (2015), *Methods for the economic evaluation of health care programmes: fourth edition*. Oxford, Oxford Medical Publications.
- Drummond, M.F., Barbieri, M., Wong, J.B. (2005), *Analytic choices in economic models of treatments for rheumatoid arthritis: what makes a difference?* *Medical Decision Making*; 25(5): 520-533.
- Drummond, M.F., Schwartz, J.S., Jönsson, B., Luce, B.R., Neumann, P.J. (2008) Key principles for the improved conduct of health technology assessments for resource allocation decisions. *International Journal of Technology Assessment in Health Care*; 24(3): 244-258.

Marco Barbieri, M.Sc. is an Honorary Research Fellow at the Centre for Health Economics, University of York (UK) and a Associate Researcher of CRES (Economics and Health Research Centre), University Pompeu Fabra, Barcelona (Spain). He holds a B.Sc. in Economics from the University of Bologna (Italy) and an M.Sc. in Health Economics from the University of York (UK). He spent two years working as a Research Fellow at the Centre for Health Economics, University of York, where he has undertaken a wide range of research including cost-effectiveness modelling in rheumatoid arthritis and cardiovascular disease, study of patient preference measurement and the application of evidence to decision making in health care. He has been involved in several health technology assessments, including systematic reviews of economic evaluations of treatments for bipolar disorder and for second-line advanced ovarian cancer. His particular field of interest is associated with issues of transferability of data among jurisdictions.

- Barbieri M, Drummond M, Rutten F et al. “*What do international guidelines say about economic data transferability*”, *Value in Health* 2010, 13 (8): 1028-37
- Barbieri M, Hawkins N, Sculpher M et al. “*Who Does the Numbers? The Role of Independent Technology Assessment to Inform Health Systems’ Decision Making about the Funding of Health Technologies*”, *Value in Health* 2009; 12(2): 193-201
- Barbieri M, Drummond MF, Willke R, Chancellor J, Jolain B, Towse A. “*Variability of Cost-Effectiveness Estimates for Pharmaceuticals in Western Europe: Lessons for Inferring Generalizability*”, *Value in Health* 2005, Vol 8 (1), 10-23

Urs Brügger is a health economist and the director of the Winterthur Institute of Health Economics (WIG) at the Zurich University of Applied Sciences in Winterthur (ZHAW), Switzerland. His fields of interest in research and teaching are Health technology assessment (HTA), economic evaluations and reimbursement systems. He is a board member of the Swiss Academy of Medical Sciences (SAMS) and the Swiss Network for Health Technology Assessment (SNTA). He studied economics and sociology at the University of St. Gallen (HSG). He holds a PhD in Economics from the University of St. Gallen (1999). In the year 2009 he received a MSc in HTA (Ulysses program).

	<ul style="list-style-type: none"> - Brügger, Urs, Bruno Horisberger, Alexander Ruckstuhl, Rafael Plessow, Klaus Eichler, and Alois Gratwohl. 2015. "Health Technology Assessment in Switzerland: A Descriptive Analysis of 'Coverage with Evidence Development' Decisions from 1996 to 2013." <i>BMJ Open</i> 5 (3): e007021. doi:10.1136/bmjopen-2014-007021. - Brügger, U., R. Plessow, S. Hess, A. Caballero, K. Eichler, V. Meyer, and U. von Wartburg. 2014. "The Health Technology Assessment of the Compulsory Accident Insurance Scheme of Hand Transplantation in Switzerland." <i>The Journal of Hand Surgery, European Volume</i>, November. doi:10.1177/1753193414559463. - Eichler, K, S Hess, M Riguzzi, ü Can, and U Brügger. 2015. "Impact Evaluation of Swiss Medical Board Reports on Routine Care in Switzerland: A Case Study of PSA Screening and Treatment for Rupture of Anterior Cruciate Ligament." <i>Swiss Medical Weekly</i>, May. doi:10.4414/smw.2015.14140.
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2. Course description

<p>Objectives:</p>	<p>At the end of the course, the student will:</p> <ul style="list-style-type: none"> - be familiar with the concepts, methods and applications of economic evaluation in healthcare; - understand costing methodology and the different approaches to valuing the benefits of health treatments; - be able to undertake a critical appraisal of published studies; - understand the limitations of clinical trials as a vehicle for economic evaluation; - be familiar with decision-analytic modelling approaches, including the construction of decision trees and Markov models; - appreciate the main issues in the use of economic evaluation in health care resource allocation decisions, including the reimbursement of health technologies; - have an appreciation of future developments in the theory and application of economic evaluation in health care. - be able to understand HTA, its methodology and its embeddedness in an institutional context (processes and organizational structures).
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<p>Content of the course:</p>	<p>The course is designed as an introduction to the concepts, methods, and application of economic evaluation in health care. Specific topics that will be covered include: an overview of economic evaluation methods, cost and benefit estimation, economic evaluation using patient-level data, economic evaluation using decision-analytic modelling, and using economic evaluation in healthcare decision-making. Numerous examples and case studies are used to illustrate the main points and considerable emphasis is placed on learning through group work and exercises. There will be ample opportunity for students to discuss any issues or problems they have already encountered in the field of economic evaluation. The course will be of particular benefit to those working in the health care sector who have a need to present a case for funding or reimbursement of particular health care treatments or programs.</p> <p>Other specific topics covered include:</p> <p>1) <u>Concepts</u>: What is HTA? The multidisciplinary nature of HTA. HTA as a tool for decision-making in health care.</p> <p>2) <u>Methods</u>: An overview over HTA methods that are used to generate evidence on safety, effectiveness, cost-effectiveness and other domains. How to deal with uncertainty.</p> <p>3) <u>Application</u>: Using HTA in different contexts and jurisdictions for decision-making, institutional settings (processes and structures) The link between policy and HTA.</p> <p>Examples and case studies are used to illustrate the main points.</p>
<p>Prerequisites:</p>	<p>The course is intended for graduate students (or equivalent) who have a background in economics, public management or the health disciplines. Some previous knowledge of economic evaluation is desirable, although this can be acquired through the pre-reading that is offered with this course. Some work experience in the health care sector is desirable, but not essential. No previous knowledge of HTA is assumed.</p>
<p>Pedagogical method:</p>	<p>Lectures, interactive exercises, group discussions.</p>

3. Detailed content and structure of course

**** See next page ****

Morning 11 am - 1 pm	Content	Method	Afternoon 2 pm – 5 pm	Content	Method
Monday	Introduction to HTA Case Study I	Lecture, group discussion	Monday	The HTA process and HTA methods Case Study II	Lecture, group discussion
Tuesday	HTA and Decision-making Case Study III	Lecture, group discussions	Tuesday	HTA in different contexts Examples	Lecture, group discussion
Wednesday	Integrating economic evaluation into health technology assessment Introduction to economic evaluation Key principles of using HTA in resource allocation decisions	Lectures plus discussion	Wednesday	Costing, including costing exercise Discounting in economic evaluation	Lectures, discussion and group work
Thursday	Measuring benefits in economic evaluation Utility estimation exercise Economic evaluation and social values	Lectures, discussion and group work	Thursday	Economic evaluation alongside clinical studies Handling uncertainty Feedback on the utility exercise	Lectures, discussion and group work
Friday	Decision- analytic modelling Modelling exercise (Part 1)	Lectures, discussion and group work	Friday	Transferring economic evaluations from one country to another Using economic evaluation for resource allocation decisions	Lectures plus discussion
Saturday 9 am – 1 pm	Modelling exercise (continued) Critical appraisal of economic evaluations Exercise on critiquing a published study	Lectures, discussion and group work	Saturday 2pm – 3.30 pm	Course assessment	Written examination

4. Self study and assessment procedure

Self study:	Pre-reading, plus material distributed during the course
Assessment procedure:	One hour written examination