iDSI Workshop on Health Benefit Packages

5 September 2015 – Santiago, Chile

SUMMARY REPORT

Produced by CHE, University of York

Contents

Background

iDSI

The International Decision Support Initiative (iDSI) is an innovative global partnership between leading government institutes, universities, and think tanks in the field of healthcare priority setting. It provides unique intellectual insights with hands-on field expertise, and delivers peer-to-peer support to policymakers and international funders.

iDSI is jointly funded by: the Bill & Melinda Gates Foundation, the Rockefeller Foundation, and the UK Department for International Development.

For further information about iDSI and its current work, please visit: www.idsihealth.org/.

Health Benefit Packages (HBP)

HBP have been defined as "*services, activities and goods reimbursed or directly provided by publicly funded statutory/mandatory insurance schemes or by national health services*". An HBP defines what interventions are covered, but also for whom and in what circumstances. Countries developing and maintaining HBPs need a framework for decision making regarding what is included. This requires appropriate institutions and processes.

Decisions about coverage of healthcare interventions must be the result of a socially legitimate process where a broad range of considerations are taken into account. In this context, given the resource constraints faced by health systems, evidence of the value for money are central pieces of information.

Research methods have been used elsewhere in the world to support similar funding decisions, most notably cost-effectiveness analysis (CEA). In the context of defining or adjusting an HBP (which depends primarily upon a prioritisation process), CEA has an important role. However, different contexts may affect the manner in which CEA is applied. For example, while cost-effectiveness is typically used to assess single technologies (or multiple technologies for a specific disease), the definition of an HBP also needs to cover new interventions for different health problems.

How appropriate is CEA and other research methods in the context of HBP, particularly in low- and middle-income countries (LMICs)? How can they be further developed? What decision making processes are suitable for using CEA?

HBP workshop

There were five main objectives:

1. To discuss the potential value of specific research methods to support priority setting for HBP.

2. To discuss recent developments in priority setting that are being considered in the definition of HBP, including multi-criteria decision analysis (MCDA).

3. To identify areas where further developments in current HBP approaches are needed.

4. To discuss some of the institutional, capacity building, and process implications of using specific research methods.

5. To suggest future collaborations to support research and decision-making in Latin America.

Main discussion topics

Conveying the results of economic evaluation to the public

- There was concern that 'controversial' funding decisions, based upon economic evaluations or cost-effectiveness analysis, may be viewed as an "attack upon the public's health" if not properly conveyed.

- Presenters advised attendees to engage actively with the media and suggested that health economists are central to creating the public-image of healthcare funding allocation decisions. Establishing a network of allies with a range of stakeholders, e.g. medical doctors, politicians, academics, pharmaceutical and health technology companies, public and private insurers, and patient organisations, was deemed very important. Equally important is identifying potential opponents.

- Politics was acknowledged as being crucial to building a good public-image, e.g. NICE in the UK relied from the beginning on gaining cross-party support. Presenters suggested making health technology assessment (HTA) research more accessible to governments; this action may encourage more HTA to be commissioned in the future. An important consideration for all health economists is how to develop the political and public capacity to understand HTA and the application of its results, in order to gain wider acceptance of the decisions based upon HTA outcomes.

Multi-Criteria Decision Analysis (MCDA)

- The MCDA presenters argued that MCDA is a useful tool for decision makers who are struggling with a large number of criteria – it assists them in identifying what are the important questions to ask during the process. Attendees revealed that decision makers and other stakeholders in Latin America are typically receptive to the multi-criteria approach and swiftly adopt the basics of MCDA; in particular, the identification and definition of criteria. It was also suggested that MCDA could support the priority setting of health diseases in HBP in Latin America; where some nations have prioritised health problems and others have focused upon health services.

- Some argued, however, that the Quality Adjusted Life-Year (QALY) is already a form of MCDA because the construction of a QALY trades-off survival and quality of life which are two criteria. In addition, the CEA framework offers an opportunity to introduce other trade-offs, if needed.

- Others raised concerns that MCDA does not reflect constraints accurately; rather it defines benefit attributes. However, there was general agreement that the issue of whether or not to use MCDA was not an easy problem to resolve.

- An important question was raised about whether costs (or cost-effectiveness) should be included as a criterion. Advocates of MCDA argued that when health issues are prioritised the costs are relevant, however, the mirror of the problem must also be considered i.e. the opportunity costs incurred by operationalising an intervention, displacing other activities and forgoing health and other benefits. In other words, if MCDA is used to estimate benefits, then the costs are benefits forgone which should also reflect the criteria, scoring and weights in the MCDA.

- The MCDA session presenters claimed that the time taken to reach a decision after an MCDA cycle is comparable to that of reaching a typical HTA or committee decision. Some argued that when experienced team members are involved in the process, MCDA is a comparably more structured process than those using other cost effectiveness analysis tools.

- There was concern over how to manage potential conflicts of interest when it was necessary to give special weight to particular stakeholders. It was suggested that to neutralise conflict of interest, all affected parties should be "put in the same room". The importance of employing a strong committee Chair was also highlighted, in order to prevent dominance from strong personalities.

- Some countries in Latin America do not currently use MCDA yet their decision makers are still concerned with cost and equity. Defining equity was determined as being very important in these situations, in order for the appropriate weighting to be applied.

Improvements to economic evaluation methods

- There was a need to identify constraints to implementing interventions and build them into the economic evaluation process. Some presenters emphasised the particular importance of this process for LMICs. A fundamental issue, such as an unwillingness to change among conservative clinicians, was an especially difficult constraint.

- Heterogeneity in the value (i.e. cost-effectiveness) of interventions was identified as being very important for decision making. However, the lack of access to local data often limits the careful exploration of heterogeneity. However, it was recognised that differences in patient case mix and in other factors driving cost-effectiveness between geographic settings are central to decision making given evidence is often 'imported' from other jurisdictions.

- One approach that has been widely used is to use country-specific evidence on the baseline rate of clinical events that drive costs and health effects in the absence of the new intervention. This could be taken, for example, from registers. Then to assume (ideally with some evidence) that the relative effect of the new intervention, on the rate of those events, generalises across countries. These relative effects will generally be estimated in comparative clinical studies (e.g. randomised trials) which are usually undertaken partly or wholly outside the jurisdiction making the decisions.

Simplified vs. complex methods

- There was minor disagreement regarding the need for simplified economic evaluation methods rather than complex ones. Advocates of simpler methods argued that these would enable greater understanding by a wider range of stakeholders and, therefore, should garner greater support, i.e. there is value in developing a narrative which clinicians can "get behind". Other attendees argued that economic evaluation modellers who are capable of building complex analyses should be able to communicate how to use their work to decision makers. It was also argued that analyses should be as complex as is needed to answer a question (guide a decision), but no more complex.

- It was suggested that, as part of a capacity building strategy, decision making committees should be populated with individuals who are sufficiently trained in the CEA so they understand the complex and simplified analyses, and can inform the other members of the committee thereby ensuring greater transparency.

- Would simplification shift the 'burden of proof' from the advocates (e.g. manufacturers) of a technology to the critics (e.g. a healthcare agency) - requiring them to provide less evidence in support of their claims? It was suggested that this could occur, but that the impact of simplifying an approach is likely to vary by jurisdiction.

Developing transferable methods

- To develop methods which can be successfully transferred between different countries, researchers in Latin America may want to develop a 'minimum pack' of methods applicable to all contexts. This could be based on the iDSI Reference Case, and then determine the additional methods requirements reflecting the needs of the decision problem.

- Some countries may benefit from operating multiple cost-effectiveness thresholds (CET), e.g. the current situation in South Africa implicitly operated two.

Working with the Right to Health

- Attendees noted that many Latin American countries have the Right to Health embedded within their constitutions, the exercise of which is decided by the judicial process. There was concern among attendees regarding the problems this can produce when considering the allocation of limited resources.

- Colombia's Individual Right to Health process was presented as an alternative to the traditional system. This scheme does not result in universal health, but does ensure that some individuals are entitled to health care. Issues arise, however, when the evidence being used by a judge is inaccurate. Uruguay was cited as an example of a country where research is used to support these types of decisions.

- It was suggested that considering the Right to 'Healthcare' is a more important question and one which health economics in Latin America should be trying to address.

Considering GDP per capita as the basis of CET

- There was a discussion about GDP based CET. As GDP is an average across a country, presenters warned about the risk of GDP-based thresholds omitting the inequality in income that might exist, and emphasised the importance of considering public and private investment in different sectors.

- CETs based on GDP per capita were defined as 'demand side' thresholds that can inform the size of future budgets. This contrasts with a 'supply side' approach to estimating thresholds to reflect what can be afforded given existing resource constraints. It is for this reason that the methods described by Mark Sculpher and by Sebastian Garcia Marti (please see presentation slides) are grounded in a supply side approach.

Other discussion topics

- There was discussion about how to overcome the uncertainty inherent to country level CETs. It was suggested that the uncertainties should be incorporated into CET tools. Different assumptions in health effects can result in large changes in the estimate of the marginal health effects of a marginal change in expenditure, but not necessarily in the threshold.

- Attendees discussed the value of establishing criteria for disinvestment. Identifying the available resources in combination with well-defined disinvestment criteria help to legitimise the removal of inefficient health technologies from an HBP.

- To what extent factors, such as the education of women, should be considered in economic evaluation methods was discussed. It was suggested that these types of factors are related to health benefits i.e. cause and effect.

- There were questions about how to take account of the age of a population when determining health gain differences. Presenters concluded that researchers should allow for general health across a region as well as age differences in the Primary Care Benefit (PCB).

- Presenters from the UK were questioned about how HTA requests are issued in the UK. A horizon scanning system identifies challenges that may affect the NHS in the future. When identified, questions pertaining to these challenges are fed to a committee board before HTA or reviews of manufacturers' HTAs are commissioned (it is often undertaken by independent organisations, such as universities, with internal experience of HTA and modelling skills). The results of these HTAs help to inform resource allocation decisions.

HBP experiences in Latin America

Chile

- The decision making process in Chile is based upon expert opinion. There has been a lot of change in recent years: the Ministry of Health was established 50 years ago, and has been conducting HTA for approximately 10 years. A lot of progress has been made in Chile to increase the quantity of economic evaluation.

- One of the main challenges facing Chile is the mismatch between the research and implementation. Although there is a good amount of expertise in Chile, economic language is not always understood by decision makers who are typically neither economists nor clinicians. This language barrier is one of the major challenges that needs to be overcome in Chile.

Ecuador

- The main focus for the Ecuadorian Ministry of Health is medicines. Many clinical trials are conducted and upon completion of the trials the drug has to gain regulatory approval. The attendees from Ecuador are working to improve this process.

- A new department – the Secretary for Price Estimation for Medicines – has been set up. One of the biggest issues is that the Ministry of Health does not conduct cost-effectiveness analysis; rather it focussed upon impact on the budget.

- The main challenges include: legislation focussed upon guarantees; lack of a catalogue of health benefits; few publicised documents means limited transparency (the collection of documents is expanding however, with the assistance of Ecuadorian universities conducting HTA); and difficulties associated with communicating the notions of QALYs and supply.

- Attendees from Ecuador were positive about emerging networks aiming to help to facilitate engagement between smaller countries in Latin America. They stressed the importance of forging greater collaborations with their neighbouring countries.

Peru

- Peru's experience with HBP covers 10 years of work. This has involved a parallel process involving political and technical development. Despite political change, researchers have managed to ensure further HBP in Peru.

- Attendees acknowledged that health economists and researchers must wear a "political hat" when seeking approval from within Congress, although they have reached a general consensus with the political parties in the formation of an agenda of researchers' current work.

- The biggest challenge that remains is developing a clear definition of HBP.

Uruguay

- Uruguay's National Integrated Health System (SNIS) and National Health Fund (FONASA) were established in 2008; previously the health system was a series of systems. The three main principles covered by the SNIS are: universal coverage, accessibility, and sustainability of health services.

- The funding system operates on a capitation basis. The National Resource Fund (FNR) is an independent public organisation which funds specialised healthcare interventions that have proven effectiveness. There exists a Public Fund reserved for catastrophic expenses.

- The Integral Health Care Plan (PIAS) covers low and medium complexities, and there are set criteria for prioritising benefits. Included are the regulations for the Ministry of Public Health which are integral for healthcare providers.

- Previously, Uruguay operated a negative list of interventions. This has now been replaced by an explicit positive list; a technology is selected to be assessed to determine whether it should be included or excluded from the list. The assessment process involves seven stages: registering the technology; 'scoping' i.e. selection based on priorities; analysis of cost-effectiveness; budget impact analysis; deliberative process; decision; and the appeals process.

Future considerations and questions for researchers in Latin America

Upon conclusion of the workshop proceedings, the Chair briefly summarised the main discussion points and suggested some future considerations for researchers in Latin America. These recommendations aim to support researchers from the region in addressing the challenges raised by the workshop attendees, as well as to help further their ongoing work in HBP.

Collaborations within Latin America

- Researchers in Latin America could consider which organisations they would benefit from establishing or strengthening to develop relationships between countries, which topics these relationships should focus upon, and how these relationships should be initiated, led and managed. Partner organisations already include: iDSI, NICE International, PAHO, ISPOR, MERCOSUR, RedETSA, National Coordination Unit of Health Technology Assessment and Implementation (UCEETS).

- What are the criteria for deciding which tasks should be conducted independently or collaboratively with other countries?

- Which of the issues currently facing the Latin American region should be set as priorities?

- What benefits accrue to large LA countries from supporting smaller ones?

An HTA Latin American forum

- Researchers in Latin American may wish to consider establishing a regional forum devoted to HTA. The governance and structure of such a group would need to be given close consideration. Could such a forum be built upon an existing foundation, e.g. PAHO or the regional ISPOR chapters?

- The appropriate range of activities should be considered e.g. developing a Reference Case for HTA, or a common HBP in Latin America?

- Should this forum operate all-inclusive membership? And should it focus solely upon economic evaluation?

Generalisability

- Consideration could be given to establishing a cross-national “hub” in Latin America. This could be set-up to develop a series of different tools and methods for use and benefit in the region. Possible projects could include:
  - Devising methods for judging the generalisability or transferability of research conducted in one country to others.
  - Developing a generalisable approach to risk assessment for the region.
  - Taking receipt of proposals, for assessing external studies and applying them to the region’s context, and delivering them to client members.
  - Hosting a library of studies and conducting short evaluation appraisals of them.
  - Facilitating communications between research centres and other stakeholder groups.

Capacity building

- The type, scale, and individuals involved in capacity building within the Latin American region could be considered.
- Should capacity building be cultivated within individual nations, or should it be centralised for the entire region?
- Do all of the key actors involved in decision making have the professional capacity to receive guidance and act upon it? Is there capacity for the industry to work collaboratively with researchers and decision makers?
- Is there the governmental capacity to use and commission research; conduct quality assurance reviews of research results; and develop and maintain active working relationships with research groups?
- Does the general public have the capacity to understand and support healthcare intervention decisions? What capacity do regional media journalists, such as medical correspondents, have to understand these decisions and communicate them to the public in an impartial manner? What is the role of the research community in advocating and raising public awareness of the decision processes?
- Do research leaders have the capacity to organise regular training and skills maintenance?

Research considerations

- Researchers in Latin American may wish to consider the scope of their HBP:
  - Does it, and should it, include such topics as public health, non-healthcare determinants, workplace health and safety?
  - Has a timetable for progressing towards Universal Health Care (UHC) been set? What is a realistic timetable?
  - How could HBP be coordinated and harmonised across Latin America? Would this be the most beneficial approach for the region as a whole?
- The HBP associated financial issues could be further explored:
  - What financial protection exists?
  - Should copays be used? How suitable are scaled (by family/household income) copays?
  - What is the role of private insurance in the HBP prior to, and after, the establishment of full UHC? What treatments and individuals are covered?
  - How can equity be ensured at the funding margin and cut-off points?
- The development and use of thresholds for HBP could be reviewed:
  - What does the threshold represent? The difference between a threshold in a first best world when all is efficient (i.e. the ICER of the lowest technology included equals the highest excluded from the HBP) and a second best world where the package already includes cost-ineffective interventions (i.e. an estimate of the opportunity cost of the most productive intervention displaced)?

  - Could thresholds be linked with individual countries' budgets?
  - What is the extent of the threshold variation between, and within, Latin American countries?
  - How will thresholds need to respond to UHC, or be harmonised as there is progress towards UHC?

- Researchers may wish to consider what type of methodological work is required, and the factors that are specific to individual nations:
  - HTA, cost-effectiveness analysis, and/or MCDA? If MCDA, what challenges should be addressed using this method? Are the criteria only benefit attributes or are costs also included? How can opportunity costs be incorporated in the MCDA tool? Are there more appropriate methods by which to elicit weights?
  - Developing a Reference Case?
  - Which issues and difficulties are shared with other Latin American countries, and which are specific to one nation only?
  - Is collaboration between research centres in the region possible, or is competition valuable?
  - Should researchers collaborate with research centres and funders outside of Latin America?

- How to conduct HTA modelling and the scope of resultant models could be considered:
  - Are there issues specific to Latin America that require unique models?
  - Should modelling needs, outside of the HTA context, be considered?

- There are several potential implementation issues that may require further consideration:
  - What guidance is available, or required, for provider organisations?
  - Who is responsible for budget impact management, and what is included as part of this process?
  - What horizon scanning and long term planning/management issues may arise?
  - What are the most suitable and effective forms of communication and knowledge translation with key stakeholders, 'early adopters', educational leaders, and 'admired' professionals?

- Researchers may also want to consider the possible ethical issues that could arise from the use of economic evaluations:
  - What are the ethical implications of using HTA, cost-effectiveness analysis, and MCDA?
  - How does the Right to Health compare to the Right to Healthcare within HBP?
  - How can researchers protect their evaluation findings and the resultant decisions against corruption and undue bias, adverse publicity, and judicial review?
  - What management strategies are in place, or should be introduced, to manage 'mistakes' or errors of judgement on the part of researchers?

- Do past decisions and previous methods guidance require review?
- Would it be suitable to establish a series of standards for all countries in Latin America?
- How can researchers maintain procedural fairness?

Appendix 1: Workshop agenda

TIME	SESSION	SPEAKERS
09:30	Welcome refreshments	

10:00 – 10:30	**Introduction**
	• Setting the scene: iDSI (10 minutes)
	  – Overview of iDSI and NICE International
	  – Aims and objectives of the workshop
	• Overview of HBP (10 minutes)
	  – What's the policy position in Latin America with respect to HBP?
	  – How is CEA being used/not used so far?
	• Discussion (10 minutes)
		• Tony Culyer (CHE, University of York, UK)
		• Manuel Espinoza (Pontificia Universidad Católica de Chile)

10:30 – 11:30	**Session 1: Overview of economic evaluation methods to support health benefit package decisions**
	• Approaches to economic evaluation (25 minutes)
	  – Overview of economic evaluation
	  – How these methods could support decisions about HBP
	• Methods of cost-effectiveness analysis (15 minutes)
	  – Opportunities and challenges of using CEA to support decisions in Latin America
	• Discussion (20 minutes)
		• Lou Garrison (University of Washington, USA)
		• Aurelio Mejia (Instituto de Evaluación Tecnológica en Salud, Colombia)

11:30 – 12:00	Mid-morning refreshment break	

12:00 – 13:00	**Session 2: Making cost-effectiveness analysis more suitable for decision making**
	• The iDSI Reference Case (25 minutes)
	  – Recent developments in methods
	  – Examples of cost-effectiveness thresholds
	• Reflecting equity considerations (15 minutes)
	  – Reflections on iDSI Reference Case
	  – Comments on cost-effectiveness thresholds and incorporating equity into CEA
	• Discussion (20 minutes)
		• Mark Sculpher (CHE, University of York, UK)
		• Sebastian Garcia Marti (Instituto de Efectividad Clínica y Sanitaria, Argentina)

13:00 – 14:00	Lunch	

14:00 – 15:00	**Session 3: Broadening the basis of decision making – multi-criteria decision analysis (MCDA)**
	• What is MCDA and how does it work? (25 minutes)
	• Examples of its use internationally
	  – Overview of MCDA
	  – Examples of use
	• Relevance to supporting HBP decisions (15 minutes)
	  – How might MCDA support HBP decisions
	  – Issues and challenges with its use
	  – Experiences to date in Latin America
	• Discussion (20 minutes)
		• Mireille Goetghebeur (EVIDEM Collaboration, Canada)
		• Manuel Espinoza (Pontificia Universidad Católica de Chile)

15:00 – 15:45	**Session 4: Gaining insights from the use of cost-effectiveness in other countries**
	• What does economic evaluation need to do better? (20 minutes)
	  – Learning from experience using CEA in decisions
	• How do we make best use of economic evaluation? (25 minutes)
	  – General discussion: how can we do economic evaluation better? And what are the barriers to its use?
	  – What is the research agenda for developing methods?
	  – How to we develop research capacity?
		• Andrew Briggs (University of Glasgow, UK)
		• Mark Sculpher (CHE, University of York, UK) and all participants

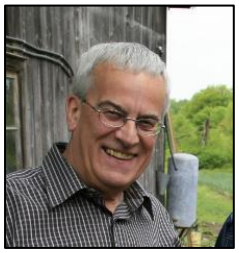
15:45 – 16:15	Mid-afternoon refreshment break	

16:15 – 17:15	**Session 5: Institution and process considerations in implementing health benefit packages**
	• Experience of NICE in UK
	  – The origins or NICE, it successes and challenges
	• Experience in Latin America
	• How does research interact with policy making?
	  – Status of HBP in the Panel members' countries
	  – What processes and institutions have emerged to support decisions about HBPs (or other decisions in the health field)
	  – Whether economic evaluation is being used to support decisions about HBPs (or other decisions in the health field)
	  – What research capacity exists in the field
	  – What is needed to make better decisions
		• Tony Culyer (CHE, University of York, UK)
		Discussion Panel:
		• Alarico Rodriguez (Fondo Nacional de Recursos, Uruguay)
		• Ruth Jimbo (Pontificia Universidad Catolica del Ecuador)
		• Pedro Crocco Abalos (Ministerio de Salud, Chile)

17:15 – 17:30	**Concluding remarks** • Future collaboration • Future iDSI activities	Tony Culyer (CHE, University of York, UK)
17:30	Close	
17:30 – 18:30	Drinks Reception	

Appendix 2: Presenters' biographies

Tony Culyer



Tony Culyer, CBE, BA, Hon DEcon, Hon FRCP, FRSA, FMedSci, is a professor emeritus in the Department of Economics and Related Studies at the University of York, UK. He has spent his career since 1969 at York. He is also an adjunct professor at the Institute of Health Policy Management and Evaluation in the University of Toronto (Canada), and an adjunct professor at the Institute for Work and Health in Toronto. He works mainly in the Centre for Health Economics (CHE).

At York, Tony was Head of Department from 1986 to 2001 and Pro- and then Deputy Vice-Chancellor between 1991 and 1997. He was the founding co-editor with Joe Newhouse of the Journal of Health Economics and the founding Organiser of the Health Economists' Study Group. He was the founding Vice Chair of the National Institute for Health and Clinical Excellence (NICE) and he still chairs NICE International's Advisory Group. Until recently he chaired the Office of Health Economics in London; he remains on its two boards. He is currently also Distinguished Visiting Scholar at the University of the Witwatersrand in South Africa.

Tony's main research interests are in health economics, deliberative decision making and health and health care in low and middle income countries.

Manuel Espinoza

Manuel Espinoza holds a medical degree and a Master degree in Epidemiology both from Pontificia Universidad Católica de Chile and a Master in Biostatistics from Universidad de Chile. He also obtained an MSc and a PhD in Health Economics from York. He joined CHE in 2009 for his PhD which he finished in 2012 under supervision of Professors Manca, Sculpher and Claxton. His work is focused on the development of methods to explore heterogeneity in cost-effectiveness analysis and free choice in the context of individualized care. He is also developing applied cost-effectiveness analysis in several clinical areas such as hepatitis C, oncology and diabetes. More recently, he has developed research to support the normative discussion of the institutionalization of health technology assessment and decision making in low and middle income countries, including legal and ethical elements.

Manuel is currently Assistant Professor in the Department of Public Health and Head of the Health Technology Assessment Unit of the Centre for Clinical Research, both at Pontificia Universidad Catolica de Chile; and Scientific Advisor of the Institute of Public Health of Chile. In the last few years he has served for the Ministry of Health of Chile in different instances related to the development of health technology assessment. He has also served as an expert consultant for implementing health technology assessment in Ecuador and for the revision of the health benefit plan in Dominican Republic.

Manuel is the current president of the Chilean Society for Pharmacoeconomics and HTA, the local Chapter of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR); President-Elect of the ISPOR LatinAmerica Consortium and director of the international board of ISPOR.

Lou Garrison

Louis P. Garrison, Jr., PhD, is Professor in the Pharmaceutical Outcomes Research and Policy Program in the School of Pharmacy, and Adjunct Professor in the Departments of Global Health and Health Services at the University of Washington, where he joined the faculty in 2004. He also co-directs the Global Medicines Program in Global Health.

Dr. Garrison's career began with 13 years in non-profit health policy research at the Battelle Human Affairs Research Centers (Seattle), and at the Project HOPE Center for Health Affairs (Virginia), where he was the Director from 1989-1992. Following this, he worked as an economist in the pharmaceutical industry for 12 years. From 2002-2004, he was Vice President and Head of Health Economics & Strategic Pricing in Roche Pharmaceuticals, and was based in Basel, Switzerland.

Dr. Garrison received a BA in Economics from Indiana University, and a PhD in Economics from Stanford University. He has more than 100 publications in peer-reviewed journals. His research interests include national and international health policy issues related to personalized medicine, benefit-risk analysis, insurance, pricing, reimbursement, and risk-sharing agreements, as well as the economic evaluation of pharmaceuticals, diagnostics, devices, surgical procedures, and vaccines, particularly as related to organ transplantation, influenza, measles, obesity, and cancer.

From 2007-2009, Dr. Garrison served on the ISPOR Board of Directors. He co-chaired two ISPOR Good Practice Task Forces—on Real-World Data and on Performance-Based Risk-Sharing Arrangements, and he chaired the ISPOR Health Science Policy Council from 2012 to 2015. He is faculty advisor for the UW ISPOR Student Chapter, and is ISPOR President-elect for 2016-17.

Aurelio Mejia[1]

Aurelio is the Deputy Director of Health Technology Assessment at the Instiuto de Evaluación Tecnológica en Salu (IETS), in addition to a researcher and lecturer in health economics and economic evaluation at the University of Antioquia. He received a Master degree in Health Economics from the University of York (UK), and has research experience in health economics with emphasis on economic evaluation. He has taught in health economic evaluation on Masters programmes in Departments of Public Health, Epidemiology and Clinical Sciences at several universities in Colombia.

He participated as coordinator of the economic component of three Guides Comprehensive Care: acute diarrheal disease, acute coronary syndrome and respiratory disorders of the newborn. He is co-editor of News Across Latin America, published by the Latin American consortium ISPOR (International Society for Pharmacoeconomics and Outcomes Research).

Mark Sculpher[2]

Mark Sculpher is Professor of Health Economics and is Director of the Programme on Economic Evaluation and Health Technology Assessment. He is also Deputy Director of the Policy Research Unit in Economic Evaluation of Health and Care Interventions (EEPRU). He has been based at York University since 1997. Between 1988 and 1997, he worked at the Health Economics Research Group at Brunel University; during 1998 he was a visitor in the Department of Clinical Epidemiology and Biostatistics at McMaster University in Canada.

[1] www.iets.org.co/quienes-somos/nuestro-equipo
[2] www.york.ac.uk/che/staff/research/mark-sculpher/

Mark has worked on economic evaluations of a range of technologies including heart disease and various cancers. He has also contributed to methods in the field, in particular relating to decision analytic modelling and handling uncertainty. He has over 200 peer-reviewed publications and is a co-author of two major text books in the area: Methods for the economic evaluation of health care programmes (OUP, 2005 with Drummond, Torrance, O'Brien and Stoddart) and Decision modelling for health economic evaluation (OUP, 2006 with Briggs and Claxton).

Mark was a member of the National Institute for Health and Care Excellence (NICE) Technology Appraisal Committee between 2004 and 2008, the NICE Public Health Interventions Advisory Committee between 2006 and 2009 and currently sits on the NICE Diagnostics Advisory Committee. He chaired NICE's 2004 Task Group on methods guidance for economic evaluation and was a member of the Methods Working Party for the 2008 update of this guidance. He was a member of the Commissioning Board for the UK NHS Health Technology Assessment Programme between 2007 and 2010, and the UK NIHR/Medical Research Council's Methodology Panel between 2008 and 2011. He is currently a member of the Policy Research Programme's Commissioning Panel. Mark is a National Institute for Health Research Senior Investigator and is a former President of the International Society of Pharmacoeconomics and Outcomes Research.

Sebastian Garcia Marti

Sebastian is currently the Executive Coordinator of Health Technology Assessment (HTA) and Economic Evaluation Department of the Institute of Clinical Effectiveness and Health Policy (IECS). He also teaches Public Health at the University of Buenos Aires and Economic Evaluation in the Clinical Effectiveness Program – a Masters programme at the University of Buenos Aires. His main interest areas include: Health Technology Assessment; systematic reviews; translating information to policy decision makers; and economic evaluations.

He is also the coordinator of the Latin American HTA and Economic Evlautionse-learning courses. He is a member of the Argentine Cochrane Group. Previously, Sebastian has conducted several training and research projects in HTA and Health Economic Evaluations in Argentina, Bolivia, Brazil, Chile, Colombia, Mexico, Peru and Uruguay, and he has experience in conducting multi-country research projects.

Sebastian graduated as a physician from the University of La Plata; held a residency in Family Medicine at the Social Security Working Union in Buenos Aires; undertook a Master of Sciences degree in Clinical Epidemiology at the University of Buenos Aires; and received training in health administration and medical informatics in Hospital Italiano of Buenos Aires.

Mireille Goetghebeur

Mireille Goetghebeur MEng PhD is Global Scientist at LASER Analytica, Adjunct professor at the School of Public Health, University of Montreal, and President of the not-for-profit EVIDEM Collaboration.

Pioneer in applying multicriteria decision analysis (MCDA) to evidence generation, evaluation and decision making on healthcare interventions, Mireille collaborates with stakeholders across the decision continuum and around the globe to optimize patient and population health and to develop equitable, sustainable and efficient healthcare systems locally and globally.

Andrew Briggs[3]

Andrew holds the William R Lindsay Chair in Health Economics at the University of Glasgow, having joined the University in 2005. Previously, he held the position of Reader in Health Economics at the University of Oxford's Health Economics Research Centre (HERC). In addition, he spent the academic year 1999/2000 at the Centre for Evaluation of Medicines (CEM), at McMaster University and he remains a research associate of both CEM and HERC.

Andrew has expertise in all areas of health economic evaluation. He has published well over 100 articles in the peer-reviewed literature. He has particularly focused on statistical methods for cost-effectiveness analysis. This includes statistical methods for estimation of parameters for cost-effectiveness models as well as statistical analysis of cost-effectiveness alongside clinical trials. He also has a more general interest in epidemiological methods, in particular the use of prognostic scoring methods for predicting health outcomes and the relationship with heterogeneity in cost-effectiveness.

Andrew recently took a leadership role as co-chair of the Joint Society for Medical Decision Making (SMDM) and International Society for PharamacoEconomics and Outcomes Research (ISPOR) Task Force on Modelling Methods. The Task Force, which was responsible for producing a set of seven papers covering all aspects of modelling methods applied to medical decision making and health technology assessment. He is also the author of two successful textbooks, one published by OUP entitled Decision Modelling for Health Economic Evaluation, and another published by Wiley entitled Statistical Methods for Cost-Effectiveness Analysis. In addition to his role at the University of Glasgow, he also serves as Editor of the journal Health Economics, and is on the editorial board of Value in Health.

Alarico Rodríguez de León

Alarico is the Technical Co-Chair of the National Medical Resources Fund for Highly Specialized Medicine in Uruguay (FNR).

He is Academic Coordinator of Course Design and Management of Joint Health Benefits at the Virtual Campus of PAHO / WHO Collaborating Center, a founding member of the Uruguay Cochrance Collaborating Center, and an Assessment Program Quality researcher for FNR.

He advised the Government of Guyana in updating the "Package of Publically Guaranteed Health Services", and he participated in the technical group that designed the Comprehensive Plan of Care for Health (PIAS) of Uruguay and the Working Group on Prioritization of Health Center for Global Development (CGD).

Ruth Jimbo

Ruth is a Family Physician and Health Technology Assessment Specialist. She is currently pursuing a Master degree in Health Economics at the University Pompeu Fabra of Spain.

She is also an Associate Professor at the Undergraduate and Graduate School of Medicine Pontificia Universidad Católica del Ecuador, and is also employed as a Health Technology Assessment Consultant at Ministry of Public Health of Ecuador.

[3] www.gla.ac.uk/researchinstitutes/healthwellbeing/staff/andrewbriggs/

Pedro Crocco Abalos

Pedro holds a medical degree and a Master degree in Health Administration from the University of Chile, Santiago, and a Master degree in Public Health from Johns Hopkins University, Baltimore.

He currently heads the Disease Prevention and Control Division in the Chilean Ministry of Health, and is responsible for collaborating to create the expertise, information, and tools that the decentralised health systems requires to protect health through health promotion, prevention of disease, injury and disability, and preparedness for new health threats. Pedro is also a Professor at the School of Public Health, University of Chile, where he oversees the teaching of undergraduate and postgraduate students and performs research in the field of public health policy.

Previously, Pedro has held senior positions within the Chilean health care system and international organisations, including most recently: head of the Department of Studies and Division of Health Prevention and Control in the Chilean Ministry of Health; and regional adviser on health systems at PAHO responsible for, among other duties, collaboration in the organisation and management of health systems and services and implementation and updating of national policies and plans for the development of quality health services.

Appendix 3: Attendee list

Alarico Rodríguez de León	Fondo Nacional de Recursos, Uruguay
Alexandra Rollinger	Centre for Health Economics, University of York, UK
Alfonso Gutierrez	Ministerio de Economía y Finanzas, Peru
Alfredo Sobrevilla	Health Finance & Governance Project, Perú
Alicia Ferreira	Fondo Nacional de Recursos, Uruguay
Andres Ruiz	ISPOR: Colombian Chapter
Andrew Briggs	University of Glasgow, UK
Aurelio Mejía	Instituto de Evaluación Tecnológica en Salud, Colombia
Carlos Balmaceda	Pontificia Universidad Católica de Chile
Constanza Vargas	Pontificia Universidad Católica de Chile
Diana Téllez	Latin American Market Access Group, Colombia
Diego Guarin	ISPOR Latin America Consortium Advisory Committee
Durfari Janive Velandia Naranjo	Centro de Estudios e Investigación en Salud (CEIS), Fundación Santa Fe de Bogotá, Colombia
Edward Mezones-Holguin	Superintendencia Nacional de Salud (SUSALUD), Perú
Eliana Perez Carrasco	Dirección General de Medicamentos, Insumos y Drogas, Ministerio de Salud, Perú
Fernando Alarid	University of Minnesota, USA
Francisco Caccavo	Pan American Health Organization (PAHO), USA
Graciela Fernández	Fondo Nacional de Recursos, Uruguay
Hilda Mantilla Ponte	
Juliana Costa	Centro Colaborador do SUS, Brazil
Kariluz Maestre	International Society For Pharmacoeconomics and Outcomes Research (ISPOR): Colombian Chapter
Lou Garrison	University of Washington, USA
Manuel Espinoza	Pontificia Universidad Católica de Chile
Maria Armijos	Ministerio de Salud Pública, Ecuador
Marianela Castillo	Departamento de Economía de la Salud, Ministerio de Salud, Chile
Mark Sculpher	Centre for Health Economics, University of York, UK
Marta Soares	Centre for Health Economics, University of York, UK
Mireille Goetghebeur	Evidence and Value: Impact on DEcisionMaking (EVIDEM), Canada
Oscar Gianneo	Fondo Nacional de Recursos, Uruguay
Pedro Crocco Abalos	Ministerio de Salud, Chile
Pedro Saramago	Centre for Health Economics, University of York, UK
Rafael De Feria	Unidad de Evaluación de Tecnologías Sanitarias, División de Planificación de la Salud, Ministerio de Salud, Chile
Roberta Wichmann	Ministério da Saúde, Brazil
Rosalba Maekawa	Dirección General de Medicamentos, Insumos y Drogas, Ministerio de Salud, Perú
Rubén Rojas Payacan	Pontificia Universidad Católica de Chile

Ruth Jimbo Sotomayor	Pontificia Universidad Catolica del Ecuador
Sebastian Garcia Marti	Instituto de Efectividad Clínica y Sanitaria, Argentina
Tony Culyer	Centre for Health Economics, University of York, UK
Victoria Hurtado	Unidad de Evaluación de Tecnologías Sanitarias, División de Planificación de la Salud, Ministerio de Salud, Chile
Viviana Garcia Carmona	Unidad de Evaluación de Tecnologías Sanitarias, División de Planificación de la Salud, Ministerio de Salud, Chile
Xavier Sanchez	Ministerio de Salud Pública, Ecuador
Yajaira Bastardo	Facultad de Farmacia. Universidad Central De Venezuela