CADTH WORKSHOP

An Introduction to Network Meta-Analysis
A Hands-On Workshop
with Dr. George Wells

February 22 to 23, 2017

February 24: Optional day on advanced applications

Network meta-analysis (NMA) is a general term for the statistical method used to compare multiple treatments and their alternatives simultaneously. The method involves combining direct and indirect evidence in a single analysis, resulting in summary estimates of efficacy or safety for treatments that may not have been compared head-to-head in a randomized controlled trial. It is also known as mixed or indirect treatment comparisons.

This two-day workshop will provide an overview of NMA and its applications, including demonstrations of worked examples and hands-on sessions where participants will work through real-world examples.

An optional third day is available for those interested in the application of integrating findings from NMA into health economic evaluations and other advanced applications.

Who Should Attend?

You should consider taking this workshop if you are starting to encounter NMA or indirect treatment comparisons in your work and are unsure what it is, how to do it, or how to interpret the results:

- Health care and health policy organizations, health technology assessment bodies
- Pharmaceutical and medical device industry
- Academic and research institutions
- Health insurance organizations
- Consultancy organizations
- Biostatisticians and methodologists

The workshop will be presented in English.

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Sessions run from 9:00 a.m. to 5:00 p.m. each day

February 22, 2017

- Introduction to indirect treatment comparisons
- NMA methods: Bucher approach, frequentist NMA, Bayesian NMA
- Heterogeneity, consistency, convergence, and prior distributions
- Worked example using Bayesian approach
- Exercise examples and datasets, and overview to breakout analyses sessions and plenary report-back sessions

February 23, 2017

- Introduction to the IDC Program
- Hands-on exercises, with breakout analyses sessions and plenary report-back sessions
- Methodological issues
- Guidance on writing and assessing an NMA report

February 24, 2017 (optional third day)

- Application to economic evaluations, including worked examples for economic evaluation
- Disconnected networks
- Rare events
- Evaluating safety
- Grading the evidence

Learning Objectives

- To be aware of the role of indirect evidence in comparing treatments when direct clinical evidence is not available.
- To understand the Bayesian and frequentist approaches to NMA.
- To be able to conceive, implemement and conduct an NMA.
- To appreciate the cautions associated with conducting and interpreting NMA.

Prerequisites

- An understanding and appreciation for systematic reviews and meta-analyses.
- The optional third day on advanced concepts is only open to those who attend introductory workshop.

Registration Fees (plus HST)

Online registration available at: **cadthevents.ca/nmaworkshop2017/registration**

Academic/government — 2-Day Intro Workshop..... $999 (plus HST)
Academic/government — 1-Day Advanced Concepts ..... $499 (plus HST)
Commercial organizations — 2-Day Intro Workshop ..... $1,999 (plus HST)
Commercial organizations — 1-Day Advanced Concepts..... $999 (plus HST)

Visit **cadthevents.ca/nmaworkshop2017/registration** for more information or to register for this event. Please contact **events@cadth.ca** with any questions.

Presenters

George Wells

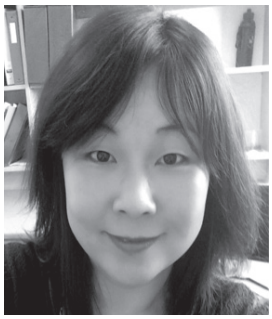
Dr. Wells is a Professor in the School of Epidemiology, Public Health and Preventive Medicine at the University of Ottawa and Director of the Cardiovascular Research Methods Centre (CRMC) at the University of Ottawa Heart Institute. He is also a Professor in the Department of Medicine and a Senior Investigator at the Ottawa Hospital Research Institute at the Ottawa Hospital. His research interests are in the design and analysis of clinical trials, statistical methodology related to health care delivery, systematic reviews and meta-analyses, economic evaluations, and the development and assessment of decision support technologies for patients and practitioners. Dr. Wells is the author or co-author of more than 700 published articles and 900 scientific abstracts. He has been the principal investigator or co-investigator on more than 260 research projects. He has taught at the university graduate and undergraduate level for 35 years and has supervised more than 80 graduate students. Dr. Wells is currently the co-NPI for the Canadian Institutes for Health Research (CIHR)-Drug Safety and Effectiveness Network (DSEN)–funded network meta-analyses team Methods and Applications Group for Indirect Treatment Analyses (MAGIC).

William Wong

William W.L. Wong, M.Math., Ph.D. is a Decision Modeller and an Assistant Professor at the School of Pharmacy at the University of Waterloo. Dr. Wong's research is focused on infectious diseases modelling and health services and outcomes research, particularly related to hepatitis B and C. His health services and outcomes research interests include quality of life research, costing, and return on investment. Methodology research interest includes advanced decision-analytic modelling techniques (such as discrete event simulation models and agent-based models) for health technology assessment, cost-effectiveness analyses, and pharmacoeconomics evaluation studies. Dr. Wong is also an investigator in the Toronto Health Economics Technology Assessment (THETA) Collaborative, which provides evidence-based decision-making support to policy-makers through research in health economics and health technology assessment. Dr. Wong collaborates with policy-makers and researchers at the Public Health Agency of Canada (PHAC), Canadian Agency for Drugs and Technologies in Health (CADTH), and Public Health Ontario on various hepatitis C related projects. He also works closely with researchers at the University of Toronto, University of Guelph, University of Calgary, and Université de Montréal on joint research projects and publications. He is a member of a recent Canadian Network on Hepatitis C and for Zika Virus Program of the Canadian Institutes for Health Research-Drug Safety and Effectiveness Network (CIHR)–funded team grants.

Shannon Kelly

Shannon Kelly has managed the Health Technology Assessment Unit in the Cardiovascular Research Methods Centre (CRMC) at the University of Ottawa Heart Institute since 2011. Her role there includes planning, overseeing, and undertaking network meta-analyses (NMA) research projects for a variety of Canadian and international research partners. She is the NMA lead for the Methods and Applications Group for Indirect Treatment Analyses (MAGIC) team and co-lead for evidence synthesis projects for the Ontario Drug Policy Research Network (ODPRN). She is also a Ph.D student in the School of Epidemiology, Public Health and Preventive Medicine at the University of Ottawa. Shannon obtained her M.Sc. in epidemiology from the University of Ottawa where her research focused on methods for expedited evidence synthesis. Her current research centres on methods for health technology assessment of therapeutic medical devices. She is a trainee with the Cardiac Arrhythmia Network of Canada (CANet), a national research network funded by the Government of Canada's Networks of Centres of Excellence.



Li Chen

Li Chen is a senior biostatistician in the Cardiovascular Research Methods Centre (CRMC) at the University of Ottawa Heart Institute. She obtained her M.Sc. in biostatistics from the School of Epidemiology, Public Health and Preventive Medicine at the University in Ottawa. She has multiple years of experience conducting network meta-analyses for the Methods and Applications Group for Indirect Treatment Analyses (MAGIC) team, the Ontario Drug Policy Research Network (ODPRN), and other CRMC projects. Her research focuses on health technology assessment, with a particular emphasis on Bayesian evidence synthesis, decision-analytic modelling, and data analyses for clinical trials.

Jesse Elliott

Jesse Elliott is a research assistant in the Cardiovascular Research Methods Centre (CRMC) at the University of Ottawa Heart Institute. Since 2014, Jesse has been involved in the design and conduct of systematic reviews and network meta-analyses. She is also a PhD student in the School of Epidemiology, Public Health and Preventive Medicine at the University of Ottawa. Her current research focuses on the effectiveness, safety, and cost-effectiveness of treatments for a rare form of pediatric epilepsy. Jesse is also a Stream 1 Trainee in the Drug Safety and Effectiveness Cross-Disciplinary Training (DSECT) program, which is funded by the Canadian Institutes for Health Research-Drug Safety and Effectiveness Network (CIHR-DSEN).