

HEIDELBERG

HEALTH ECONOMICS SUMMER SCHOOL

2019

Outline of an Intense Five Day Program

1. **Introductory Sessions**
including interactive exercises and mini cases
2. **Comparative Economic Analyses**
for Health Technology Assessment (HTA), market access and reimbursement
3. **Modeling in Theory and Practice**
(workshop)
4. **State of the Art Lectures**
reviewing strengths and limitations of the conventional health economic evaluation paradigm, and discussing potential solutions
5. **Stakeholder Debate**
on implications for policy and potential ways forward

Scientific Program Committee

- Prof. Michael Schlander, Heidelberg (Chair)
- Prof. Jeffrey Richardson, Melbourne
- Prof. Wendelin Schramm, Heilbronn
- Dr. Karla Hernandez-Villafuerte, Heidelberg

Venue and Date

Heidelberg, Studio Villa Bosch

July 01 – July 05, 2019

Objectives

A major branch of health economics is concerned with the study of how scarce healthcare resources are allocated among competing health care programs and, by implication, among different groups in society.

This seminar introduces basic concepts and practical issues faced by health care decision makers in charge of allocating scarce resources. They often refer to health economists using tools such as cost effectiveness analysis (CEA) to inform these decisions. Conventionally, CEA is designed to help achieving the maximum potential health benefit that can be achieved given a resource constraint or “scarcity”. Results of conventional CEAs may however contradict prevailing social norms and preferences. The Summer School will address the underlying issues, and leading scholars of health economics will be available to participants to discuss implications, potential solutions, and ways forward.

The Summer School will be comprised of three modules that will offer a comprehensive overview of principles and methods, which build upon each other but may also be booked separately.

Module A – Days 1 and 2

Participants may also enroll for this module as a stand-alone subject.

The first two days provides an introduction to the discipline of health economics. The first part of the seminar will present a broad understanding of the economics of health and health care and the bases of the analytical economics techniques that are normally apply to inform resource allocation decision and well as policy development in the health system. The seminar will cover key economic issues for the health system and uses economics techniques to understand how the health system operates.

This part of the Summer School will provide participants concerned with health care policy (e.g., payers, industry, policy makers, physicians, planners and others who are involved in different segments of the health care system) with an overview of the economics of health and health care.

It will enable them to apply established analytical economic skills to problems of resource allocation in the health system.

After the first two days participants should be able to:

1. understand and describe the principles of economic analysis in health care.
2. be familiarized with the concepts related to the identification, measure, valuation and analysis of health outcomes and costs.
3. recognize the health economics techniques used to inform resource allocation and priority setting in the health system.
4. appreciate the role of economic evaluation in healthcare
5. be able to identify the key elements relevant the organization of health care system (e.g. provision and funding).

Module B – Day 3

Participants may also enroll for this module as a stand-alone subject.

The program will be based on a mix of introductory lecture presentations, interactive discussion sessions, and complementary case studies, practical exercises and simulations.

Module C – Days 4 and 5

Participants may also enroll for this module as a stand-alone subject.

Days 4 and 5 will be dedicated to an in-depth review of the strengths and limitations of the conventional logic of cost effectiveness, the need for broader or alternative concepts that capture citizens' social norms and preferences, and the search for such alternatives, presenting and discussing the current state of the art in theory and practice. Potential implications for cost value assessments of orphan medicinal products, gene and CAR-T cell therapies, and "personalized medicine" will be addressed by a group of international experts in Health Technology Assessment, evidence-based medicine, health economics, and medical ethics.

Program Outline

TOPIC	TIME
Module A [Introductory Level]	July 1-3
Day 1: Monday, July 1, 2019 [10:00am to 7:00pm]	
A.1. Welcome Reception and Registration	1 hour 10:00am-11:00am
A.2. Introduction to Program & Objectives	30 min 11:00am-11:30am
A.3. International Health Care Systems: Organization, Financing, Performance <ul style="list-style-type: none"> – Typology: Bismarck, Beveridge, and “market” style systems – Trends and convergence between “ideal” system types – Key Performance Indicators (inputs, structure / processes, outcomes) – Dynamics and Cost Drivers – Comparative Analysis of Systems (WHO and other studies) – Examples for discussion including United Kingdom, Germany , Spain/Italy, United States of America 	1.5 hours 11:30am – 01:00pm
Lunch Break	1 hour 01:00pm - 02:00pm
A.4. Fundamentals of Health Economics: Economics as a Way of Thinking	1.5 hours 2:00pm – 3:30pm

<ul style="list-style-type: none"> – Scarcity and Choices, Value, Utility, and Opportunity Cost, Marginal Analysis, Efficiency of Markets – What is Health Economics and Why Do We Need It? (including its origins in Welfare Theory and Decision Science / Operations Research – <i>Overview Only</i>) – Making Choices (Means and Ends, “Efficiency”) 	
<p>A.5. Group Exercise “The Kidney Machine” Allocation of Scarce Resources</p>	<p>1 hour 3:30pm-4:30pm</p>
<p>Coffee Break</p>	<p>30 min 4:30pm – 5:00pm</p>
<p>A.6. Value and Valuation in Health Economics</p> <ul style="list-style-type: none"> – Welfare Theory and Willingness-to-Pay (WTP); Allocative Efficiency – Extrawelfarism and Quality-Adjusted Life Years (QALYs); QALY Maximization – Preference-Based Measurement of Health-Related Quality of Life (HRQoL) – Preference-Based “Generic” HRQoL Measurement Instruments – Measurement Techniques: Standard Gamble (SG), Time-Trade-Off (TTO), Rating and Visual Analogue Scales (VAS) 	<p>1.5 hours 5:00pm – 6:30pm</p>
<p>A.7. Exercise “Preference Measurement” Applying and Comparing SG, TTO and VAS</p>	<p>30 min 6:30pm – 7:00pm</p>
<p>Day 2: Tuesday, July 2, 2019 [09:00am to 6:30pm]</p>	
<p>A.8. Summary of Day 1</p> <ul style="list-style-type: none"> – Insights from “Preference Measurement” Exercise – What Have We Learnt on Day 1? 	<p>45 min 09:00am – 09:45am</p>

<p>A.9. Costing in Theory & Practice</p> <ul style="list-style-type: none"> → A Typology of Economic Analyses: Descriptive and Prescriptive Studies → Opportunity Cost and Perspectives of Analysis → Opportunity Costs versus Monetary Flows → Types of Cost in Health Economics: <ul style="list-style-type: none"> → Fixed, variable, relevant, average, marginal, and incremental costs → Direct (medical / nonmedical), indirect, and intangible costs, including measurement methods → Cost Analyses in Practice → Guidelines and Recommendations (including Second Washington Panel) 	<p>1 ¼ hour 09:45am – 11:00am</p>
<p>Coffee Break</p>	<p>30 min 11:00am – 11:30am</p>
<p>A.10. Group Exercise “Cost Analysis” <i>Analyzing a Costing Study</i></p>	<p>1 hour 11:30am – 12:30am</p>
<p>A.11. Good Scientific Practice for Costing Studies</p> <ul style="list-style-type: none"> → Learnings from Case Study for the Reporting of Costing Studies → Insights from Case Study for the Interpretation of Costing Studies 	<p>30 min 12:30am – 01:00pm</p>
<p>Lunch Break</p>	<p>1 hour 01:00pm – 02:00pm</p>
<p>A.12. Cost Benefit Analysis in Practice</p> <ul style="list-style-type: none"> → Comparative Studies: Typology and Terminology → Perspectives of Analyses → Cost Benefit Analysis 	<p>1 hour 02:00pm – 03:00pm</p>

<ul style="list-style-type: none"> – Cost Effectiveness Analysis – Cost Consequence Analysis – Cost Utility Analysis – Incremental Cost Effectiveness Ratios and the Logic of Cost Effectiveness – Types of Sensitivity Analyses and Cost Effectiveness Acceptability Curves 	
<p>A.13. Mini Case Study: Analyzing the Cost Effectiveness of a Cancer Screening Program</p>	<p>1 hour 03:00pm – 04:00pm</p>
<p>Coffee Break</p>	<p>30 min 04:00pm – 04:30pm</p>
<p>A.14. Economic Evaluation and HTA</p> <ul style="list-style-type: none"> – Health Technology Assessment (HTA): Principles and Practical Relevance – Decision Support for Health Care Policy Makers, Market Access and Reimbursement – Economic Analysis, Modeling Approaches, Acceptance, Limitations, and Use in HTAs 	<p>2 hours 04:30pm – 06:30pm</p>

Module B [Intermediate Level]	July 03
Day 3: Wednesday, July 3, 2019 [09:00am to 6:00pm]	
B.1. Technical Set-Up	30 min 09:00am - 09:30am
B.2. Summary of Day 2	30 min 09:30am – 10:00am
B.3. Theoretical Foundations of Models and Markov Methodology	1 hour 10:00am - 11:00am
Coffee Break	15 min 11:00am – 11:15am
B.4. Basic Techniques of spreadsheet software needed for building a model B.5. Implementing a three state model structure (normal state, temporary state and absorbing state) B.6. Building transition matrixes based on fixed probabilities (Markov chain) B.7. Implementing a half-cycle correction (several possibilities)	1 ¼ hours 11:15am – 12:30am
Lunch Break	1 hour 12:30pm - 01:30pm
B.8. Including Cost; discounting and willingness-to-pay threshold B.9. Including quality-of-life factors for calculating QALYs B.10. Implementing a second comparator to the model B.11. How to expand from Markov chains to Markov processes (i.e. age and gender dependent mortality)	2 hours 01:30pm – 03:30pm
Coffee Break	15 min 3:30pm – 3:45pm

<p>B.12. Designing and Reporting of key medical, economic and health-economic outcome parameters (cost-per-QALY-gained, net benefit calculations, etc.)</p> <p>B.13. Design and structure of a model-based health-economic study report or publication</p>	<p>2 hours 03:45pm – 05:45pm</p>
<p>B.14. Wrap-Up of the Day</p>	<p>¼ hour 05:45pm – 06:00pm</p>

Module C [Intermediate / Advanced Level]	July 04-05
Day 4: Thursday, July 4, 2019 [09:30am to 6:30pm]	
C.1. Welcome Reception and Registration	30 min 09:30am-10:00am
C.2. Introduction to Program & Objectives; Allocative Efficiency and Distribution	30 min 10:00am-10:30am
C.3. The Conventional Logic of Cost Effectiveness: A Critique (Part 1) <ul style="list-style-type: none"> – Theoretical Underpinnings, including von Neumann Morgenstern Theory – Efficiency and Equity: a simple trade-off? 	1 hour 10:30am-11:30pm
Coffee Break	30 min 11:30am-12:00am
C.4. The Conventional Logic of Cost Effectiveness: A Critique (Part 2) <ul style="list-style-type: none"> – Normative Analysis: Deontological and Consequentialist Ethics in Medicine, Economics, and Health Care Policy 	1 hour 12:00am-1:00pm
Lunch Break	1 hour 01:00pm -02:00pm
C.5. Empirical Evidence on Social Preferences <ul style="list-style-type: none"> – What are social preferences and when / why do they matter? – How to measure social preferences? – Empirical evidence on social values of citizens – Empirical versus normative ethics: How to reconcile? Some limitations 	1 ½ hours 02:00pm –03:30pm
Coffee Break	30 min 03:30pm – 04:00pm

<p>C.6. The Search for Solutions (1):</p> <ul style="list-style-type: none"> – Multi-Criteria Decision Analysis – U.S. “Value Frameworks” – Principles and Limitations 	<p>1 hour 04:00pm –05:00pm</p>
<p>Coffee Break</p>	<p>30 min 05:00pm –05:30pm</p>
<p>C.7. The Search for Solutions (2):</p> <ul style="list-style-type: none"> – Extended Cost per QALY Analysis – Social Cost Value Analysis – Principles and Limitations 	<p>1 hour 05:30pm –06:30pm</p>
<p>Summer School Dinner</p>	<p>07:30pm -10:00pm</p>
<p>Day 5: Friday, July 5, 2019 [08:30am to 03:00pm]</p>	
<p>C.8. Practical Application Introduction to Case Studies</p> <ul style="list-style-type: none"> – The “Value of a Cure” – evaluation of CAR T cell and gene therapies – Orphan Medicinal Products (OMPs): Evaluation of Expensive Drugs for Rare Diseases – Highly Effective Drugs for common diseases – the case of hepatitis C – Prevention versus Cure: Urgency of Interventions (the “rule of rescue” and low versus high risk situations) 	<p>2 hour 08:30am –10:30am</p>
<p>Coffee Break</p>	<p>30 min 10:30am - 11:00am</p>
<p>C.9. Stakeholder Perspectives Academic Health Economists</p> <ul style="list-style-type: none"> – A UK Perspective – A German Perspective 	<p>1 hour 11:00am –12:00am</p>

<ul style="list-style-type: none"> – A French Perspective 	
<p>C.10. Stakeholder Perspectives Providers</p> <ul style="list-style-type: none"> – A Perspective from the Biopharmaceutical Industry 	<p>30 min 12:00am - 12:30am</p>
<p>C.11. Stakeholder Perspectives Payers & Policy Makers</p> <ul style="list-style-type: none"> – A UK Perspective – A German Perspective – A French Perspective 	<p>1 hour 12:30am –01:30pm</p>
<p>C.12. Summary, Review & Outlook</p>	<p>30 min 01:30pm –02:00pm</p>
<p>Lunch</p>	<p>1 hour 02:00pm – 03:00pm</p>

The present draft may be subject to change and revision.

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