theta Quarterly

SPRING 2014

The Toronto Health Economics and Technology Assessment Collaborative Newsletter

Editorial

Economic Evaluation in Sub-Saharan Countries

Dr. Petros Pechlivanoglou's teaching experience in Addis Ababa, Ethiopia

As societies become wealthier, the demand for improved healthcare increases. However, even in the wealthiest societies healthcare resources are finite and cannot fully satisfy this increasing demand. In this context of limited resources and a virtually limitless demand for healthcare, stakeholders are interested in identifying those interventions or technologies that make efficient use of healthcare resources. In countries with a public healthcare insurance system, the payer (i.e. the government) often relies on the findings of economic evaluations to support decisions on efficiently allocating resources across medical technologies. Economic evaluation is a framework that offers a systematic approach to identifying, measuring and valuing the costs and health consequences of an intervention. In other words, an economic evaluation provides the government or other reimbursement authorities with a framework for efficient, evidence-based decision making.

Sub-Saharan countries are faced with a more challenging scenario since the financial resources allocated to healthcare are fewer, the human resources for healthcare are scarce, and the demand for healthcare is increasing at an even faster pace. In such a scenario, identifying effective but low-cost technologies becomes imperative. In addition, until recently large health insurance systems in most Sub-Saharan countries have been almost absent. Therefore, in most Sub-Saharan countries there has been no institutional body to conduct or asses an evidence-based evaluation of the medical, social, economic and ethical implications of reimbursing a new or existing technology. Instead, economic evaluations have typically been commissioned or executed by international organizations (e.g. WHO, World Bank) to assist in prioritizing foreign donations and other resources across disease areas. Most of these evaluations have been applied to interventions in communicable diseases and targeted vulnerable populations (e.g. children and pregnant women). Economic evaluations have also been conducted by local and foreign academic institutions, but mostly for academic purposes, and have rarely informed policy decision making. However, as national healthcare insurance systems start to emerge across Sub-Saharan countries like Ghana, Uganda, South Africa and Ethiopia, the importance of economic evaluation in resource allocation decisions is becoming

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theta Collaborative

Insurance coverage, increase in health-care costs create growing need for high-quality economic evidence in developing countries

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apparent. In response to that efficiency already has become a component of reimbursement decisions for some of these insurance systems. Although the quality of the evidence base is not always high and the influence from outside sources on the reimbursement decision is considerable, the establishment of an evidence based decision framework is a step towards efficient resource allocation.

The efficiency of insurance-covered technologies is an important aspect but certainly not the only one that needs to be considered in decision making in Sub-Saharan countries. Equally, or more importantly, is the aspect of feasibility. Regardless of whether a technology is identified as efficient, absence of human and financial resource capacity or lack of infrastructure will prevent it from actually being implemented. Feasibility is becoming an increasingly important factor given the rise in the incidence of non-communicable diseases, where implementation of most treatments requires infrastructure, advanced equipment and skilled human resources. For example, in Ethiopia where human capacity in oncology is limited, adoption of a cost-effective intervention that would require a multidisciplinary oncology team would have to be considered in conjunction with the fact that there are only 13 oncologists and 26 nurses dedicated to the care of at least 51,700 new cancer cases per year. Although the current methods used in economic evaluation are not specifically designed to deal with concepts like feasibility, the frameworks for reimbursement decisions that are constructed around economic evaluations can serve as a systematic way of incorporating such components in decision making.

Dr. Petros Pechlivanoglou teaching in Addis Ababa, Ethiopia

However, a centralized reimbursement system by itself is not sufficient for economic evaluation to start supporting healthcare resource allocation decisions. Human capacity in conducting and assessing economic evaluations is also necessary. Healthcare policy makers need to become more familiar with the advantages and limitations of economic evaluation. Healthcare providers need to gain an understanding of the basic principles underlying economic evaluation so that they can assess the implications of decision making that is at least partially based on evidence from an economic evaluation. Furthermore, Sub-Saharan countries need to build capacity of researchers and educators who can perform such economic evaluations, improve and adjust the methodological processes to reflect the needs of such healthcare systems as well as offer knowledge translation to the public with respect to the usefulness of evidence-based decision making.

Initiatives aimed at improving the education of current and future academics and policy makers in topics related to efficient resource allocation are slowly sprouting across Africa. Local academic centres, often in cooperation with foreign partners, provide workshops and courses to graduate students and policy makers. In March 2014, Dr. Petros Pechlivanoglou, a health economist at THETA, led such a graduate course in Pharmacoeconomics at the School of Pharmacy of Addis Ababa University. The course was a part of the Toronto Addis Ababa Academic Collaboration (TAAAC); a collaboration that aims at building and strengthening capacity in medical specialities and other

See “HTA students...” on next page

Dr. Murray Krahn receives Dr. Jill M. Sanders Award of Excellence in Health Technology Assessment

THETA Director Dr. Murray Krahn receives the Dr. Jill M. Sanders Award from Bernadette Preun, Vice-Chair of the CADTH Board of Directors (Article and photo courtesy of CADTH)

Dr. Brian O'Rourke, President and CEO of the Canadian Agency for Drugs and Technologies in Health, is pleased to announce that Dr. Murray Krahn has been selected as the 2014 recipient of the Dr. Jill M. Sanders Award of Excellence in Health Technology Assessment (HTA).

"Dr. Murray Krahn has long been one of the brightest leaders in the field of HTA in Canada," says Dr. O'Rourke. "This recognition is a testament to his exceptional contributions to the methodology of HTA, but also his dedication to nurturing and mentoring the next generation of scientists."

As an academic researcher who keenly understands clinicians and health policy decision-makers, Dr. Krahn is highly respected for his efforts to establish partnerships between policy-makers and HTA organizations. He played a significant role in establishing the Toronto Health Economics and Technology Assessment (THETA) collaborative, where he is currently the Director and co-principal investigator.

Dr. Krahn is also nationally and internationally recognized for his complex research that examines the interface between evidence-based medicine, health economics, and decision-making.

In particular, he is widely known for his work to estimate the cost-effectiveness of universal hepatitis A and C vaccination in Canada, as well as the development of a clinical policy model to estimate long-term costs in prostate cancer.

See "THETA Director..." on next page

HTA students in Ethiopia described resource allocation as key issue

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health and non-health professional programs in Addis Ababa. The course gave Ethiopian graduate pharmacy students the opportunity to familiarize themselves with the principles of economic evaluation of pharmaceutical products, technologies and services, as well as to implement these principles in real-life decision problems. During the course, students identified important problems of efficiency within the existing healthcare system (e.g. the excess societal and healthcare costs associated with expired or nearly expired donated medications or the cost-effectiveness of different prevention alternatives for cervical cancer). Students also expressed their worries that unless efficient resource allocation becomes a component of future decisions, the healthcare system will not be able to withstand the increasing demand and rising costs. With rapid changes in the healthcare system, a new era of non-communicable diseases, and increasing healthcare costs, a transition to evidence-based healthcare resource allocation for Ethiopia is indeed essential. In order for this transition to occur, investment in building capacity in economic evaluation and evidence-based decision making is necessary. This will ensure that there can be a continuing stream of sufficient skilled individuals to provide objective, scientific advice on evidence meant to inform future decision making. Collaborations like TAAAC, where Ethiopian stakeholders and content experts from settings where economic evaluation is broadly used in decision making interact, will likely facilitate shaping this transition.

New Project

THETA is happy to announce the launch of SIESTA

SIESTA enrolls its first five participants!

Home Sleep Study with ApneaDx™ for the Diagnosis and Management of Obstructive Sleep Apnea – SIESTA: A Pragmatic Randomized Controlled Trial

Research team: Murray Krahn, Mike Fitzpatrick, Valeria Rac, Merrick Zwarenstein, Lusine Abrahamyan, Tetyana Kendzerska, David Chartash, Petros Pechlivanoglou, Ba' Pham, Nicholas Mitsakakis, Steven Carcone, Suzanne Chung

SIESTA proposes to examine the validity, effectiveness, and cost-effectiveness of ApneaDx™, a new single-channel portable monitor designed to capture and analyze breath sounds to detect sleep apnea versus in-laboratory overnight sleep study with polysomnography – the gold standard for the diagnosis and management of obstructive sleep apnea.

SIESTA is both a multi-centre prospective validation study, as well as a pragmatic randomized single-blinded two armed non-inferiority trial. With a planned sample size of 330 participants, SIESTA will take approximately two years to complete.

SIESTA is currently at the recruitment stage at the Kingston and Hamilton study sites. Dr. Mike Fitzpatrick is the lead Clinical Investigator at the Kingston Sleep Disorders Laboratory, with Nancy Farr as the onsite Study Coordinator. At the Hamilton Sleep Disorders Clinic, we have Dr. Ray Gottschalk as the Clinical Investigator and Jason Myers as the onsite Study Coordinator. REB submission is underway for our third site, Sleep & Apnea Assessment Unit in London Health Sciences Centre - Victoria Hospital with Dr. Charlie George.

ApneaDX™ is one of the first three companies selected by the MaRS Excellence in Clinical Innovation and Technology Evaluation ("EXCITE") program. In the initial two weeks of recruitment, the trial has enrolled five participants

THETA hosts researchers from Norway

On January 30th THETA hosted Professor Ivar Sønbø Kristiansen and Associate Professor Torbjørn Wisløff to an all day workshop to explore common areas of research interest and avenues for future collaboration. Professor Kristiansen is a member of the Economic Evaluation of Health Technologies research group from the University of Oslo. Professor Torbjørn Wisløff, also a member of University of Oslo research team, works for the Norwegian Knowledge Centre for the Health Services (NOKC).

THETA Director honoured for roles in research, leadership and education

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In addition to these many achievements, Dr. Krahn also plays a pivotal role in training and mentoring many of the rising stars currently working in HTA today. Among his current and former students, he is admired not only for conveying his passion for research and encouraging independent thinking, but also for providing critical opportunities for students to develop the wide range of skills they need to build successful careers.

Dr. Krahn completed his undergraduate medical training at the University of Manitoba and completed an Internal Medicine Residency at the University of Toronto. He subsequently went on to do both a Master's Degree in Clinical Epidemiology at McMaster University and a Clinical Fellowship in Decision Making at the Tufts-New England Medical Center in Boston. In addition to his work at THETA, Dr. Krahn is also the F. Norman Hughes Chair in Pharmacoeconomics at the University of Toronto Faculty of Pharmacy and an attending physician at the University Health Network.

New Projects

Health Consequences and Cost-Effectiveness of Hepatitis B Screening Before Adjuvant Chemotherapy for Patients with Early Stage Breast Cancer: A Modeling Perspective

Funded by the Canadian Breast Cancer Foundation

Research team: Kelvin Chan, Jordan Feld, William W.L. Wong, Kathleen Pritchard, Lisa Hicks, Murray Krahn

Adjuvant chemotherapy for patients with breast cancer improves overall survival. However, it also exposes patients to toxic and occasionally life-threatening side effects. An under-recognized and preventable toxicity is the risk of Hepatitis B virus (HBV) reactivation. Two percent of the Canadian population is chronically infected with HBV, with the prevalence in high risk groups such as Aboriginal and foreign-born populations being over 10%. Many infected individuals are unaware of their infection. When chemotherapy is administered to breast cancer patients in the absence of antiviral prophylaxis, HBV reactivation occurs in up to 50% of patients. HBV reactivation is associated with hepatitis, hospitalization, compromised liver function and death. It can also lead to interruption or early termination of chemotherapy which may compromise long-term breast cancer outcomes. The pre-emptive use of HBV antiviral therapy can largely prevent HBV reactivation. The objective of the study is (1) to estimate the health consequences of different hepatitis B screening strategies for patients with breast cancer undergoing adjuvant chemotherapy; and (2) to determine the comparative cost-effectiveness of the hepatitis B screening strategies for patients with breast cancer undergoing adjuvant chemotherapy.

Pathways to Procurement: Processes, Rationales & Options for Investing in Health Technology Innovation

Canadian Institutes of Health Research (CIHR) 3.5 year Operating Grant $354,718 (2014-2018)

PI: Miller FA
Research team: Lehoux P, Krahn M, Peacock S, Rac V, Pham B.

New and innovative health technologies offer opportunities to improve health, but typically at increased cost. Health policy makers usually focus on the challenges this creates for hospitals and other health care organizations, which face growing demand with limited resources. From the perspective of industrial policy, however, the development and sale of innovative health technologies can contribute to economic growth and employment. Increasingly, therefore, health policy makers are being asked to consider both sets of policy objectives, and to think about how the purchasing practices of health care organizations might be used to improve the health technology innovation system – to build health-improving and cost-reducing health technologies and profitable health technology industries, over the long term.

Very little is currently known about how hospitals and other health care organizations purchase innovative health technologies. Thus, a first step for this study is to describe these arrangements, to find out what kinds of organizations are involved, and how evidence of the clinical effects and costs of technologies are considered, alongside other factors. This also allows us to understand why these arrangements exist – who supports them and why, and what types of policies influence them. Taken together with existing knowledge and theory, evidence from this study can identify the policy options that exist, and their applicability in the Canadian context, and support more informed discussion and consideration of what we might be able to achieve through careful use of the buying power of healthcare systems in Canada, and what conflicts and compromises might arise as a result.

Estimating the Cost of Health Care among Dialysis Patients

Cancer Care Ontario (Ontario Renal Network): $189,972 (2013-2015)

PI: Murray Krahn
Research team: Claire de Oliveira, Phil McFarlane, Erik Landriault, Amit Garg, Karen Bremner, Stephanie Dixon, Nicholas Mitsakakis

This study will estimate total and dialysis-related health care costs for all chronic kidney disease patients in Ontario who initiated long-term dialysis from 2005 to 2012. We will classify patients according to type of dialysis, and estimate costs for the first 12 months and first 5 years after commencing dialysis. We also propose to examine how utilization and costs for each type of dialysis have changed over time and which services have contributed to the observed changes.

Institutional approvals have been obtained and the analysis for this study will begin in mid-April.

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New Projects

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Program Evaluation of Telehomecare for Patients with Heart Failure or Chronic Obstructive Pulmonary Disease: TeLeCare (TLC) Study

Ontario Ministry of Health and Long-Term Care through BRIDGES: $426,540 (2013-2017)

PI: Murray Krahn
Co-PI: Valeria Rac
Research team: Nida Shahid, Yeva Sahakyan, Iris Fan, Christelle Moneypenny, Souzi Badr, Lusine Abrahmyan, Petros Pechlivanoglou, Ba' Pham, Nicholas Mitsakakais, Murray Krahn

This study will take a multi-level approach to evaluate the Telehomecare (THC) program offered to patients with HF or COPD across Toronto Central, North East and Central West Local Health Integration Networks (LHINs) in Ontario. Primary objective is to explore the organizational factors (facilitators and barriers) and processes, which facilitate or impede the adoption and implementation of telehomecare across three LHINs. Furthermore we will explore how do various models of THC-enabled patient self management impact patient outcomes, participant's experiences (patients, providers, technicians and administrators involved in telehomecare program), and system costs for chronic disease management (HF or COPD) in Ontario. This will be accomplished using semi-structured interviews, surveys, and observation of practices of everyone involved as well as by exploring the patterns of THC use and interactions of patients with THC providers. Patient data, such as number of ED visits, hospital admissions, will be looked at to determine changes in patients' use of healthcare services and costs.

Developing and Validating the BUSS (Bladder Utility Symptom Scale) - A Disease-Specific Utility Instrument for Bladder Cancer Health-Related Quality of Life

Canadian Institutes of Health Research: $278,960 (2013-2015)

Co-PIs: Murray Krahn, Girish Kulkarni
Research team: Shabbir Alibhai, Kirstin Boehme, Karen Bremner, Anthony Finelli, Nathan Perlis, Paul Ritvo

This study is the first phase in the development of the Bladder Utility Symptom Scale (BUSS), an indirect utility instrument for bladder cancer (BCa): developing the questionnaire and assessing its psychometric properties.

We performed a literature search on quality of life related to BCa and its treatments. We retrieved 1275 citations and reviewed 170 publications, yielding 169 items. Thematic synthesis was used to group items into 12 themes (domains) and create a conceptual framework. Focus groups with 12 BCa experts and 47 BCa patients confirmed the domains and identified 83 clinically important items, which were further refined. The final BUSS conceptual framework included BCa-specific (urinary, sexual, bowel, body image) and generic domains (pain, vigor, social, psychological, sleep, functional, family relationship, medical care relationship). Pilot testing of the BUSS was completed among a subset of the BCa experts and 41 BCa patients as a means of assessing self-administration feasibility, readability, and content validity. Multi-centre reliability and validity testing are currently underway.

Project Updates

Development of an Economic Policy Model for Hepatitis C Drug Pipeline

Research Team: Murray Krahn, William W.L. Wong, Hong-Anh Tu, Wendong Chen, Jordan Feld, Kristen Chelak, Karen M Lee, Julie Blouin

Please see the next update below for details.

Cost-Effectiveness of Screening Hepatitis C in Canada

Research Team: Murray Krahn, William W.L. Wong, Hong-Anh Tu, Wendong Chen, Jordan Feld, Tom Wong, Ping Yan, Dana Paquette

Both the "Development of an Economic Policy Model for Hepatitis C Drug Pipeline" and the "Cost-Effectiveness of Screening Hepatitis C in Canada" projects have been completed. Manuscripts were prepared for publication. The economic model was currently used by the Canadian Agency for Drugs and Technologies in Health (CADTH) in part of the therapeutic review.

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Project Updates

Continued from previous page

Clinical and Cost-effectiveness of MedsCheck in Ontario Seniors: A mixed-methods study

THETA Team: Murray Krahn (PI), Valeria Rac, Lusine Abrahamyan (project lead), Petros Pechlivanoglou, Fiona Miller, Sarah Patton, Susanne Priest, Nicholas Mitsakakis, Suzanne Chung, James Bowen, Paul Grootendorst, Job van Boven, Mohammed Mahdi

OPEN Team: Linda MacKeigan (lead), Lisa Dolovich (co-lead), Nedzad Pojskic, Suzanne Cadarette, Andrea Burden, Giulia Consiglio, Lori MacCallum, Elizabeth Bojarski

Over the recent years the roles and the scope of practice of community pharmacists have been expanding in Canada towards more patient-centered care. In April 2007, Ontario launched the MedsCheck Annual program – a medication review led by community pharmacists for patients taking at least three prescription medications for a chronic condition. This study aims to evaluate factors that affect the likelihood of receiving a MedsCheck Annual review in Ontario seniors, estimate its clinical and cost-effectiveness, and explore the 'real world' context of medication reviews as they were experienced by patients and pharmacists. The study was initiated in September 2013 and is funded by the Blueprint for Pharmacy.

Both quantitative and qualitative methods will be utilized for the study. We will use ICES administrative databases to evaluate the predictors and the effectiveness and cost-effectiveness of the medication reviews. Ethnographic observations and in-depth interviews will be conducted to explore the 'real world' context of the reviews.

In February 2014, THETA project team signed a Collaborative Agreement with The Ontario Pharmacy Research Collaboration (OPEN), a multi-institutional and interdisciplinary research network initiated in 2012 and funded by the Government of Ontario to evaluate "the quality, outcomes and value of medication management services that pharmacists and other healthcare professionals provide" (www.open-pharmacy-research.ca). The agreement was signed to enhance the research capacity and methodological expertise of both groups and reduce duplications. The teams aligned their research agendas and timelines and are currently working on this project together.

Ontario Stroke Unit Study

Research Team: Murray Krahn, Mark Bayley, Moira Kapral, Valeria Rac, Luciano Ieraci, Gabrielle van der Velde, Ruth Hall, Linda Kelloway, Iris Fan

Data collection for OSUN is expected to be complete by early spring. Currently, the ICES data linkage has begun. A poster and mini oral were presented at the 4th Canadian Stroke Congress in Montreal: http://stroke.ahajournals.org/content/44/12/e174.full

Cancer costs in B.C. and Ontario

Research Team: Murray Krahn, Jeff Hoch, Stuart Peacock, Claire de Oliveira, Karen Bremner, Kelvin Chan, Reka Pataky, Winson Cheung, Paulos Teckle, Mahbubul Haq

THETA Collaborative and University Health Network (UHN) are undertaking a large-scale project that seeks to estimate the costs of cancer care for twenty-one cancer sites in British Columbia and Ontario using linked administrative health care data. In particular, researchers are examining the costs of chemotherapy, radiation therapy, hospitalization, same-day surgery, emergency room visits, physician services, outpatient drugs, diagnostic testing, home care, continuing care and long-term care, as well as mean total costs.

The objectives of this work are to estimate pre-diagnosis and first year post-diagnosis costs for each cancer site; understand temporal trends in patterns of care and costs for the first year post-diagnosis for a few cancer sites; and calculate net cancer costs by phase of case, 5-year costs and lifetime costs of cancer care. These estimates can help inform policy-makers' decisions regarding resource allocation for cancer prevention and control, and can serve as important inputs for economic evaluations.

In the past year, the team has published in CMAJ Open research evaluating the trends in the cost of initial cancer treatment in Ontario. This work can be found at http://www.cmajopen.ca/content/1/4/E151.full and was recently mentioned on The Current on CBC Radio in the context of World Cancer Day: http://www.cbc.ca/thecurrent/episode/2014/02/05/the-increasing-cost-of-treating-cancer/ .

At last year's Canadian Centre for Applied Research in Cancer Control (ARCC) conference, Reka Pataky, Health Economist and Data Lead at ARCC, presented the direct medical costs of care for BC and Ontario for the 21 most common cancer sites by phase of care. This presentation provided insight on

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Project Updates

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how costs of care differ by cancer and phase, and highlighted the need for standardization of methodology between provinces to enable inter-provincial comparisons. This work is being prepared for publication.

The study team is currently working on ensuring that the same costing methods are being used in both provinces to calculate net costs of care (i.e. the cost difference between patients with and without cancer).

THETA Staff

Welcome Nida Shahid!

Nida is a new Research Associate at THETA Collaborative. She completed her undergraduate studies in Life Sciences at the University of Toronto. She underwent a formal training in clinical trial management as a Certified Clinical Research Associate (CCRA) at McMaster University and is a member of the Society of Clinical Research Associates (SoCRA). Currently, Nida is planning a post-graduate training in Epidemiology to further expand her knowledge and interest.

Nida has over five years of experience in coordinating and managing large multi-center studies, the Ontario Birth Study in the Department of Obstetrics & Gynaecology at Mount Sinai Hospital, Evaluating Processes of Care & the Outcomes of Children in Hospital (EPOCH) at The Hospital for Sick Children and numerous resuscitation studies from RESCU, Division of Emergency Medicine in St. Michael's Hospital.

As her main expertise, she has developed a study Quality Assurance plan ensuring highest integrity of study data by providing methodology to assess measurement of primary and secondary outcomes in EPOCH study, which took her on-site monitoring at site-hospitals across Eastern, Western Canada (including Quebec) and New Zealand. She has been leading data management on multiple knowledge translation studies. Her expertise also lies with Randomized Clinical Trials involving medical device and registry-based studies funded by the National Institute of Health (NIH), Canadian Institute of Health Research (CIHR) and Heart & Stroke Foundation.

Nida is currently the project lead for a multi-level evaluation study: Program Evaluation of Telehomecare for Patients with Heart Failure or Chronic Obstructive Pulmonary Disease: TeLeCare (TLC) Study, which is funded by the Ontario Ministry of Health and Long Term Care through BRIDGES.

Welcome Yeva Sahakyan!

Yeva is a new Research Associate at THETA collaborative. She received her medical degree from the Yerevan State Medical University and holds a Master's degree in Public Health from the American University of Armenia. During her years of study she received merit based university-wide awards for her outstanding academic performance. Over 7 years she was an assistant professor and practicing physician at the "Department of Clinical Pharmacology" further at "Department of Internal Medicine" at Yerevan State Medical University Hospital. Prior to joining THETA, Yeva spent two years as a Clinical Research Associate at "Astellas Pharma Europe" pharmaceutical company and received a best employee award for successful implementation and execution of international multicenter phase III and IV clinical trials in Urology and Neurology (Eudra CT N2011-005713-37; Eudra CT N2011-005872-41) in Armenian centres.

Yeva's research interests and expertise include telehomecare, cardiovascular health, gender research, and clinical trial design.

THETA Staff continues on next page

CONFERENCES

Upcoming

Click titles for more information.

ISPOR 19th Annual International Meeting
Examining the role of big data on health-care decision making
May 31-June 4, 2014, Montreal

Society for Medical Decision Making 15th Bienniel European Meeting
Special Focus on Clinical Decision Making in the Era of Personalized Medicine
June 8-June 10, 2014, Antwerp

HTAi 11th Annual Meeting
June 16-18, Washington, DC
(Pre-conference June 14-15)

Health Services Research: Evidence Based Practice
1st Annual Conference, presented by BioMed Central
July 1-3, London, UK

Society for Medical Decision Making 36th Annual North American Meeting
Medical Decision Making Among Diverse Populations: Advancing Practice, Policy and Science
October 18-22, Miami

CADTH Symposium 2015
April 12-14, 2015, Saskatoon

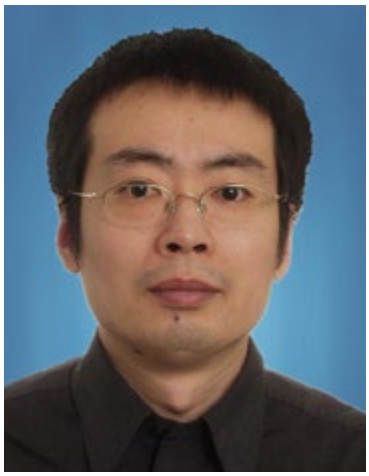
Recently held

Click titles for more information.

CADTH Symposium 2014
April 12-14, 2014, Saskatoon

SMDM Asia-Pacicfic Conference 2014
January 6-8, 2014, Singapore

THETA Staff



Welcome Shawn Xie!

Xuanqian (Shawn) Xie is a research associate at THETA and a health economist at Health Quality Ontario.

He completed his undergraduate study in Medicinal Chemistry at Beijing Medical University, China, and obtained a MSc degree in Public Health from the University of Southern Denmark, focusing on health economic evaluation. After that, he received the statistical programming training, and obtained the Certified Advanced Programmer for SAS 9. Prior to joining THETA, he had been working for six and half years as a Biostatistician at the Technology Assessment Unit (TAU) of McGill University Health Center, Montreal. In this duration, he received further training in health economics and biostatistics. At TAU, he contributed to a number of projects on HTA, cost-effectiveness analysis and meta-analysis for medical devices, diagnostic tests and medications. Also, he conducted the statistical analyses for a couple of diagnostic radiology studies using the hospital data and pharmacoepidemiology studies using the administrative database.

His research interests include the economic evaluation of diagnostic test(s), decision-analytic model for the long-term outcomes (i.e. Markov model and discrete event simulation), and Bayesian meta-analysis.

Visiting Scholar from Shanghai

THETA would like to welcome Bin Wu! Bin will be a visiting scholar at THETA Collaborative for twelve months. He completed his PhD in Clinical Pharmacology at Shanghai Jiaotong University. His main research focus is in Chinese health technology assessment, including costing disease burden, measuring utilities and developing clinical decision models using mathematical methods.

In the Spotlight

Karen Bremner talks utilities and development of the PORPUS

Karen Bremner is a Research Associate in Clinical Decision Making and Health Care at the Toronto General Hospital (University Health Network). At Toronto General Hospital, Ms. Bremner's recent interests have been in the area of health-related quality of life and utility assessment in prostate cancer patients, and she has played an integral role in the development of a prostate cancer-specific utility instrument.

"My introduction to utility measurement was conducting a study to assess the responsiveness of the Patient-Oriented Prostate Utility Scale (PORPUS), a prostate cancer-specific indirect utility instrument. At that time, it did not have utility weights. Instead, patients answered the PORPUS and this description was used as the "your current health" choice in the standard gamble. The "Full Health" choice was no problems on any of the 10 PORPUS items. I was trained on how to administer the rating scale and standard gamble, and recruited patients from urologists and oncologists at Toronto General and Princess Margaret Hospitals. A few years and several hundred interviews later, I certainly knew how to do the standard gamble and I had learned a lot about prostate cancer, its treatment, and the patients. I went to a meeting of the Society of Medical Decision Making in San Diego where I attended everything about utility. I came home dreaming about palm trees and fascinated with utility.

The responsiveness study confirmed that the PORPUS was sensitive to change, so the next study was development of the utility weights. We used weights derived from prostate cancer patients rather than the general public. The latter was used for the Health Utilities Index and the EuroQol, and is generally considered the ideal by health economists. However, patients are the recipients of treatment and they must live with its outcomes. Also, we suspected that having prostate cancer might alter one's view. The most frequent side effects of prostate cancer treatments are urinary, bowel, and sexual dysfunction. The average man might consider these, especially the latter, to be devastating to quality of life. But I had interviewed many patients who considered them to be reasonable alternatives to having cancer.

This study involved obtaining rating scale values and standard gamble utilities for health state scenarios derived from combinations of levels of attributes on the PORPUS. The responsiveness study had elicited utilities for patients' own health. Considering scenarios stretched the imaginations of some men, but very few could not understand the task at all. With Dr. George Tomlinson's statistical expertise, we developed a function to calculate PORPUS utility scores.

The PORPUS is now available as an indirect utility instrument specific to prostate cancer. Patients at the Prostate Centre at Princess Margaret Hospital routinely complete the PORPUS at their visits. This rich longitudinal database has many potential applications. We administered the PORPUS to over 500 patients in an Ontario-wide mail survey, thus providing utilities for long-term survivors of prostate cancer. The PORPUS has been translated into German and used by researchers and

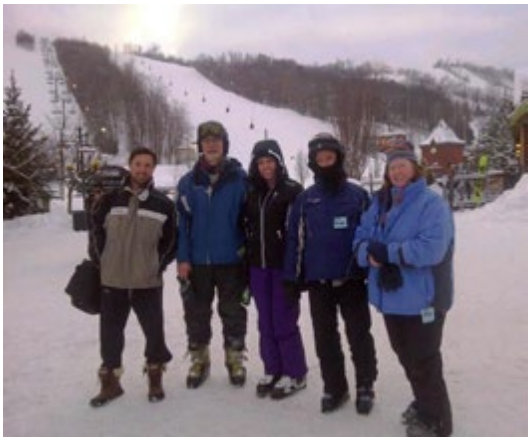
clinicians in Germany and Austria. Two PORPUS websites allow patients to complete the PORPUS on-line in English or German, and get their utility score. A group in Barcelona recently translated the PORPUS into Spanish with help from Dr. Murray Krahn and I, and a paper was submitted to a journal. We were approached by Dr. Leslie Wilson from San Francisco, who wanted to estimate PORPUS utilities from Prostate Cancer Index scores. She, Murray, Dr. Nicholas Mitsakakis, and I derived a mapping function, thereby allowing estimation of PORPUS utilities from the multitude of clinical and research studies that used the Prostate Cancer Index.

We have often had to justify the PORPUS' use of patient weights to decision modellers and economists, but it is consistent with the recent focus on the patient perspective. Patient-centred care, patient reported outcomes (PRO), and the Patient-Centered Outcomes Research Institute (PCORI) all reflect involving patients in decision-making and considering their values and preferences."

Gallery Winterlude!

On February 3rd THETA staff hit the slopes of Blue Mountain and trails of the Scenic Caves for Winterlude 2014. The group had a fantastic time snowboarding, alpine and cross-country skiing, under a partly cloudy sky and balmy* temperature of -8°C. Below are some photos of the day, including the après-ski.

**I think it's safe to say that anything above -10°C could be considered balmy for the winter we've just experienced!*



THETA Rounds

Friday, May 9, 2014
Louise Russell, PhD
Making Public Decisions about Health:
Cost-Effectiveness and Cost-Benefit Analysis

Friday, May 30, 2014
Prof. Maarten J. Postma
Role of Health Economics and its Specificities in the Dutch Reimbursement of Vacciness

THETA is pleased to announce that future THETA Rounds will be recorded and posted on the THETA website.

Thank you to our 2013-2014 series presenters!

Fernando Alarid
Dr. Ahmed Bayoumi
Shannon Cope
Dr. Courtney Davis
Dr. Stuart Hogarth
Dr. Ivar Kristiansen
Dr. David Moher
Ester Moher
Dr. Petros Pechlivanoglou
Ba' Pham
Dr. Lisa Prosser
Dr. Valeria Rac
Dr. Heather Taffet Gold

HTA Institute 2014

Health Technology Assessment for Decision Makers

July 14-16, 2014
Dalhousie University, Halifax

THETA together with the Department of Community Health and Epidemiology at Dalhousie University in collaboration with the Institute of Health, Policy, Management and Evaluation, Leslie Dan Faculty of Pharmacy, and the CIHR-STIHR Health Care, Technology and Place Program will host the 2014 Health Technology Assessment Institute for Decision Makers.

The HTA Institute will bring together experts from a range of disciplines to provide attendees with pragmatic tools for HTA. This three-day intensive course will be useful to individuals who use HTA to make decisions relating to drugs, devices, and programs.

For more information visit:
http://theta.utoronto.ca/HTAI

THANK YOU FOR READING THETA QUARTERLY

We welcome your comments.
info@theta.utoronto.ca

theta Collaborative

TORONTO HEALTH ECONOMICS AND TECHNOLOGY ASSESSMENT COLLABORATIVE (THETA)

Leslie Dan Pharmacy Building
University of Toronto
6th Floor, Room 658
144 College Street
Toronto, ON M5S 3M2

Tel: 416-946-3718
Fax: 416-946-3719
Email: info@theta.utoronto.ca

theta.utoronto.ca