

P R O G R A M



Asia - Pacific Meeting

Informing Health Care Decision-Making
with Evidence

January 6-8, 2014

The Regent Hotel, Singapore



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SMDM Asia-Pacific Conference

Oral & Poster Abstract Sessions

Monday, January 6, 2014

AM 1. SMDM CORE COURSE: INTRODUCTION TO MEDICAL DECISION ANALYSIS (DECISION-ANALYTIC MODELING)

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9:00 AM - 12:00 PM: Mon. Jan 6, 2014

Tanglin II (The Regent Hotel)

Course Director(s): Beate Jahn, PhD

Course Faculty: Ursula Rochau, MD, MSc

Objectives:

By the end of this course, participants will

- 1) understand the key concepts and goals of medical decision analysis,
- 2) know the basic methods of decision tree analysis and Markov modeling and be able to choose the appropriate model type for a given research question
- 3) understand why and when decision-analytic modeling should be used in clinical evaluation, and
- 4) be able to critically judge the conclusions derived from a decision-analytic model and know the strengths and limitations and of modeling

Course Description:

This half day course provides an introduction into medical decision analysis a tool for clinical evaluation, benefit-harm analysis and medical decision making. During the course, participants will develop a basic understanding of:

- Key concepts, definitions and goals of medical decision analysis
- Creating the structure of a decision-analytic model
- Measuring benefits, harms, and patient preferences
- Application of modeling techniques such as decision trees and Markov models
- Perform a medical decision analysis with uncertainty/sensitivity analyses
- Translate the results from decision analysis into medical decision making and clinical guidelines

Using practical examples, participants will be guided through the main modeling steps. Examples from the published literature will be discussed to understand the application of modeling techniques to specific decision problems and research questions. Modeling recommendations of the ISPOR-SMDM Joint Modeling Good Research Practices Task Force will be presented to allow participants assessing and judging the quality and validity of decision models. Strengths and limitations of medical decision analysis will be discussed at the end of the course.

For introductory reading the following literature is recommended:

Hunink MG, Glasziou PP, Siegel JE, Weeks JC, Pliskin JS, Elstein AS, Weinstein MC. Decision

making in health and medicine. Integrating evidence and values. Cambridge: Cambridge University Press, 2001.

The course was developed by Uwe Siebert, MD, MPH, MSc, ScD.

AM 2. INTRODUCTION TO SYSTEM DYNAMICS FOR HEALTH CARE SERVICES

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9:00 AM - 12:00 PM: Mon. Jan 6, 2014

Tanglin III (The Regent Hotel)

Course Director(s): *David B. Matchar, MD*

This class introduces the basics of SD as applied to health care issues. The session will be divided into three parts. First, the participants will be introduced to the development of the SD methodology, with a focus on its applications in health care. Second, key elements of SD models will be introduced, including causal loops (reinforcing and balancing), time delays, stocks and flows, and the relationship between endogenous structure and system behavior. Third, participants will be guided through hands-on exercises designed to introduce Vensim PLE to show users how to develop simple SD models.

Objectives:

By the end of the sessions, participants will:

- Develop a basic understanding of key concepts (feedback, causal loops, polarity of causal links, stocks and flows (including how to distinguish them));
- Understand the potential and limitations of SD models in resolving complex health issues;
- Be able to construct simple SD stock and flow models with use of Vensim PLE Software.

It is recommended that participants read the following articles, which provide background information on the history, iconography, potential and limitations of SD modeling.

1. Homer JB, Hirsch GB. System dynamics modeling for public health: Background and opportunities. *American Journal of Public Health*. 2006 Mar; 96(3):452-8.
2. John D. Sterman. System Dynamics modeling: Tools for learning in a complex world. <http://www.systemdynamics.org/conferences/2002/proceed/papers/CAREVIEW/C2STERMA.P>
3. Richardson GP. Reflections on the foundations of system dynamics. *System Dynamics Review*. 2011 Jul-Sep;27(3):219-43.

FD 2. INTRODUCTION TO HEALTH TECHNOLOGY ASSESSMENT

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9:00 AM - 5:00 PM: Mon. Jan 6, 2014

Boardroom III (The Regent Hotel)

Course Director(s): *Jeremy Goldhaber-Fiebert, PhD, Murray D. Krahn, MD, MSc*

Course Faculty: *Fiona Alice Miller, , Jeffrey Hoch, PhD*

Objectives:

By the end of the course, participants will gain

- 1) Understanding of the key concepts and steps to performing an HTA
- 2) Familiarity with HTA methods and be able to provide a detailed description of performing an HTA in a particular applied context
- 3) The ability to describe the organization of typical administrative data sources and the potential linkages
- 4) Understanding of methods for extracting, analyzing, and utilizing administrative data for HTAs

Course Description:

This full day course provides detailed information on performing Health Technology Assessments (HTA) and the increasingly important use of primary data from administrative data sources in performing such analyses. The course includes discussion of appropriate methods, motivated by applied examples with time for group discussion about HTA topics most relevant to course participants.

For introductory reading the following literature is recommended. PDF of these articles will be emailed to participants prior to the course.

Health technology assessment: history and demand
by Andrew Stevens, Ruairidh Milne and Amanda Burls
Journal of Public Health Medicine Vol. 25, No. 2, pp. 98–101
DOI: 10.1093/pubmed/fdg022

The development of health technology assessment
David Banta
67 rue de la Roquette, 75011 Paris, France
Received 28 October 2001; accepted 26 March 2002
Health Policy 63 (2003) 121[1]/132

HTA 101- INTRODUCTION TO HEALTH TECHNOLOGY ASSESSMENT

Clifford S. Goodman, Ph.D.
The Lewin Group
Falls Church, Virginia, USA
clifford.goodman@lewin.com
January 2004

AM 3. MICROSIMULATION AS A TOOL TO MODEL HEALTH CARE DECISIONS

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9:00 AM - 12:00 PM: Mon. Jan 6, 2014

Tanglin IV (The Regent Hotel)

Course Director(s): Mark S. Roberts, MD, MPP

The goals of the course are to provide an understanding of the limitations of cohort-based simulations, and illustrate how microsimulation releases many of the limitations implied by using standard state based (Markov) models. The course will:

- Review basic modeling types (branch and node decision trees, state transition models) and describe their limitations
- Describe the technique of individual microsimulation and demonstrate its equivalence to constructing very large state transition model
- Illustrate how individual heterogeneity can be incorporated into microsimulation models
- Provide examples of the use of microsimulation from several disease models
- Describe the computational and interpretive issues inherent in microsimulation models, especially with regards to sensitivity analysis
- Define and illustrate 1st order and 2nd order Monte Carlo methods

Throughout the course, recommendations from the SMDM/ISPOR workshop on best modeling practices will be reviewed.

The objectives of this short course are:

- Understand the limitations of cohort-based modeling
- Distinguish types of problems that may require microsimulation from those that do not
- Learn best practices in microsimulation model construction
- Distinguish the types of sensitivity analysis and understand the computational issues involved in probabilistic sensitivity analysis in microsimulation

FD 1. INTRODUCTION TO SHARED DECISION MAKING COMMUNICATIONS AND DECISION SUPPORT TECHNOLOGIES IN DIVERSE CULTURAL ENVIRONMENTS

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9:00 AM - 5:00 PM: Mon. Jan 6, 2014

Boardroom II (The Regent Hotel)

Course Director(s): *Dana (Dane) L. Alden, PhD*

Course Faculty: *Anne M. Stiggelbout, PhD, Lyndal Trevena, MBBS, MPH, PhD*

Consideration of cultural (e.g., individual versus family decision making) and socio-economic (e.g., resource constraint) differences is extremely important in any discussion of the globalization of SDM and attendant technologies. Thus, a central focus of the course is on cultural and socio-economic targeting and tailoring of SDM communications in increasingly diverse patient populations.

Extensive interactive discussion of alternative approaches will provide participants with tangible tools for adapting pre-existing and/or developing new approaches to SDM in different environments.

A model for real time tailoring based on individual cultural differences will also be introduced.

Course participants will also learn basic design of patient decision support technology. Design steps include: 1) deciding on theories and other criteria (e.g., IPDAS) to guide development, 2) determining what components and information to include; and 3) adapting the overall decision support technology in terms of culture and socio-economics to optimize effective communication of the risk and value/lifestyle implications of treatment and screening alternatives.

Critical to the success of the course will be active participation by attendees in group break-outs and general discussions. Course participants' professional and/or personal experiences will greatly enhance the applicability of broader principles to the Asia-Pacific context.

By the end of the course, participants will:

1. Appreciate the difference between the extant patient-provider decision models.
2. Understand the elements of the shared decision making model.
3. Know the evidence regarding the benefits as well as the limitations of shared decision making's impact on medical outcomes.
4. Understand basic steps to consider when designing patient decision support technologies.
5. Understand broader relationships between culture, SDM and patient decision support.
6. Have a practical tool kit for improving the cultural concordance of SDM and decision support communications and technologies.
7. Appreciate the challenges and successes of shared decision making projects in diverse cultural and socio-economic environments as provided both by course faculty and course participants.
8. Have internalized concrete exemplars of SDM/decision technology cultural targeting and tailoring to use in applying course takeaways.

PM 1. UTILITIES, PREFERENCE MEASURES, AND QALYs

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2:00 PM - 5:00 PM: Mon. Jan 6, 2014

Tanglin II (The Regent Hotel)

Course Director(s): Ahmed Bayoumi, MD, MSc

We will review five main topics: 1) The concept of preference measurement / utility and its role in decision sciences; 2) the most common direct preference-based measures, including the Standard Gamble, the Time Trade-Off, and the Visual Analog Scale; 3) Indirect measures of utility, including the EQ-5D, the SF6D, and the Health Utilities Index; 4) The QALY model, its strengths and limitations; and 5) A brief overview of non-preference based measures for measuring utility and alternatives to the QALY. By the end of the course, participants should be able to:

- Describe the main methods for measuring utilities and their relative strengths and weaknesses
- Recognize the main strengths and limitations of each method and of direct and indirect utility measurement
- Appreciate the main strengths and limitations of the QALY approach

Attendees are asked to bring a laptop loaded with Microsoft Excel to complete the exercises.

PM 2. BUILDING A BUSINESS CASE: EXAMPLES FROM WEIGHT LOSS INTERVENTIONS

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2:00 PM - 5:00 PM: Mon. Jan 6, 2014

Tanglin III (The Regent Hotel)

Course Director(s): Eric A. Finkelstein, PhD, MHA

Course Faculty: Marcel Bilger, PhD

The course will provide a broad overview of the following types of research and applications related to obesity interventions:

- Burden of illness studies,
- Cost-benefit and cost-effectiveness analyses, and
- Business case analyses.

Participants will come away from the course with

- An understanding of research methods that have been used to influence medical decision-makers
- A discussion of which public and private sector payers are most interested in which types of analyses.

This course is taught at an introductory level and is appropriate for those who wish to understand how best to use research to promote medical decision making. The format will be a mix of lecture and discussion based on real-life case studies. There are no prerequisites for participation. The course will be taught by Eric Finkelstein, PhD, and Marcel Bilger, PhD who are both faculty at the Duke-NUS Graduate Medical School Singapore.

PM 3. A BEGINNERS GUIDE TO PROBABILISTIC MODELING AND VALUE OF INFORMATION ANALYSIS

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2:00 PM - 5:00 PM: Mon. Jan 6, 2014

Tanglin IV (The Regent Hotel)

Course Director(s): Andrew Briggs, DPhil

Course Faculty: Olivia Wu,

This course provides an introduction to the principles and practice probabilistic modelling and Value of Information analysis. It is aimed at those who have seen the presentations and heard the terminology and now want to interpret the figures, understand the implications and use the techniques themselves. The course will cover the concepts of EVPI, EVPPI, EVSI and ENBS, detailing when each approach can be used and for which questions. The foundations of VOI analysis on an appropriate probabilistic representation of uncertainty will be emphasised. Case studies will be used to illustrate the techniques where appropriate and participants will get the opportunity to undertake an exercise to calculate the expected value of perfect information.

The objectives of the course are:

- to de-mystify the techniques of Value of Information analysis
- for participants to be able to comprehend and explain the results of VOI analyses
- for participants to understand the different levels of VOI analysis and which questions can be addressed by each of the different techniques
- to emphasise the role of probabilistic modelling of uncertainty as a basis for VOI
- for participants to have the opportunity to undertake an Expected Value of Perfect Information exercise in excel

Timetable

14:00 – 14:05 - Introduction to course

14:05 – 14:50 - Lecture session: Undertaking probabilistic analysis

14:50 – 15:30 - Lecture session: VoI principles

15:30 – 16:00 - Coffee break

16:00 – 16:45 - Practical session: Probabilistic analysis & EVPI

16:45 – 17:15 – Lecture session: VoI interpretation & understanding

17:15 – 17:30 - Wrap-up & Conclusions

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Nassim (The Regent Hotel)

Posters:

TREATMENT PREFERENCES OF PATIENTS WITH ENDOMETRIAL CANCER AND CLINICIANS

*Marleen Kunneman, MA¹, Arwen H. Pieterse, PhD¹, **Anne M. Stiggelbout, PhD¹**, Remi A. Nout, MD, PhD¹, Moniek Kamps², Oswald J.A. Mattheussens, MD³, Ludy C.H.W. Lutgens, MD, PhD⁴, Roy F.P.M. Kruitwagen, MD, PhD² and Carien L. Creutzberg, MD, PhD¹, (1)Leiden University Medical Center, Leiden, Netherlands, (2)Maastricht University Medical Center, Maastricht, Netherlands, (3)Rijnland Hospital, Leiden, Netherlands, (4)MAASTrict Radiation Oncology Clinic, Maastricht, Netherlands*

BREAST CANCER PATIENTS' INVOLVEMENT IN ADJUVANT SYSTEMIC THERAPY DECISION-MAKING: THE LEVEL OF INVOLVEMENT DIFFERS DEPENDING ON WHO ASSESSES IT AND THE TYPE OF THERAPY

*Ellen G. Engelhardt, MSc.¹, Anine J. Griffioen¹, Nanny van Duijn-Bakker¹, Anja van der Hout, MSc.¹, Koos J.M. van der Hoeven, Dr., MD.¹, Ellen MA Smets, PhD², J. (Hanneke) CJM de Haes, PhD², Arwen H. Pieterse, PhD¹ and **Anne M. Stiggelbout, PhD¹**, (1)Leiden University Medical Center, Leiden, Netherlands, (2)Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands*

HEALTH EXPENDITURE AND ECONOMIC GROWTH

*Hiroaki Kakihara, Ph.D., M.D., MSc, **Michitoshi Yamaguchi, Ph.D.**, XinXin Ma, Ph.D. and Hiroyasu Yoneda, Ph.D., Kyoto University, Kyoto, Japan*

PROJECT SIGNET: A MODEL CAPACITY BUILDING PROGRAMME FOR EVIDENCE-INFORMED DECISION-MAKING

***Joseph L. Mathew**, Advanced Pediatrics Centre, Chandigarh, India, T. Lazar Mathew, PSG Institute of Advanced Studies, Coimbatore India, Coimbatore, India, Jeremy Lim, Insights Health Associates, Singapore, Singapore and Ang Shin Yuh, Singapore Health Services, Singapore, Singapore*

NAIVELY OPTIMISTIC? A SYSTEMATIC REVIEW OF PATIENTS' EXPECTATIONS OF THE BENEFITS AND HARMS OF TREATMENTS, SCREENING, AND TESTS

Tammy C. Hoffmann, PhD, BOccThy, (Hons)** and **Chris Del Mar, MBBChir, MA, MD, Bond University, Gold Coast, Australia

PATIENT AND PHYSICIAN PERCEPTIONS OF THE INFLUENCE OF CONFLICTS OF INTEREST ON A MEDICAL DECISION WITH AMBIGUOUS BENEFITS

***Sorapop Kiatpongsan, MD**, *Harvard Interfaculty Initiative in Health Policy, Cambridge, MA, Anjali Kaimal, MD, MAS, Massachusetts General Hospital, Harvard Medical School, Boston, MA, Michael I. Norton, PhD, Harvard Business School, Boston, MA and Milton C. Weinstein, PhD, Harvard School of Public Health, Boston, MA**

DO HEALTHCARE PROFESSIONALS' EXPECTATION CONCUR WITH PATIENTS?: AN ACCEPTABILITY STUDY ON A DIABETES PATIENT DECISION AID

***Ping Yein Lee, MBBS, MMed(Family, Medicine)**¹, *Ee Ming Khoo*², *Wah Yun Low*², *Yew Kong Lee, MA*³, *Khatijah Lim Abdullah*², *Akmal Syahidatul*² and *Chirk Jenn Ng*², (1)Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Serdang, Malaysia, (2)Faculty of Medicine, University of Malaya, Wilayah Persekutuan, Malaysia, (3)University of Malaya, Kuala Lumpur, Malaysia*

INFORMATION SEEKING BEHAVIOR OF NURSES DURING POST-OPERATIVE PAIN ASSESSMENT AND MANAGEMENT DECISION-MAKING

***Thurayya Eid, PhD, MSN, BSN**, *King Abdulaziz University Hospital, King Abdulaziz University, Jeddah, Saudi Arabia, Elizabeth Manias, PhD, MNursStud, GradCertCritCare, MPharm, BPharm, The University of Melbourne, Melbourne, Australia and Tracey Bucknall, PhD, GradDipAdvNurs, BN(Honors), ICUCert, Deakin University, Melbourne, Australia**

DECISION MAKING FOR PAP TESTING AMONG PACIFIC ISLANDER WOMEN

***Jie W. Weiss, PhD**¹, *Michele Mouttapa, PhD*¹, *Jasmine DeGuzman Lacsamana, MPH*¹, *Lourdes Quitigua*², *Lola Lola Sablan-Santos, MPH*² and *Sora Park Tanjasiri, DrPH*¹, (1)California State University, Fullerton, Fullerton, CA, (2)Guam Communications Network, Long Beach, CA*

PERSPECTIVES ON DECISION MAKING FROM PARENTS OF ADULTS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITY

Kathleen M. Fisher, PhD¹, Joan R. Bloch, PhD¹ and Marcia R. Gardner, PhD², (1)Drexel University, Philadelphia, PA, (2)Seton Hall University, South Orange, NJ

CERVICAL CANCER INFORMATION NEEDS OF DISADVANTAGED, RURAL WOMEN IN TAMIL NADU, INDIA: DESIGNING A PATIENT-CENTRED INTERACTIVE VOICESITE ACCESSED VIA MOBILE PHONE

Lyndal Trevena, MBBS, MPH, PhD¹, Rita Isaac, PhD², Ian Olver, MBBS, PhD¹ and Madelon Finkel, PhD³, (1)University of Sydney, Sydney, Australia, (2)Christian Medical College, Vellore, India, Vellore, India, (3)Weil Cornell Medical College, New York, NY

ELDERLY PEOPLE'S SATISFACTION WITH HOME TELEHEALTH SERVICES AND USE INTENTION

Shu-Lin Uei, PhD., Candidate, Mennonite Christian Hospital, Hualien, Taiwan and Yu-Ming Kuo, Dr., Tzu Chi College of Technology, Chia-Yi, Taiwan

OPTIMIZING REPACK SIZES FOR OUTPATIENT PHARMACY AUTOMATED DISPENSING SYSTEMS

Hong Yee Lim¹, Eric Yng Xixin Yang¹, Hui Hui Wang², Wee Chuan Hing³, ***Kiok-Liang Teow, MSc²***, Zhecheng Zhu² and Angeline Chiam³, (1)Tan Tock Seng Hospital, Singapore, Singapore, (2)National Healthcare Group, Singapore, Singapore, (3)National University Hospital, Singapore, Singapore

EVALUATION OF THE NET BENEFIT OF BREAST CANCER MASS-SCREENING: AN ANALYSIS OF BENEFIT AND HARM USING A MATHEMATICAL MODEL OF AGE SPECIFIC POPULATION DYNAMICS

Miwako Tsunematsu, MHS and Masayuki Kakehashi, PhD, Hiroshima University, Hiroshima, Japan

A COST-EFFECTIVENESS ANALYSIS OF TREATMENT STRATEGIES FOR SYMPTOMATIC UTERINE FIBROID

Chung Yin Kong, PhD, Massachusetts General Hospital, Boston, MA

MANILA DOCTORS HOSPITAL STRATEGY FOR QUALITY AND EFFECTIVE STROKE CARE (MDH QUEST STUDY)

Cristine C. Santelices, MD, Jeffrey S. Delos Santos, MD and Bernadette Tumanan - Mendoza, MD, Manila Doctors Hospital, Manila, Philippines

ISSUES WITH COST-EFFECTIVENESS MODELLING OF DIAGNOSTIC TESTS CASE STUDY OF ISCHAEMIC CARDIOMYOPATHY

Praveen Thokala, PhD, University of Sheffield, Sheffield, United Kingdom

METHODS FOR EVALUATION OF MEDICAL DEVICES

Praveen Thokala, PhD, University of Sheffield, Sheffield, United Kingdom

CONTEMPORARY PROFILE OF DIABETES-RELATED ED VISITS IN THE UNITED STATES A REPORT FROM 2006-2010 HCUP NATIONWIDE EMERGENCY DEPARTMENT SAMPLE

Lakshmi Venkitachalam, PhD¹, Mary Gerkovich, PhD¹, Stephen Simon, PhD¹, Arif Ahmed, BDS, PhD, MSPH², Karen Williams, PhD¹ and William Lafferty, MD¹, (1)University of Missouri-Kansas City, Kansas City, MO, (2)University of Missouri - Kansas City, Kansas City, MO

UNDERSTANDING PATIENT FLOWS AND CONSULTATION PATTERNS FOR CARE DELIVERY IN EMERGENCY DEPARTMENT

Fanwen Meng, PhD¹, Palvannan R. K., MSc¹, Kiok-Liang Teow, MSc¹, Eugene Guo Liang Lam, BNurs² and Chee Kheng Ooi, MBBS, MSc², (1)National Healthcare Group, Singapore, Singapore, (2)Tan Tock Seng Hospital, Singapore, Singapore

A CONTEMPORARY POPULATION-BASED COMPARATIVE ANALYSIS OF OUTCOMES AND COSTS FOLLOWING ROBOTIC AND NON-ROBOTIC RADICAL CYSTECTOMIES IN THE UNITED STATES

Jeffrey J. Leow, MBBS, MPH¹, Stephen Reese¹, Wei Jiang, MS¹, Stuart R. Lipsitz, ScD¹, Benjamin I. Chung, MD² and Steven L. Chang, MD, MS¹, (1)Brigham and Women's Hospital, Boston, MA, Boston, MA, (2)Stanford University Medical Center, Stanford, CA, Stanford, CA

ASIA'S RAPID ECONOMIC DEVELOPMENT AND TRENDS IN NUTRITIONAL HETEROGENEITY ACROSS AGE AND SEX: A MULTI-COUNTRY COMPARISON

Kimberly Babiarz, MA, PhD¹, Karen Eggleston, PhD², Qiulin Chen, PhD³ and Jeremy Goldhaber-

Fiebert, PhD², (1)Centers for Health Policy and Primary Care and Outcomes Research, Stanford, CA, (2)Stanford University, Stanford, CA, (3)Chinese Academy of Social Sciences, Beijing, China

BUDGET IMPACT ANALYSIS OF LINEZOLID IN THE TREATMENT OF METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) CONFIRMED NOSOCOMIAL PNEUMONIA IN CHINA

Seng Chuen Tan, MSc, IMS Health Asia Pacific, Singapore, Singapore, Benquan Wu, MD, Respiratory and Critical Care Centre, The 3rd Affiliated Hospital, Sun Yat-sen University, Guangzhou, China, Xue Wang, MD, ICU, First Affiliated Hospital of Medical College of Xi'an JiaoTong University, Xi'an, China, Qiang Li, MSc, Surgical Intensive Care Unit, Department of General Surgery, Jiangsu Province Hospital, Nanjing, China, [Yixi Chen, MSc](#), Pfizer Inc., Beijing, China, Petr Hajek, MSc, Pfizer Inc., Prague, Czech Republic and Dipen Patel, Pharmerit International, Bethesda, MD

DERIVING A MAPPING ALGORITHM FOR CONVERTING SF-36 SCORES TO EQ-5D UTILITIES IN THE KOREAN POPULATION

***Seon Ha Kim, PhD¹**, Sang-il Lee, PhD², Min Woo Jo, PhD² and Seon-Ok Kim, MS³, (1)Eulji University, Seongnam, South Korea, (2)University of Ulsan College of Medicine, Seoul, South Korea, (3)Asan Medical Center, Seoul, South Korea*

THE ECONOMIC COST OF DIABETES IN SINGAPORE

*Joanne Yoong, AB, PhD, **May Ee Png, BSc**, Chuen Seng Tan, Hwee-Lin Wee, PhD and E-shyong Tai, MB, ChB, (with, commendation), MRCP, (UK), FRCP, PhD, National University of Singapore, Singapore, Singapore*

MANAGING, CREATING AND USING EVIDENCE TO SUPPORT CLINICAL DIAGNOSIS IN PRIMARY CARE

***Brendan C. Delaney, MD¹**, Derek Corrigan, MSc², Przemyslaw Kazienko, PhD³, Roxana Danger Mercaderes, Dr⁴, Tomasz Kajdanowicz, PhD³, Tomasz Wrobel³, Jean-Karl Soler, PhD⁵, Olga Kostopoulou, PhD¹, Vasa Curcin, PhD⁴ and Thomas Fahey, PhD², (1)King's College London, London, United Kingdom, (2)Royal College of Surgeons in Ireland, Dublin, Ireland, (3)Wroclaw University of Technology, Wroclaw, Poland, (4)Imperial College, London, United Kingdom, (5)Mediterranean Institute of Primary Care, Malta, Malta*

COST-EFFECTIVENESS OF 72-WEEK VS. 48-WEEK TREATMENT WITH PEGINTERFERON PLUS RIBAVIRIN IN CHRONIC HEPATITIS C GENOTYPE 1-

INFECTED JAPANESE PATIENTS

Haku Ishida, M.D.¹, Shuji Terai, M.D.², Isao Hidaka, M.D.², Isao Sakaida, M.D.² and Yuji Inoue, M.D.², (1)Yamaguchi University Hospital, Ube, Japan, (2)Yamaguchi University Graduate School of Medicine, Ube, Japan

IMPROVED SURVIVAL IN PATIENTS WITH VIRAL HEPATITIS-INDUCED HEPATOCELLULAR CARCINOMA UNDERGOING RECOMMENDED ULTRASONOGRAPHIC SURVEILLANCE

Hla-Hla Thein, MD, MPH, PhD¹, Michael Campitelli, MPH², Latifa Yeung, MD, MSc² and Craig Earle, MD, MSc³, (1)Dalla Lana School of Public Health, Toronto, ON, Canada, (2)University of Toronto, Toronto, ON, Canada, (3)Institute for Clinical Evaluative Sciences, Toronto, ON, Canada

LOST IN SHARED DECISION MAKING OVER THE CLINICAL PATHWAY FROM REFERRAL TO CONSENT FOR NON-INVASIVE PRENATAL TESTING FOR FETAL ANEUPLOIDY: A MIXED-METHODS STUDY

Huso Yi, PhD, Miu Yung Olivia Ngan and Ying Chui Janice Lau, MPhil, JC School of Public Health and Primary Care, The Chinese University of Hong, Shatin, Hong Kong

FINANCIAL/MATERIAL SUPPORT AND ACCESS TO CARE AS DETERMINANTS OF RECOVERY FROM POST-EARTHQUAKE PSYCHOPATHOLOGY: A 23 YEARS LONGITUDINAL STUDY

Vahe Khachadourian¹, Haroutune K. Armenian², Armen Goenjian³, Anahit Demirchyan, M.D., M.P.H.¹ and Varduhi Petrosyan, MS, PhD¹, (1)American University of Armenia, Yerevan, Armenia, (2)Fielding School of Public Health, UCLA, Los Angeles, CA, (3)Collaborative Neuroscience Network, Garden Grove, CA, Los Angeles, CA

A BAYESIAN LEARNING MODEL OF STROKE PATIENTS' UTILIZATION OF REHABILITATION SERVICE

Yuan Tian, M.Sc¹, Xing Zhang, BA², Gerald C. H. Koh, PhD² and David B. Matchar, MD¹, (1)Duke-NUS Graduate Medical School, Singapore, Singapore, (2)National University of Singapore, Singapore, Singapore

FRAMINGHAM RISK FACTORS MODELING TO PREDICT CARDIOVASCULAR DEATHS AMONG FILIPINOS

Bridith S. Penaranda, MS, Public Health-Biostatistics¹, Maria Luz Joanna B. Soria, MD², Eduardo L. Cruz Cruz, MS³ and Rody G. Sy, MD², (1)University of the Philippines, Muntlupa City, Philippines, (2)Cardinal Santos Medical Center, San Juan City, Metro Manila, Philippines, (3)University of the Philippines, Quezon City, Philippines

DOES PERSONALIZED TREATMENT BENEFIT EVERYONE? PREDICTIVE ANALYSIS OF OPTIONS FROM A LARGE CLINICAL TRIAL

[Georgiy Bobashev, Ph.D.](#), Barry Eggleston, MS and Nikhil Garge, MS, RTI International, Durham, NC

COMPARISON OF SYSTEM DYNAMICS AND DISCRETE EVENT SIMULATION IN APPLICATION OF SPECIALIST OUTPATIENT CLINIC MODELLING

[Zhecheng Zhu, PhD](#), National Healthcare Group, Singapore, Singapore, Singapore and Kiok-Liang Teow, MSc, National Healthcare Group, Singapore, Singapore

WELCOME AND KEYNOTE ADDRESS

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8:30 AM - 10:00 AM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Session Chairs:

- *Jeremy Goldhaber-Fiebert, PhD*
- *Anirban Basu, PhD*

Session Summary:

8:30 AM - 9:00 AM

WELCOME FROM THE PRESIDENT-DESIGNATE, NATIONAL UNIVERSITY OF SINGAPORE

9:00 AM - 9:30 AM

KEYNOTE ADDRESS

9:30 AM - 10:00 AM

KEYNOTE

Abstracts:

WELCOME FROM THE PRESIDENT-DESIGNATE, NATIONAL UNIVERSITY OF SINGAPORE

8:30 AM - 9:00 AM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [WELCOME AND KEYNOTE ADDRESS](#)

***Chorh Chuan Tan**, National University of Singapore, Singapore*

Welcome to Singapore from Professor Chorh Chuan Tan, President-Designate, National University of Singapore

KEYNOTE ADDRESS

9:00 AM - 9:30 AM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [WELCOME AND KEYNOTE ADDRESS](#)

Chih-Liang Yaung, PhD, Asia University, ., Taiwan

The keynote address features the Honorable Dr. Chih-Liang Yaung, who was Taiwan's Minister of Health from 2009-2011. Dr. Yaung was also the Dean of the College of Public Health at National Taiwan University and is currently on faculty in the Department of Healthcare Administration at Asia University. Dr. Yaung held senior government and academic positions in which he led the development of Taiwan's health insurance plan, delivered health services to large populations, and responded to health crises like SARS. Drawing on his broad policy and academic experience, Dr. Yaung will highlight key challenges and opportunities in achieving important health goals for the Asia-Pacific region and comment on how past knowledge and experience might be used effectively to address them. He will explicitly address the important roles that SMDM's core disciplines can play in this important endeavor.

KEYNOTE

9:30 AM - 10:00 AM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [WELCOME AND KEYNOTE ADDRESS](#)

Philip Clarke, PhD, The University of Melbourne, Carlton Victoria, Australia

Keynote presentation from Philip Miles Clarke, University of Sydney

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10:30 AM - 12:00 PM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Session Chairs:

- *Ahmed Bayoumi, MD, MSc*
- *Anne M. Stiggelbout, PhD*

Session Summary:

10:30 AM - 10:45 AM

A RANDOMISED TRIAL OF TRAINING STUDENT CLINICIANS IN HOW TO FACILITATE SHARED DECISION MAKING AND COMMUNICATE EVIDENCE: IS THIS THE IGNORED STEP IN EVIDENCE-BASED PRACTICE?

10:45 AM - 11:00 AM

COMPREHENSIVELY MEASURING SUBJECTIVE WELL-BEING IN HEALTH ECONOMICS: DIMENSIONALITY ANALYSIS FOR IMPROVED OUTCOME ASSESSMENT

11:00 AM - 11:15 AM

THE DELIBERATION-WITHOUT-ATTENTION EFFECT IN MEDICAL DIAGNOSIS

11:15 AM - 11:30 AM

CONCORDANCE IN PREFERENCES FOR END OF LIFE CARE BETWEEN ADVANCED CANCER PATIENTS AND THEIR CAREGIVERS IN SINGAPORE: A DISCRETE CHOICE EXPERIMENT

11:30 AM - 11:45 AM

TRANSLATION AND APPLICATION OF THE NUMERACY UNDERSTANDING IN MEDICINE INSTRUMENT IN JAPAN

11:45 AM - 12:00 PM

PATIENT VERSUS PHYSICIAN PERCEPTIONS OF THE VALUE OF A MEDICAL SERVICE WITH AMBIGUOUS BENEFITS

Abstracts:

[A RANDOMISED TRIAL OF TRAINING STUDENT CLINICIANS IN HOW TO](#)

FACILITATE SHARED DECISION MAKING AND COMMUNICATE EVIDENCE: IS THIS THE IGNORED STEP IN EVIDENCE-BASED PRACTICE?

10:30 AM - 10:45 AM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 1](#)

Tammy C. Hoffmann, PhD, BOccThy, (Hons)¹, Sally Bennett, PhD, BOccThy, (Hons)², Claire Tomsett, BOccThy, (Hons)² and Chris Del Mar, MBBChir, MA, MD¹, (1)Bond University, Gold Coast, Australia, (2)University of Queensland, Brisbane, Australia

Purpose: Successful evidence-based practice requires clinicians to practice patient-centred care. Central to this is shared decision making; of which, a key skill is communicating evidence clearly to patients. Many clinicians do this poorly, if at all. One reason is lack of training: evidence-based practice courses and workshops typically do not include these skills. Teaching these skills to student clinicians during evidence-based practice training may be valuable, but methods for doing this have not been evaluated. This study aimed to evaluate, in a multi-site randomised trial, the effectiveness of a brief intervention designed to increase student clinicians' ability to facilitate shared decision making and evidence communication.

Method: Medical, physiotherapy and occupational therapy undergraduate, honours, and postgraduate students (n=107) were randomly allocated to an intervention or control group. Intervention group participants received brief training in shared decision making and evidence communication skills. At baseline and post-intervention, participants performed role-plays which were videorecorded and evaluated by a blinder assessor. The primary outcomes were shared decision making and evidence communication skill, measured using the Observing Patient Involvement (OPTION) scale (range 0-100) and selected items from the Assessing Communication about Evidence and Preferences (ACEPP) Tool (range 0-5). Secondary outcome measures were confidence in these skills (11-item visual analogue scale) and attitudes towards patient-centred communication (*Patient Practitioner Orientation Scale (PPOS)*), which participants completed as a questionnaire.

Result: Post-intervention, intervention group participants scored significantly higher on the OPTION scale (mean between-group difference = 19.2, 95% CI 12.3 to 26.0), ACEPP items (difference = 1.0, 95% CI 0.5 to 1.4), confidence measure (difference = 13.3, 95% CI 7.3 to 19.4), and the Sharing subscale of the PPOS (difference = 0.5, 95% CI 0.2 to 0.7). The between-group difference for the Caring subscale of the PPOS was not significant.

Conclusion: This brief intervention was effective in improving student clinicians' ability, attitude toward, and confidence in shared decision making facilitation. Following further testing of the longer-term effects of this intervention, incorporation of this brief intervention into evidence-based practice courses and workshops should be considered so that student clinicians graduate with these important skills, which are typically neglected in clinician training, yet crucial to the uptake of shared decision making.

ECONOMICS: DIMENSIONALITY ANALYSIS FOR IMPROVED OUTCOME ASSESSMENT

10:45 AM - 11:00 AM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 1](#)

***Marieke de Vries, PhD¹**, **Wilco Emons, PhD¹**, **Arnoud Plantinga¹**, **Suzanne Pietersma, PhD²** and **Elske van den Akker, PhD²**, (1)Tilburg University, Tilburg, Netherlands, (2)LUMC, Leiden, Netherlands*

Purpose:

Allocation of inevitably limited financial resources for health care requires judgments about the effectiveness of interventions. Health-related QoL utility scales are commonly used in economic evaluations, but interventions are likely to affect QoL more broadly than is measurable with existent scales. In traditionally used measures, physical dimensions like ‘mobility’ are prominently present. In line with the WHO definition of health, a recent Delphi-procedure shows that value assessment needs to put more emphasis on mental and social dimensions. Our main objective was to identify the core dimensions of subjective well-being (SWB) for a new, more comprehensive outcome measure.

Method:

Building on a previous review of the literature and existing QoL and SWB measures, followed by a three-stage online Delphi consensus-procedure among five stakeholder groups (i.e., patients, family of patients, clinicians, scientists and general public) to identify the key domains of QoL, we formulated about 3 items per domain for an initial, Delphi-based set of 21 domains of well-being. We tested these questions in a large sample (N=1143) and used dimensionality analyses to narrow down the initial set of domains and find a smaller number of latent factors.

Result:

Parallel analysis suggested retaining 5 or 7 dimensions. The five-factor model explained 53% of common variance and revealed dimensions of positive affect/happiness, physical independence, personal growth, autonomy, and mental health. The seven-factor model explained 56% of common variance and differed from the five-factor model in that two physical scales were extracted: (1)physical health problems, and (2)mobility & physical limitations; and in that a separate dimension related to happiness was extracted. Taken into account the relatively low increase in explained common variance in the 7-factor compared to the 5-factor model, and the higher feasibility of a measure with 5 instead of 7 dimensions for outcome assessment in clinical settings, we propose a 5-factor model for measuring SWB in economic evaluations.

Conclusion:

We indentified a set of key dimensions to be included a new, comprehensive measure of SWB which reliably captures these dimensions and fills in the gaps of existent measures used in economic evaluations. These efforts are intended to further develop standardized methodology in economic evaluations by providing a more comprehensive and more accurate estimate of outcomes, resulting in more comparable judgments of outcomes in economic evaluations.

THE DELIBERATION-WITHOUT-ATTENTION EFFECT IN MEDICAL DIAGNOSIS

11:00 AM - 11:15 AM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 1](#)

Amanda Woolley, BSc and **Olga Kostopoulou, PhD**, King's College London, London, United Kingdom

Purpose: Unconscious Thought theory states that, in complex tasks that involve working memory load, better decisions can be made after a period of distraction than either immediately or after a period of conscious deliberation (Dijksterhuis & Nordgren, 2006). This is known as the Deliberation Without Attention (DWA) effect (Dijksterhuis et al. 2006). The theory purports to apply to a range of cognitive tasks, including diagnosis. Studies that attempted to replicate the effect in clinical diagnosis produced conflicting results but also changed the conditions of the experimental paradigm (De Vries et al. 2010; Mamede et al. 2010). We sought to replicate the DWA effect with family physicians in the UK.

Method: In a mixed factorial design, we presented participants with 3 patient cases on computer. The cases were based on real patients for whom the diagnosis was known. Each case consisted of a number of cues (items of information) presented sequentially and only for 4 seconds each, to increase working memory load. Participants were allocated randomly to one of 3 thinking modes: Immediate response (limited to 20 seconds), Distracted (participants completed an unrelated memory task before diagnosing each case) or Self-paced (participants took as long as they needed to diagnose). After each case, participants gave their diagnosis and indicated their confidence in the diagnosis.

Result: Participants were 116 family physicians. Only 27% of responses were correct, i.e. matched the patients' real diagnoses. Thinking mode was related neither to diagnostic accuracy ($p=0.43$) nor to confidence ($p=0.15$). Physicians in the Self-paced condition did not take time to think and tended to diagnose within seconds (median 7 seconds). A significant, inverse relationship was found between diagnostic accuracy and confidence ($t=3.03$, $df=329$, $p<0.01$).

Conclusion: The study did not replicate the DWA in medical diagnosis, despite maintaining the conditions of the experimental paradigm. It thus resolves the uncertainty surrounding the effect on clinical diagnosis. The quick responses of physicians in the Self-paced condition and the lack of differences in accuracy suggest that all three groups employed similar cognitive processes, constructing their diagnoses "online" rather than at the end. The period of distraction did not improve information processing. The higher confidence associated with inaccurate diagnoses suggests that high confidence in an initial diagnosis may discourage physicians from revising it to account for subsequent, inconsistent information.

CONCORDANCE IN PREFERENCES FOR END OF LIFE CARE BETWEEN ADVANCED CANCER PATIENTS AND THEIR CAREGIVERS IN SINGAPORE: A DISCRETE CHOICE EXPERIMENT

11:15 AM - 11:30 AM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 1](#)

Chetna Malhotra, MD, MPH¹, Eric A. Finkelstein, PhD, MHA², Ravindran Kanesvaran, MD³ and Assad Farooqui, BA¹, (1)Duke-NUS Graduate Medical School, Singapore, Singapore, (2)Duke-NUS Graduate Medical School Singapore, Singapore, Singapore, (3)National Cancer Centre, Singapore, Singapore

Purpose: To assess preferences for end-of-life (EOL) care among advanced cancer patients and their caregivers and the extent of concordance in preferences within patient-caregiver dyads

Method: A discrete choice experiment was administered to 138 patients with advanced cancers and their caregivers in which they were asked to choose between two EOL care scenarios. Each scenario was described through 7 attributes with between 2 and 4 levels for each: severity of pain, amount of care required from family-members or friends, expected length of survival, quality of health care experience, expected cost of treatment from diagnosis to death, source of payment, and place of death. Ten scenarios were presented to each respondent. Annual willingness to pay (WTP) for specific EOL improvements was estimated for patients and their caregivers. Attribute importance was assessed for each respondent and proportion of dyads in which patients and caregivers matched on their top and bottom ranked attributes was calculated.

Result: Caregivers had a greater WTP for specific EOL improvements compared to patients. Only 28% of the patient-caregiver dyads matched on their topmost EOL attribute, which was most commonly place of death. Similarly, 27% of the dyads matched on their bottom ranked attribute, which was most commonly care required from family-members or friends.

Conclusion: Patient's priorities for EOL treatments systematically differ from those of their caregivers. As a result, caregivers are likely to make decisions that are not consistent with the patient's wishes. To the extent possible, physicians should work to ensure that patient's preferences are elicited as opposed to relying on the recommendations of caregivers when it comes to EOL treatment.

TRANSLATION AND APPLICATION OF THE NUMERACY UNDERSTANDING IN MEDICINE INSTRUMENT IN JAPAN

11:30 AM - 11:45 AM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 1](#)

Marilyn Schapira, MD, MPH, University of Pennsylvania, Philadelphia, PA, Masako Okamoto, Ph.D., Obihiro University of Agriculture and Veterinary Medicine, Obihiro Hokkaido, Japan, Yasuchi Kyutoku, Ph.D., Chuo University, Tokyo, Japan, Yurie Sugimoto, Kyushu Institute of Technology, Tokyo, Japan, Lester Clowney, Jichi Medical University, -, Japan, Ippeita Dan, Ph.D., Chuo University, -, Japan, Tamara Miller, PT, MS, University of Wisconsin-Milwaukee, Milwaukee, WI and Cynthia M. Walker, Ph.D., University of Wisconsin, Milwaukee, WI

Purpose:

Although understanding numerical information is a crucial factor when people make medical

decisions, health numeracy has been understudied in Japan due to the absence of adequate assessment tools. In the United States, one such tool is Numeracy Understanding in Medicine Instrument (NUMi; Schapira et al., 2012), which was developed based on empirically derived health numeracy framework. In the current study, we aimed to examine validity of NUMi for the Japanese public, and to compare the Japanese (NUMi-J) and original versions.

Method:

NUMi-J was prepared using a forward and backward translation, with context and wordings being modified based on feedback from experts in clinical medicine and statistics and pilot respondents (N=1054). In the main survey, responses from a quota sample (N=2000) approximating the composition of the Japanese population was collected. As in the original study, both classical test theory (CTT) and item response theory (IRT) were used to examine the psychometrical nature of NUMi-J. Validity was assessed by examining the association of NUMi-J scores with other measures of numeracy, literacy, psychographics and levels of understanding of medical information.

Result:

The performance of Japanese sample was better than in the original study (mean scores of 14.5 vs. 13.2, respectively). Consequently, the IRT parameter for difficulty was lower with the 20 items ranging respectively from -2.70 to 0.96 in the current, and -1.70 to 1.45 in the original study). Except for difficulty parameter, the results from NUMi-J were comparable with the original ones, with sufficient reliability (Cronbach α =0.83) and discriminability (range of IRT parameter 0.33 to 2.48). As expected, performance on NUMi-J was more strongly correlated with numeracy scores (11-item objective scale, $r=0.52$; Berlin Numeracy test, $r=0.47$) than literacy scores (Health knowledge test, $r=0.35$; Science literacy test, $r=0.40$), or psychographic scores (Rational-Experiential Index-ability, $r=0.19$; Self-efficacy, $r=0.05$). Finally, logistic regression analysis indicated that the predictive ability of NUMi-J on the understanding of quantitative medical information to be the best among all the other parameters (numeracy, literacy and psychographic; All the independent variables were standardized; odds ratio of NUMi-J, 2.3).

Conclusion:

In its translated form, NUMi worked well in this culturally different population, and will be a useful tool for assessing patients' health numeracy in Japan, especially for those with relatively lower numeracy levels.

PATIENT VERSUS PHYSICIAN PERCEPTIONS OF THE VALUE OF A MEDICAL SERVICE WITH AMBIGUOUS BENEFITS

11:45 AM - 12:00 PM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 1](#)

***[Sorapop Kiatpongsan, MD](#)**, Harvard Interfaculty Initiative in Health Policy, Cambridge, MA, **[Anjali Kaimal, MD, MAS](#)**, Massachusetts General Hospital, Harvard Medical School, Boston, MA, **[Michael I. Norton, PhD](#)**, Harvard Business School, Boston, MA and **[Milton C. Weinstein, PhD](#)**, Harvard School of Public Health, Boston, MA*

Purposes:

To compare patients' and physicians' perceptions of the value of a medical service, such as cord-blood stem cell banking, whose future benefits are ambiguous, and to investigate if the differences in perceptions derive from discrepant assessments of the probability of realizing benefits, of the magnitude of benefits, or both. Also, to investigate if the differences in perceptions depend on whether the service offers unambiguous benefits in addition to ambiguous benefits.

Methods:

Four hundred thirty-nine 18-45 years old U.S. women (patients) and 59 U.S. obstetric providers (physicians) were asked to predict benefits (probability and magnitude) of cord-blood stem cell banking within the next 5, 10, 20 and 40 years. Patients were then randomly assigned to 1 of 3 scenarios representing varying degrees of ambiguity about the benefits (A) only unambiguous benefits, (B) both unambiguous and ambiguous benefits, or (C) only ambiguous benefits and reported their family's willingness to pay for the service. Physicians were also asked to predict a typical family's willingness to pay in each scenario.

Results:

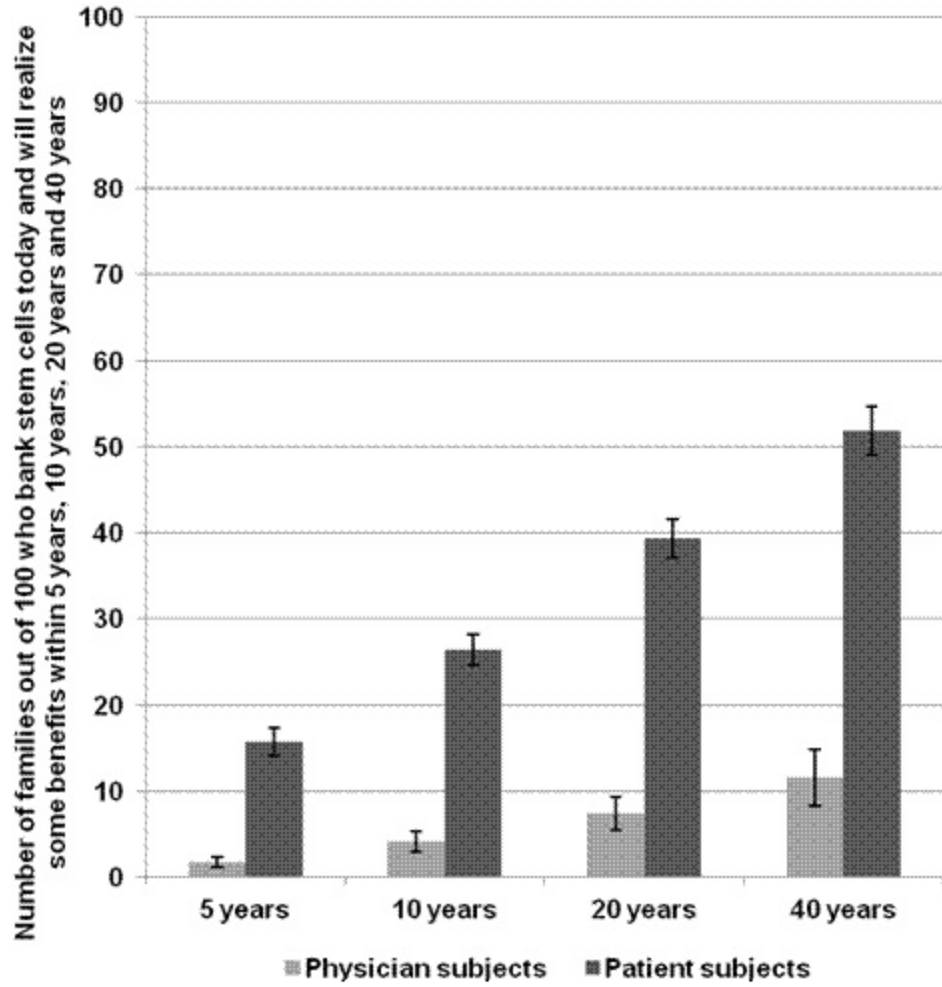
Patients' predictions of the probability of realizing benefits are significantly more favorable than physicians' (16%, 26%, 39% and 52% versus 2%, 4%, 7% and 12% at 5, 10, 20 and 40 years respectively; $p < 0.001$ for all). See Figure 1. Predictions of magnitude of benefits, in contrast, were not significantly different at 5, 10 and 20 years, but were significantly more favorable among patients at 40 years ($p < 0.01$).

Physicians underestimated families' willingness to pay in all scenarios for families with income $< \$50K$ ($p < 0.05$) but not for families with income $\$50-100K$. Interestingly, a service offering both unambiguous and ambiguous benefits has significantly lower value than a service with only unambiguous benefits to families with income $\$50-100K$ ($p < 0.05$), but not to physicians or to families with income $< \$50K$.

Conclusions:

Patients and physicians have different perceptions of the value of a medical service with ambiguous future benefits, owing primarily to different perceptions of the probability of realizing the benefits. Physicians underestimated willingness to pay for a service in low-income families. These differences suggest the value of improved communication between physicians and patients when the benefits of a medical service are ambiguous.

Figure 1. Physician subjects' predictions and patient subjects' predictions of the probability of realizing future benefits from cord-blood stem cell banking services



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10:30 AM - 12:00 PM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Session Chairs:

- *Kee Chan, PhD*

Session Summary:

10:30 AM - 10:45 AM

THE IMPACT OF SURGEON VOLUME ON THE MORBIDITY AND COSTS OF RADICAL CYSTECTOMY IN THE UNITED STATES: A CONTEMPORARY POPULATION-BASED ANALYSIS

10:45 AM - 11:00 AM

COST-EFFECTIVENESS OF RUBELLA VACCINATION IN VIETNAM: A TRANSMISSION MODEL-BASED ECONOMIC EVALUATION

11:00 AM - 11:15 AM

COST-EFFECTIVENESS ANALYSIS OF HLA-B*5801 TESTING IN PREVENTING ALLOPURINOL-INDUCED SJS/TEN IN THAILAND

11:15 AM - 11:30 AM

COST-EFFECTIVE SCREENING FOR METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) COLONIZATION UPON HOSPITAL ADMISSION

11:30 AM - 11:45 AM

COST-EFFECTIVENESS ANALYSIS OF INNOVATIVE TRIPLE THERAPY WITH PROTEASE INHIBITORS IN TREATMENT-NAÏVE PERSONS WITH HEPATITIS C USING A STOCHASTIC AGENT-BASED MODEL

Abstracts:

THE IMPACT OF SURGEON VOLUME ON THE MORBIDITY AND COSTS OF RADICAL CYSTECTOMY IN THE UNITED STATES: A CONTEMPORARY POPULATION-BASED ANALYSIS

10:30 AM - 10:45 AM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Jeffrey J. Leow, MBBS, MPH¹, Stephen Reese¹, Quoc-Dien Trinh, MD¹, Benjamin I. Chung, MD², Adam S. Kibel, MD¹ and Steven L. Chang, MD, MS¹, (1)Brigham and Women's Hospital, Boston, MA, Boston, MA, (2)Stanford University Medical Center, Stanford, CA, Stanford, CA

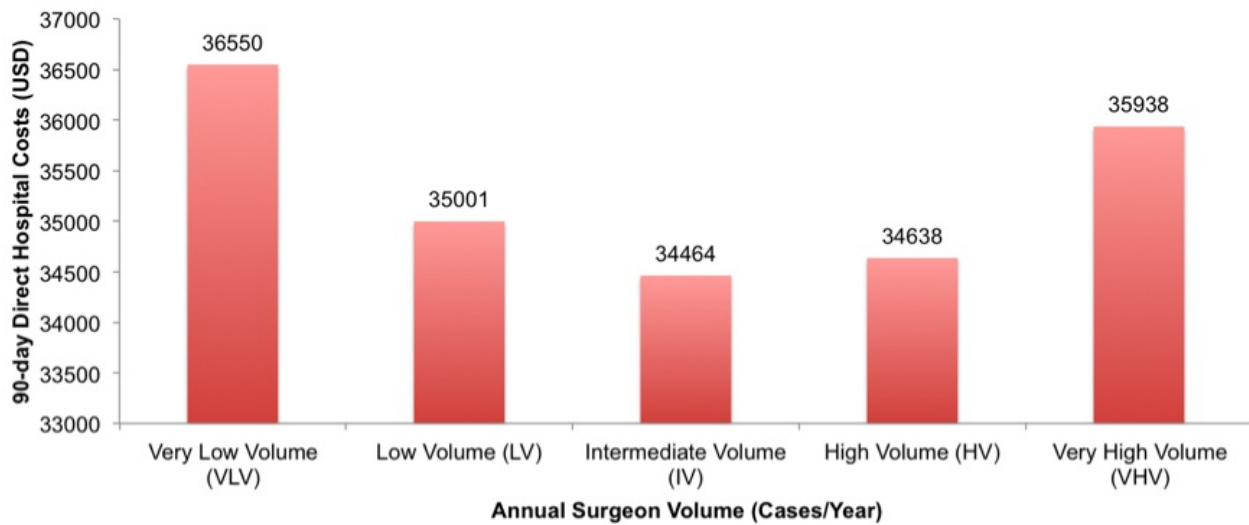
Purpose: Radical cystectomy (RC), the gold standard treatment for invasive bladder cancer, is a morbid procedure associated with high costs. Numerous volume-outcomes studies focused on postoperative mortality suggest that centralization of care can reduce the economic burden of disease. This study evaluates the relationship between surgeon volume and RC morbidity outcomes as well as costs in the United States.

Methods: We captured all who underwent a RC (ICD-9 code 57.71) from 2003 to 2010, from a nationally representative discharge database. Patient (age, gender, race, marital status, insurance status, Charlson comorbidity), hospital (bed size, teaching status, location, region), and surgical characteristics (year of procedure, type of approach and urinary diversion, receipt of pelvic lymphadenectomy) were evaluated. Annual volume, defined as the total number of cystectomies performed by a surgeon in the year the procedure was performed on a patient, was divided into quintiles. Multivariable logistic and linear regression analyses were performed with clustering by hospitals and survey weighting to ensure nationally representative estimates. Outcomes include 90-day major complications (Clavien 3-5) as defined by ICD-9 diagnosis codes, and direct patient costs.

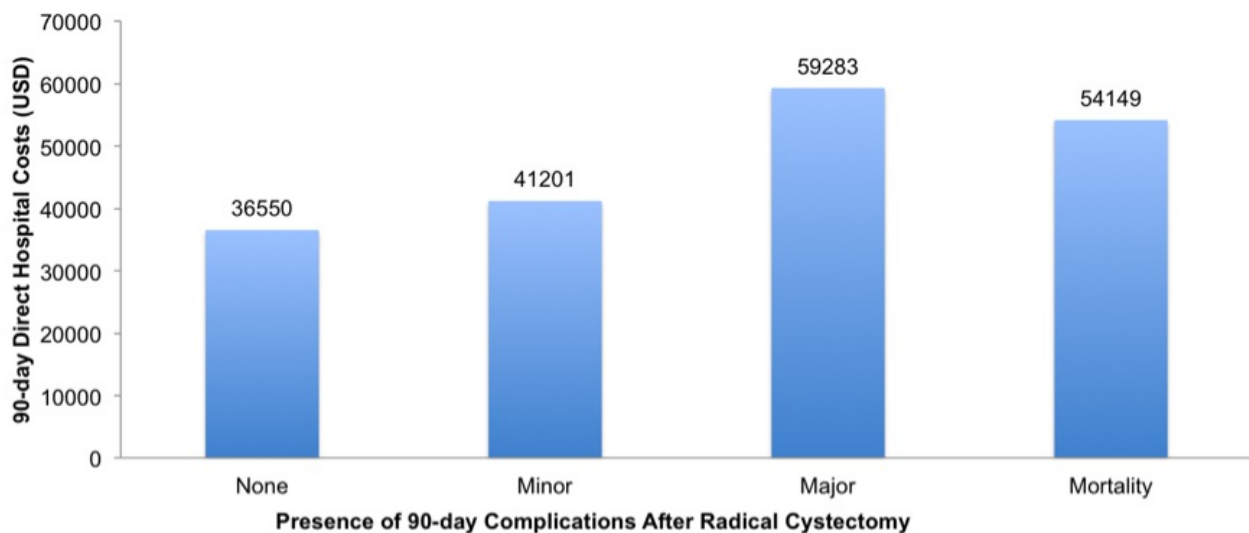
Results: The weighted cohort included 49792 RC patients with an overall major complication rate of 16.2%. Compared to very low volume surgeons (1/year), very high surgeons (≥ 7 /year) had 44% decreased odds of major complications (OR: 0.56, 95% CI: 0.41-0.76, $p < 0.001$). Compared to patients who did not have any complications, those who suffered a major or minor complication had significantly higher 90-day median direct hospital costs (\$59283 and \$54149 vs. \$36550, both $p < 0.0001$).

Conclusions: Our contemporary evaluation of radical cystectomy in the United States suggests an inverse relationship between surgeon volume and postoperative 90-day major complication rates as well as 90-day direct hospital costs. Preventing major complication via centralization of care may reduce the burden of disease. Primary mechanisms underlying this effect, such as peri-operative process of care variables, need to be investigated.

Association of Surgeon Volume with 90-day Direct Hospital Costs



Association of Surgical Morbidity with 90-day Direct Hospital Costs



COST-EFFECTIVENESS OF RUBELLA VACCINATION IN VIETNAM: A TRANSMISSION MODEL-BASED ECONOMIC EVALUATION

10:45 AM - 11:00 AM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 2](#)

Hong Anh Tu, PhD¹, Minh V. Hoang, PhD², Kiet HT Pham, PhD², Huyen T. Dang, Dr.³, K. Toda, PhD⁴, Peter C. Coyte¹, Raymond Hutubessy, PhD⁵, Kimberly Fox, PhD⁶ and Mark Jit, PhD⁷, (1)University of Toronto, Toronto, ON, Canada, (2)Hanoi Medical University, Hanoi, Vietnam, (3)National Institute of Hygiene and Epidemiology, Hanoi, Vietnam, (4)World Health Organization, Hanoi, Vietnam, (5)World Health Organization, Geneva, Switzerland, (6)World Health Organization, Manila, Philippines, (7)Health Protection Agency, London, United Kingdom

Purpose: Rubella, an acute, contagious viral infection, occurring in children and young adults can cause serious complications like abortion, fetal death and congenital rubella syndrome (CRS). Rubella vaccine has not yet been included in the Vietnam National Immunization Program (NIP).

The objective of this study is to assess the cost-effectiveness of introducing rubella vaccination in the NIP, from both healthcare payer and societal perspectives in 2013 for 5 scenarios: (i) no vaccination, (ii) routine vaccination of 9 month olds, (iii) catch-up campaign for children from 9 months to 14 years, followed by routine vaccination of 9 month olds, (iv) catch-up campaign for child-bearing age women (CBW) aged 15 - 35 years followed by routine vaccination of 9 month olds, (v) catch-up campaign for children aged 9 months to 14 years and for CBWs aged 15 - 35 years followed by routine vaccination of 9 month olds.

Method: We used epidemiological data from a rubella disease transmission model previously developed for Vietnam. Cost data were collected through survey questionnaires and financial records of Vietnamese hospitals. Data on vaccine effectiveness, disability-adjusted life years (DALYs), and rubella complications was derived from literature. A single-dose vaccination schedule, 98% coverage, 95% effectiveness, lifetime duration of protection and US\$1.50 per dose were the parameters we assumed. Primary outcomes were expected DALYs averted, cost, and incremental costs per DALY averted. Extensive sensitivity analyses were conducted. DALYs and costs were discounted at 3%. Full incremental analysis was used to identify the best strategy amongst the cost-effective scenarios.

Result: Rubella vaccination appeared to be very cost-effective and even cost-savings for all proposed vaccination strategies when comparing to no vaccination from both healthcare and societal perspectives in Vietnam. A catch-up campaign in 2013 for children aged 9 months - 14 years followed by routine vaccination of 9 month olds was the most cost-effective strategy amongst the four vaccination strategies. The model was most sensitive to disease incidence, treatment cost of CRS complications, and productivity losses for caregivers.

Conclusion: Our analysis suggests that a rubella vaccination program is highly cost-effective under all vaccination scenarios in Vietnam. These findings provide timely economic evidence for health policy makers in Vietnam, and other countries, considering a publicly funded rubella vaccination program.

COST-EFFECTIVENESS ANALYSIS OF HLA-B*5801 TESTING IN PREVENTING ALLOPURINOL-INDUCED SJS/TEN IN THAILAND

11:00 AM - 11:15 AM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 2](#)

Surasak Saokaew, B.Pharm., Pharm.D., University of Phayao, Phayao, Thailand, Wichitra Tassaneeyakul, Ph.D., Khon Kaen University, Khon Kaen, Thailand, Ratre Maenthaisong, Ph.D, Mahasarakham University, Mahasarakham, Thailand and [Nathorn Chaiyakunapruk, PharmD, PhD, Monash University Sunway Campus, Selangor, Malaysia](#)

Purpose: Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN), caused by allopurinol therapy, are strongly associated with the human leukocyte antigen (HLA), HLA-B*5801. Identification of HLA-B*5801 genotype before prescribing allopurinol offers the possibility of

avoiding this drug in individuals with such susceptibility and preventing allopurinol-induced SJS/TEN. As there is a paucity of evidence about economic value of such testing, this study aims to determine the cost-effectiveness of genetic testing for HLA-B*5801 compared with usual care (no genetic testing) before allopurinol administration in Thailand.

Method: A decision analytical model was used to estimate life year costs and outcomes represented as quality adjusted life years gained (QALY). The use of Markov model is needed to reflect long-term outcomes because some surviving SJS/TEN patients may suffer from long-term sequelae. The model was populated with relevant information of the association between gene and allopurinol-induced SJS/TEN, test characteristics, costs, and epidemiologic data for Thailand from a societal perspective. Input data were obtained from the literature and a retrospective database analysis. The results were expressed as incremental cost per quality-adjusted life years gained (QALY). A base-case analysis was performed for patients at age 30 from the societal perspective. A series of sensitivity analyses including threshold, scenario, one-way, and probabilistic sensitivity analyses were constructed to explore the robustness of the findings.

Result: Based on a hypothetical cohort of 1,000 patients, the incremental total cost was 923,919 THB and incremental QALY was 4.65 with an ICER of 198,486 THB (USD 6,403) per QALY. Genetic testing for HLA-B*5801 before allopurinol administration was not considered a cost-effective intervention, based on a standard cost-effectiveness threshold of 160,000 THB/QALY in Thailand. However, when the cost of genetic testing was less than 822 THB (USD 26.5), the test becomes cost-effective at the societal willingness-to-pay level of 160,000 THB (USD 5,161)/QALY.

Conclusion: The genetic testing for HLA-B*5801 before allopurinol administration might not be considered as a cost-effective intervention. However, consideration of other factors including ethical, legal, and social implications is needed in order to make an informed policy decision making.

COST-EFFECTIVE SCREENING FOR METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) COLONIZATION UPON HOSPITAL ADMISSION

11:15 AM - 11:30 AM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 2](#)

Yan Sun, PhD¹, *Palvannan Kannapiran¹, Kelvin Teo¹, Bee Hoon Heng, MBBS² and Brenda Ang, MBBS³, (1)National Healthcare Group, Singapore, Singapore, (2)National Healthcare group, Singapore, Singapore, (3)Tan Tock Seng Hospital, Singapore, Singapore, Singapore*

Purpose: MRSA is one of the most common sources of nosocomial infections and it significantly contributes to poorer clinical outcomes and higher utilization. Screening for MRSA colonization upon admission and isolation of identified MRSA carriers has been proposed as a strategy to prevent nosocomial spread of MRSA. There are a few screening approaches available: universal screening vs. selective screening; rapid PCR screening vs. culture screening. The goal of this study is to identify the most cost effective screening strategy in Singapore context by comparing: rapid PCR screening for all; rapid PCR for selected high risk patients; culture screening for all; culture screening for selected high risk patients; no screening at all.

Method: All admitted patients to Tan Tock Seng Hospital in 2012 were included. A risk prediction model was developed and validated to select high risk patients for screening, using logistic regression and Bayesian Information Criteria. Markov decision analysis was applied to identify the most cost-effective screening strategy. The five strategies were compared in terms of the cost per infection prevented: PCR screening for all; PCR screening for selected high risk patients; no screening. The modeling cycle (time length of transition) is 1 hour. The total modeled exposure time in hospital is about 120 hours (5 days). Costs to hospital will be used as the primary cost measure. We will also measure the cost from the perspectives of patients.

Result: In the risk stratification model, the important predictors identified were MRSA colonization history; elder age; infection or hospitalization in last 3 months; admitted from nursing homes; with kidney diseases, or stroke. The c-statistics of the ROC of the prediction model was 0.82 (95%CI: 0.81-0.83). The MRSA prevalence at admission was about 7.3% in 2012. Considering the cost of infection treatment, the incidence rate of hospital infection, the sensitivity and specificity of predicting the high risk patients, the most cost effective screening strategy was selective screening, which cost about \$15.8K (95%CI: \$7.8K - \$21.9K) per infection prevented compared with no screening.

Conclusion: The study provides an evidence-based decision tool for policy makers to standardize care and set guidelines on cost effective infectious disease control in hospitals.

COST-EFFECTIVENESS ANALYSIS OF INNOVATIVE TRIPLE THERAPY WITH PROTEASE INHIBITORS IN TREATMENT-NAÏVE PERSONS WITH HEPATITIS C USING A STOCHASTIC AGENT-BASED MODEL

11:30 AM - 11:45 AM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 2](#)

Hla-Hla Thein, MD, MPH, PhD¹, Marija Gojovic, PhD², Shamin Kinathil, MSc³, Lisa Maher, PhD³, Gregory Dore, MD, PhD³ and David Wilson, PhD³, (1)Dalla Lana School of Public Health, University of Toronto, Toronto, ON, Canada, (2)University of Toronto, Toronto, ON, Canada, (3)The Kirby Institute for infection and immunity in society, The University of New South Wales, Sydney, Australia

Purpose: Hepatitis C virus (HCV) protease inhibitors in combination with pegylated interferon and ribavirin (PEG-IFN/RBV) is the new standard of care treatment for persons infected with HCV genotype 1. Despite treatment advances for hepatitis C, treatment uptake has remained low in Australia. Our objectives were to simulate the spread of HCV and HIV infections in Australia, and assess the burden of disease and cost-effectiveness of innovative triple therapy in treatment-naïve persons with HCV over a lifetime from a societal perspective.

Method: We developed a stochastic agent-based model. An artificial population of 10,000 agents with demographic and behavioral characteristics was created to represent the population of Australia. Contacts between the agents were based on mixing groups according to an agent's personal and behavioral characteristics. The probability of infection in a given period of time was determined

by the number of contacts, transmission probability per contact established, susceptibility of the observed agent, and the infectivity of the contacted agent. The HCV model describes the progression of HCV stages: acute HCV; fibrosis stages 0-4, decompensated cirrhosis, hepatocellular carcinoma, liver transplantation and liver-related death. Treatment scenarios include: i) dual therapy (PEG-IFN/RBV); ii) response-guided dual therapy (RGT); iii) triple therapy with boceprevir and iv) triple therapy with telaprevir for persons with HCV genotype 1. Model calibration, uncertainty and sensitivity analyses were performed. An economic model was developed to conduct cost-utility analysis. Outcomes included numbers of HCV infections averted, lifetime health care costs, quality-adjusted life year (QALY), and incremental cost-effectiveness ratios.

Result: In 2010, approximately 4,000 persons with hepatitis C were treated with standard dual therapy. Our model estimated that there were approximately 10,000 new cases of hepatitis C, 560 new cases of decompensated cirrhosis, 143 new cases of hepatocellular carcinoma, 42 liver transplant cases, and 347 liver-related deaths. Over the lifetime with the same treatment rates, these new cases would relatively increase between 37-116% under standard dual therapy. Compared to standard dual therapy, there would be a significant decline in the number of new advanced cases and the number of persons receiving liver transplantation in triple therapies, QALY gains, and cost savings in both triple therapies and RGT.

Conclusion: Both triple therapies and response-guided therapy are cost saving. Strategies to improve new treatment uptake are critical to mitigate the future burden of hepatitis C.

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Posters:

HOW MUCH SHOULD DOCTORS BE PAID? CROSS-CULTURAL EVIDENCE OF PREFERENCES FOR PAY RATIOS

[Sorapop Kiatpongsan, MD](#), *Harvard Interfaculty Initiative in Health Policy, Cambridge, MA and Michael I. Norton, PhD, Harvard Business School, Boston, MA*

THE GAP BETWEEN PHYSICIANS' PERCEPTIONS OF THE IMPORTANCE OF SHARED DECISION MAKING AND THEIR REPORTS OF ITS OCCURRENCE IN THEIR PRACTICES

[Sorapop Kiatpongsan, MD¹](#), *Sandra Feibelmann, MPH² and Karen R. Sepucha, PhD², (1)Harvard Interfaculty Initiative in Health Policy, Cambridge, MA, (2)Massachusetts General Hospital, Boston, MA*

MULTI CRITERIA DECISION ANALYSIS METHODS IN HEALTH CARE: CURRENT STATUS, GOOD PRACTICE AND FUTURE RECOMMENDATIONS

Praveen Thokala, PhD, University of Sheffield, Sheffield, United Kingdom

COST-EFFECTIVENESS ANALYSIS OF PERCUTANEOUS RENAL MASS BIOPSY TO GUIDE THE MANAGEMENT OF SMALL RENAL MASSES

[Jeffrey J. Leow, MBBS, MPH](#) and *Steven L. Chang, MD, MS, Brigham and Women's Hospital, Boston, MA, Boston, MA*

THE PEOPLES-UNI ONLINE COURSE ON SCIENTIFIC DECISION-MAKING IN HEALTH-CARE': A MODEL FOR BUILDING CAPACITY IN RESOURCE-LIMITED SETTINGS

[Joseph L. Mathew](#), *Post Graduate Institute of Medical Education and Research, Chandigarh, India, Debjani Muller, University of Witwatersrand, Parktown, South Africa and Richard Heller, Peoples-uni, Sydney, Australia*

KNOW ESSENTIALS: A TOOL FOR EVIDENCE-BASED HEALTH-CARE DECISIONS IN

SETTINGS LACKING FORMAL DECISION-MAKING SYSTEMS

Joseph L. Mathew, *Advanced Pediatrics Centre, Chandigarh, India and T. Lazar Mathew, PSG Institute of Advanced Studies, Coimbatore India, Coimbatore, India*

IMPROVEMENT OF QUALITY OF CARE FOR POSTPARTUM HEMORRHAGE BY MULTIFACETED INTERVENTION

Pattarawalai Talungchit, MD, PhD, *Mahidol University, Bangkok, Thailand, Tippawan Liabsuetrakul, MD, PhD, Prince of Songkla University, Hat Yai, Songkhla, Thailand and Gunilla Lindmark, MD, PhD, Uppsala University, Uppsala, Sweden*

EFFECT OF TRAINING IN MECHANISM-BASED CLASSIFICATION ON CLINICAL DECISION-MAKING OF PAIN BY PHYSICAL THERAPY POST-GRADUATE STUDENTS- A QUALITATIVE STUDY

Senthil Paramasivam Kumar, PhD, *Srinivas college of Physiotherapy, Mangalore, India and Ketaki C. Joshi, MPT, Thakar's Physiotherapy Clinic, Thane (Mumbai), India*

USING CONSENSUS METHODS TO DEVELOP A COUNTRY-SPECIFIC MPH CURRICULUM AT THE MALDIVES NATIONAL UNIVERSITY

Monica C. Robotin, MBBS, (Hons), FRACS, MAppEpid, MIntH, MBA, *Faculty of Medicine, University of Sydney, Sydney, Australia, Muthau Shaheem, BPolSc, MBA, Faculty of Health Sciences, Maldives National University, Male, Maldives and Aishath S. Ismail, BSc, (Hons), AppHNutrit, MPH, Maldives National University, Male, Maldives*

USING AN OPTION GRID TO FACILITATE INFORMED PARTICIPATION IN CERVICAL CANCER SCREENING IN RURAL PRIMARY CARE PRACTICE, TAMIL NADU, INDIA: A PHASE 1 STUDY

Lyndal Trevena, MBBS, MPH, PhD¹, *Rita Isaac, PhD², Ian Olver, MBBS, PhD¹ and Madelon Finkel, PhD³, (1)University of Sydney, Sydney, Australia, (2)Christian Medical College, Vellore, India, Vellore, India, (3)Weil Cornell Medical College, New York, NY*

BUT IS THE NEEDLE VERY LONG?: THE FEAR OF NEEDLES IN CONSULTATIONS ON INSULIN THERAPY

Ayeshah Syed, Master, of, English, as, a, Second, Language, University, of, Malaya and **Zuraidah Mohd. Don, PHD, UNIVERSITY, OF, MALAYA, (UM), MA, EAST, ANGLIA, UNIVERSITY, UK,**

WHO MAKES THE DECISION? MALAYSIAN HEALTHCARE PROFESSIONALS' VIEWS ON PROSTATE CANCER TREATMENT

Yew Kong Lee, BA¹, Ping Yein Lee, MBBS, MMed, (Family, Medicine)², Ai Theng Cheong, MBBS, M.Med, (Family, Medicine)², Chirk Jenn Ng³, Khatijah Lim Abdullah³, Teng Aik Ong, MBBS, Master, of, Surgery¹ and Azad Hassan bin Abdul Razack, MBBS, FRCSEd¹, (1)University of Malaya, Kuala Lumpur, Malaysia, (2)Universiti Putra Malaysia, Serdang, Malaysia, (3)Faculty of Medicine, University of Malaya, Wilayah Persekutuan, Malaysia

IMPROVING VASCULAR PREVENTION VIA RISK PERCEPTION: DEVELOPMENT OF ASSESSMENT TOOLS TO IMPROVE CONSULTATION IN CARDIOVASCULAR PREVENTIVE PRACTICE

Sharmila R. Sakthivel, University of Muenster, Dortmund, Germany

A SHARED-DECISION MAKING MODEL TO EVALUATE GENOMIC SEQUENCING IN PRENATAL AND NEWBORN SCREENING

Kee Chan, PhD, Boston University, Boston, MA

LIFETIME ON-DEMAND TREATMENT COSTS OF RECOMBINANT ACTIVATED FACTOR VIIA AND PLASMA-DERIVED ACTIVATED PROTHROMBIN COMPLEX CONCENTRATE FOR HAEMOPHILIA INHIBITOR PATIENTS IN CANADA

Allison Petrilla¹, Pinar Bilir¹, James Weatherall, BBA, MA, PHD, in, Economics² and Won Chan Lee¹, (1)IMS, Falls Church, VA, (2)Novo Nordisk A/S, Vaerloese, Denmark

THE SURVEY OF CHEMOTHERAPY SYMPTOM MANAGEMENT SELF-EFFICACY IN THE PATIENTS WITH BREAST CANCER

Chiu-YA Kuo, MSN, Chang Gung Memorial Hospital In Chia Yi, Taiwan, Chaiyi County, Taiwan, Taiwan and Shu-Yuan Liang, PhD, School of Nursing National Taipei University of Nursing and Health Sciences, Taipei, Taiwan

COST-EFFECTIVENESS OF NEW CATARACT SURGERY TECHNOLOGIES: FEMTOSECOND-LASER-ASSISTED AND STANDARD PHACOEMULSIFICATION

CATARACT SURGERY WITH CONVENTIONAL AND PREMIUM INTRAOCULAR LENSES

[Christopher S. Sales, MD, MPH](#), Stanford University, Palo Alto, CA and Suzann Pershing, MD, Stanford University, Stanford, CA

IDENTIFYING POSTDISCHARGE ADVERSE EVENTS FROM A COMMUNITY HOSPITAL

***Dennis Tsilimingras, MD, MPH¹**, Jeffrey Schnipper, MD, MPH², Ashley Duke, DNP³, John Agets, MD⁴, Stephen Quintero, MD⁴, Jessica Bishop-Royse, PhD⁵, Leslee Hancock, MN⁴, Henry Carretta, PhD, MPH⁴, Gail Bellamy, PhD⁴, Dean Watson, MD³, Les Beitsch, MD, JD⁴ and David Bates, MD, MSc², (1)Wayne State University School of Medicine, Detroit, MI, (2)Brigham and Women's Hospital and Harvard Medical School, Boston, MA, (3)Tallahassee Memorial HealthCare, Tallahassee, FL, (4)Florida State University College of Medicine, Tallahassee, FL, (5)DePaul University Social Science Research Center, Chicago, IL*

A DISCUSSION ON DEMAND ASSIGNMENT IN LOCATION SET COVERING MODELS

[Yuan Zhou, Master¹](#), Boray Huang, PHD¹ and Hui-Chih Hung, PHD², (1)National University of Singapore, Singapore, Singapore, (2)National Chiao Tung University, Hsinchu, Taiwan

ECONOMIC EVALUATION OF NURSE-LED SERVICES IN THE ACUTE CARE SETTING-A SYSTEMATIC REVIEW

***Shin Yuh Ang, BSc, MBA**, Singapore General Hospital, Singapore, Singapore*

SHOULD THALIDOMIDE BE INCLUDED IN THE PHILIPPINE NATIONAL FORMULARY FOR THE TREATMENT OF ERYTHEMA NODOSUM LEPROSUM?

[Charissa Mia D. Salud-Gnilo, MD, FPDS](#), University of the Philippines-Philippine General Hospital, Manila, Philippines and Suzette B. Sagun, MD, RPh, University of the Philippines-Philippine General Hospital, Manila, Philippines

EFFECT OF PHYSICIAN CHARACTERISTICS AND GEOGRAPHICAL REGION ON POST-DIAGNOSIS PHYSICIAN CONTACT AMONG PATIENTS WITH PROSTATE CANCER

[Candice Yong, BSP Pharm](#), University of Maryland School of Pharmacy, Baltimore, MD, Ebere Onukwugha, PhD, MSc, University of Maryland, Baltimore, MD and Michael Naslund, MD,

DRUG EXPENDITURE TRENDS IN GOVERNMENT HEALTH EXPENDITURE AND TOTAL HEALTH EXPENDITURE

Thant Sin Htoo Sr., MBBS, MSc, (Health, Economics) and San San Aye Sr., MBBS, MSc, (Health, Economics), Department of Health Planning, Nay Pyi Taw, Myanmar/Burma

COST-EFFECTIVENESS ANALYSIS OF 7-VALENT PNEUMOCOCCAL CONJUGATE VACCINE (PCV7) IN SHANGHAI, CHINA

*Shanlian Hu, MD, MS¹, Shengfang Song, MS², Lixia Du, MS¹, Jiangjiang He, MS¹ and **Qiang Shi, MD, PhD³**, (1)Shanghai Health Development Research Center, Shanghai, China, (2)School of Public Health, Fudan University, Shanghai, China, (3)Pfizer China, Shanghai, China*

MATERNAL EMPLOYMENT AND CHILD HEALTH IN JAPAN

Ma Xinxin, Ph., D., M., D.¹, Hiroaki Kakihara, Ph., D., M., D.¹ and Goto Rei, Ph.D, MD², (1)Kyoto University, Kyoto, Japan, (2)Graduate School of Economic, Kyoto, Japan

DRUG RELATED PROBLEMS AND THEIR ASSOCIATION WITH HOSPITAL LENGTH OF STAY OF PNEUMONIA PATIENTS

Azizah Nasution, Dra, MSc¹, N. Hidayah, S.Farm., Apt.¹, D. Rinza, Dra., M.Kes., Apt², Rosidah ., Dr., Prof.¹ and U. Harahap, Dr., Prof.¹, (1)Universitas Sumatera Utara, Medan, Indonesia, (2)Haji Adam Malik Hospital, Medan, Indonesia

THE COST-EFFECTIVENESS OF CONTACT SCREENING AND MANAGEMENT STRATEGIES OF CHILDREN THAT ARE CONTACTS OF TUBERCULOSIS CASES

Rina Triasih, Dr, MMed(Paed)¹, Stephen M. Graham, A/Professor, PhD², Trevor Duke, Professor² and Colin Robertson, Professor³, (1)Sardjito hospital/Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia, (2)The University of Melbourne, Melbourne, Australia, (3)Royal Children Hospital/The University of Melbourne, Melbourne, Australia

ANALYSIS OF THE LOYALTY OF HOSPITALS' LOYAL PATIENTS

Wender Lin, Ph.D.**, Chang Jung Christian University, Tainan, Taiwan, Shiing-Jer Twu, Ph.D., Taiwan Sustainable Health Care and Holistic Medicine Association, Taipei, Taiwan and **Mei-ling

FILLING GAP: FINDING CERVICAL CANCER DATA IN LAOS

Sivixay Thammalangsy, PhD, Candidate, Sydney Medical School, Bankstown, Australia

VISUALIZATION TECHNIQUES APPLIED IN DECISION-ANALYTIC MODELING USING DISCRETE-EVENT-SIMULATION

Beate Jahn, PhD¹, Ursula Rochau, MD, MSc², Christina Kurzthaler, Bsc³, Martina Kluibenschaedl, Bsc.¹, Christoph Urach⁴, Patrick Einzinger, MSC⁵, Harald Piringer, Msc⁶, Niki Popper, MSc⁵ and Uwe Siebert, MD, MPH, MSc, ScD⁷, (1)UMIT - Institute of Public Health, Medical Decision Making and HTA, Hall in Tyrol, Austria, (2)UMIT - Institute of Public Health, Medical Decision Making and HTA/ ONCOTYROL - Area 4 HTA and Bioinformatics, Hall in Tyrol/ Innsbruck, Austria, (3)Institute of Public Health, Medical Decision Making and HTA, Hall in Tyrol/ Innsbruck, Austria, (4)Vienna University of Technology, Vienna, Austria, (5)Dwh Simulation Services, Vienna, Austria, (6)VRVis Zentrum für Virtual Reality und Visualisierung Forschungs-GmbH, Vienna, Austria, (7)UMIT/ ONCOTYROL/ Harvard School of Public Health/ Harvard Medical School, Hall, Austria

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1:30 PM - 3:00 PM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Session Chairs:

- *Yee Wei Lim*
- *Douglas K. Owens, MD, MS*

Session Summary:

1:45 PM - 2:00 PM

EVALUATION OF PERSONALIZED BREAST CANCER TEST-TREATMENT STRATEGIES USING THE 21-GENE ASSAY RECURRENCE SCORE AND ADJUVANT! ONLINE: APPLICATION OF A DISCRETE EVENT SIMULATION MODEL

2:00 PM - 2:15 PM

QUANTITATIVE RISK-BENEFIT ANALYSIS ON DOSAGE OF INTRAVENOUS TISSUE-TYPE PLASMINOGEN ACTIVATOR IN ASIAN PATIENTS WITH STROKE THROMBOLYSIS

2:15 PM - 2:30 PM

IMPROVING CERVICAL CANCER SCREENING BALANCING DETECTED CANCER PRECURSORS AND RESOURCE USE

2:30 PM - 2:45 PM

HEALTHCARE RESOURCE USE AND COSTS ANALYSIS FROM A CHINESE PAYER PERSPECTIVE OF METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS NOSOCOMIAL PNEUMONIA (MRSA-NP) PATIENTS TREATED WITH LINEZOLID OR VANCOMYCIN, WITH A FOCUS ON PATIENTS DEVELOPING RENAL FAILURE

2:45 PM - 3:00 PM

USING HEALTH CARE ADMINISTRATIVE DATA TO ESTIMATE COSTS FOR ANDROGEN DEPRIVATION THERAPY IN PROSTATE CANCER PATIENTS

Abstracts:

EVALUATION OF PERSONALIZED BREAST CANCER TEST-TREATMENT STRATEGIES USING THE 21-GENE ASSAY RECURRENCE SCORE AND ADJUVANT! ONLINE: APPLICATION OF A DISCRETE EVENT SIMULATION MODEL

Beate Jahn, PhD¹, Ursula Rochau, MD, MSc¹, Christina Kurzthaler, Bsc¹, Marjan Arvandi, MS¹, Felicitas Kuehne¹, Martina Kluibenschaedl, Bsc.¹, Murray D. Krahn, MD, MSc², Mike Paulden, MA., MSc.³ and Uwe Siebert, MD, MPH, MSc, ScD⁴, (1)UMIT - Institute of Public Health, Medical Decision Making and HTA/ Area 4 HTA and Bioinformatics, Hall in Tyrol/ Innsbruck, Austria, (2)University of Toronto, Toronto Health Economics and Technology Assessment (THETA) Collaborative, Toronto, ON, Canada, (3)University of Toronto, Toronto, ON, Canada, (4)UMIT/ ONCOTYROL/ Harvard School of Public Health/ Harvard Medical School, Hall, Austria

Purpose: A Breast Cancer Outcomes model was developed at the ONCOTYROL research center, to evaluate the cost-effectiveness of personalized test-treatment strategies in Austria. The goal of this study was to build a model that allows evaluation of combinations of innovative tests, biomarkers and new treatments early in the development process. In a first application, we evaluate the cost effectiveness of the new 21-gene assay (ODX) when it is applied in addition to the Adjuvant! Online (AOL) decision aid to support personalized decisions on adjuvant chemotherapy in Austria

Method: We developed a discrete event simulation model to run a hypothetical cohort of 50 year old women over a lifetime time horizon. The main outcomes were life-years gained, quality-adjusted life-years (QALYs), costs and cost-effectiveness. Based on the new ISPOR-SMDM recommendations, the model was validated. Eight test-treatment strategies were evaluated. Each strategy was defined by three letters. The first letter indicates whether patients with a low risk according to AOL were tested using ODX (Y=yes; N=no), the second and the third letters provide this information for AOL intermediate and high-risk patients, respectively. Robustness of the results was tested in a sensitivity analysis. **Results** were compared to a Canadian analysis by the Toronto Health Economics and Technology Assessment Collaborative (THETA).

Result: Five out of eight strategies were dominated (i.e. more costly and less effective: NNY, NYN, YNN, YNY, YYN). The base-case analysis shows that only the strategies in which ODX is provided to patients with an intermediate or high AOL risk (incremental cost-effectiveness ratio (ICER) NYY = 1,600 EUR/QALY) and where all patients get ODX (ICER YYY 15,700 EUR/QALY) are cost-effective. These results are sensitive to changes in the probabilities of distant recurrence, age and costs of chemo that lead to further non dominated strategies. The base case analysis was comparable to the THETA results. Our discrete event simulation using a modular structure provides the flexibility to test various sequential tests, additional biomarker and treatments.

Conclusion: Our study showed that ODX, when used in addition to the AOL, is cost-effective in two test-treatment strategies (NYY, YYY) in Austria. Our simulation tool provides the flexibility to evaluate combinations of two or more tests that can complement each other and respective treatment.

QUANTITATIVE RISK-BENEFIT ANALYSIS ON DOSAGE OF INTRAVENOUS TISSUE-TYPE PLASMINOGEN ACTIVATOR IN ASIAN PATIENTS WITH STROKE THROMBOLYSIS

2:00 PM - 2:15 PM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 3](#)

Cheng-Yang Hsieh, MD, Jason C. Hsu, PhD and Yea-Huei Kao Yang, National Cheng Kung University, Tainan, Taiwan

Purpose: Intravenous tissue-type plasminogen activator (t-PA) is the only effective treatment for acute ischemic stroke in current practice. Recently, it has been used at lower dose in Asian countries due to the concerns of the safety and cost of the standard dose approved in the westerns countries. We aimed to evaluate the risk-benefit ratio of t-PA for the Asian stroke patients at diverse dosages of: (1) standard-dose (0.9 mg kg^{-1}) and (2) low-dose (0.7 mg kg^{-1}) to provide evidence for decision making of prescribing and reimbursement.

Method: A decision model was created to compare the risk-benefit of the standard- and low- doses of t-PA. The risk measures were the occurrence of symptomatic intracerebral hemorrhage (SICH) and mortality respectively and in combination; the efficacy measures was the proportion of patients with a modified Rankin Scale (mRS) score ≤ 1 at 3 months. The estimates were obtained from the published meta-analysis literature about Asian population. The risk and benefit of both dosages were compared in the form of incremental risk-benefit ratios (IRBRs). Probabilistic sensitivity analysis and one-way sensitivity analysis were conducted to incorporate uncertainty in model parameters and to estimate the impact of changing each key parameter individually.

Result: When SICH was used as the risk measure, low-dose t-PA (IRBR = 0.3729) showed increased risk and benefit as compared to standard-dose t-PA. However, standard-dose t-PA was dominated over by low-dose t-PA (IRBR = -2.3333), when mortality was used as the risk measure. Furthermore, the result of combined SICH and mortality revealed that the standard-dose t-PA was favorable as compared with low-dose t-PA with the IRBR of -0.3529. In sensitivity analyses, the IRBR ratios were robust to variations in utility of effectiveness and mortality of low-dose t-PA.

Conclusion: Our results indicated that the standard-dose t-PA might be preferred over low-dose t-PA considering both risks and benefits. Selecting appropriate dosage of t-PA according to both risk and benefit simultaneously is suggested in order to achieve better treatment goals for acute ischemic stroke in Asian population.

IMPROVING CERVICAL CANCER SCREENING BALANCING DETECTED CANCER PRECURSORS AND RESOURCE USE

2:15 PM - 2:30 PM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 3](#)

Kine Pedersen¹, Sveinung Wergeland Sorbye, MD, PhD², Stefan Lonnberg, MD, PhD³, Emily Burger, MPhil¹ and Ivar Sonbo Kristiansen, MD, PhD, MPH¹, (1)University of Oslo, Oslo, Norway, (2)University Hospital of North Norway, Tromso, Norway, (3)Cancer Registry of Norway, Oslo, Norway

Purpose: Norwegian health authorities are considering implementing primary human papillomavirus (HPV) testing in screening for cervical cancer for women 34-69 years. We aim to compare the current screening algorithm (i.e., primary cytology every three years) with primary HPV-testing every six years to enumerate resource trade-offs in terms of detection of high-grade cancer precursors (CIN2+) and number of colposcopies performed.

Method: We developed a probabilistic decision tree simulation model to estimate outcomes associated with different screening algorithms. The model uses epidemiologic data from the Cancer Registry of Norway and follows individual women attending primary screening at baseline through subsequent six years, allowing for loss-to-follow-up and spontaneous regression of CIN2+. We compared the current Norwegian strategy (Strategy 1) entailing primary cytology with co-testing (HPV and cytology) for delayed triage of atypical and low-grade cytology results (ASC-US/LSIL), with two alternative HPV strategies. Both HPV strategies involve primary HPV testing followed by reflex cytology for any HPV-positive result. For Strategy 2, the threshold for diagnostic colposcopy/biopsy is high-grade atypical cells or worse (ASC-H+), while Strategy 3 involves a lower threshold on the cytology result, i.e., any atypical cells (ASC-US+). Primary outcomes were CIN2+ detected and number of colposcopies/biopsies performed.

Result: Among 100,000 women, we project the three strategies would detect 503, 338 and 715 CIN2+, and require respectively 2685, 1925 and 3696 colposcopies. Consequently, the number of colposcopies per CIN2+ detected were 5.34, 5.70 and 5.17 for Strategy 1, 2 and 3, respectively. Strategy 2 results in a 32% reduction in detected CIN2+ while simultaneously increasing the number of colposcopies per CIN2+ by 7% compared to the current strategy, thus providing a less efficient algorithm. Conversely, Strategy 3 may increase detection of CIN2+ by 42% at a cost of 38% more colposcopies, and detect CIN2+ more efficiently than the current strategy (i.e., decreasing the colposcopy to CIN2+ ratio by 3%).

Conclusion: There is a potential for improving the current screening algorithm by implementing screening with primary HPV-testing. However, unless the lower threshold for referral to colposcopy/biopsy is utilized, primary HPV-testing may detect fewer cancer precursors and require more colposcopies per detected case. The differential effectiveness of the three algorithms in terms of preventing invasive cancer will depend on the extent to which cancer precursors regress or progress into cancer.

HEALTHCARE RESOURCE USE AND COSTS ANALYSIS FROM A CHINESE PAYER PERSPECTIVE OF METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS NOSOCOMIAL PNEUMONIA (MRSA-NP) PATIENTS TREATED WITH LINEZOLID OR VANCOMYCIN, WITH A FOCUS ON PATIENTS DEVELOPING RENAL FAILURE

2:30 PM - 2:45 PM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 3](#)

Yin Wan, MS¹, Qiang Li, MSc², Yixi Chen, MSc³, Seema Haider, PhD⁴, Sizhu Liu, MS¹ and Xin Gao, PhD¹, (1)Pharmerit, Bethesda, MD, (2)Surgical Intensive Care Unit, Department of General Surgery, Jiangsu Province Hospital, Nanjing, China, (3)Pfizer Inc., Beijing, China, (4)Pfizer Inc.,

Purpose: To assess the healthcare resource utilization (HCRU) and costs from a Chinese payer's perspective (Nanjing city) for MRSA-NP in hospitalized adults treated with linezolid or vancomycin, including the economic impact of renal failure.

Method: A post-hoc analysis was conducted using data from a phase IV, randomized, double-blind, global multicenter study (Wunderink, CID: 2012, NCT00084266) in culture-proven MRSA-NP patients [microbiologic confirmed intent-to-treat (MITT) cohort]. Renal failure was defined by ≥ 1 of the following: 1) investigator-reported renal failure adverse events; 2) acute kidney injury defined renal failure using RIFLE criteria; 3) initiated dialysis after study drug started. HCRU from treatment initiation through end of study visit (EOS) included study drug use, mechanical ventilator (MV) days, intensive care unit (ICU) days, length of stay (LOS), and dialysis days. Chinese costs were calculated by applying Nanjing-specific unit costs (2012 ¥) to the HCRU collected from the global trial. Between-group differences were tested using chi-square test for renal failure rates and t test for HCRU/costs, and the non-parametric Wilcoxon rank-sum test for comparisons with sample size < 30 .

Result: MITT patients (224 linezolid/224 vancomycin) were followed for 23.3 ± 10.1 days (linezolid 23.0 ± 10.0 , vancomycin 23.6 ± 10.2), with 39% hospitalized at EOS for both linezolid and vancomycin. Linezolid vs. vancomycin had similar total costs: $\text{¥}77,089 \pm \text{¥}51,211$ vs. $\text{¥}77,695 \pm \text{¥}52,450$, $p=0.90$. Linezolid patients had a significantly lower incidence of renal failure vs. vancomycin (4% [n=9] vs. 15% [n=34], $p<0.001$). Patients with renal failure (vs. no renal failure) had significantly more MV days (12.0 ± 9.9 vs. 7.8 ± 9.0 , $p=0.004$) and ICU days (13.5 ± 9.9 vs. 10.0 ± 8.5 , $p=0.013$), similar LOS (18.8 ± 9.8 vs. 18.2 ± 9.6 , $p=0.74$) and incurred higher total costs $\text{¥}100,449 \pm \text{¥}65,080$ vs. $\text{¥}74,944 \pm \text{¥}49,632$, $p=0.002$, **Table 1**). linezolid-treated (vs. vancomycin-treated) patients who developed renal failure trended towards lower HCRU (MV days: 7.6 ± 3.6 vs. 13.2 ± 10.7 , $p=0.21$; ICU days: 9.9 ± 6.6 vs. 14.4 ± 10.5 , $p=0.30$; LOS: 16.1 ± 11.0 vs. 19.5 ± 9.5 , $p=0.26$) and, when correcting for mortality differences using a per-person day approach tended to incur lower per person-day total cost ($\text{¥}4,805 \pm \text{¥}1,930$ vs. $\text{¥}5,347 \pm \text{¥}2,395$, $p=0.32$). **Table 1** reports the unadjusted mean costs for various cohorts.

Conclusion: Linezolid was associated with a significantly lower incidence of renal failure than vancomycin. HCRU and costs from a Chinese (Nanjing) payer perspective were similar between linezolid and vancomycin. Patients who developed renal failure incurred more HCRU and greater costs versus those who did not.

Table 1

Mean (¥)±SD (¥)	N	Total Costs (¥)	Bed-Day costs (¥)	MV costs(¥)	Dialysis costs (¥)	Study Drug Costs (¥)
MITT Cohort	448					
- linezolid	224	77,089±51,211	64,708±46,381	2,978±3,333	358±3,051*	9,045±3,867*
- vancomycin	224	77,695±52,450	67,168±45,935	2,914±3,276	1,646±7,688*	5,968±3,792*
MITT Cohort by Renal Failure	448					
- Without developing renal failure	405	74,944±49,632*	64,385±45,238*	2,798±3,243*	72±992*	7,689±4,091*
- Developing renal failure	43	100,449±65,080*	80,569±52,089*	4,337±3,555*	9,762±16,473*	5,782±4,081*
Renal Failure Patients†	43					
- linezolid	9	81,468±42,519	62,222±33,972	2,720±1,312	6,894±12,962	9,632±4,381*
- vancomycin	34	105,474±69,484	85,426±55,294	4,765±3,843	10,521±17,372	4,763±3,382*

*Significantly different at $\alpha=0.05$ vs. VAN or vs. patients developing renal failure

†Renal failure developed after randomization

USING HEALTH CARE ADMINISTRATIVE DATA TO ESTIMATE COSTS FOR ANDROGEN DEPRIVATION THERAPY IN PROSTATE CANCER PATIENTS

2:45 PM - 3:00 PM: Tue. Jan 7, 2014

Tanglin IV (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 3](#)

Murray D. Krahn, MD, MSc¹, Karen E. Bremner, BSc², Jin Luo, MSc³, Jeffrey Hoch, PhD⁴, Gary Naglie, MD⁵ and Shabbir MH Alibhai, MD, MSc², (1)Toronto Health Economics and Technology Assessment (THETA) Collaborative, Toronto, ON, Canada, (2)University Health Network, Toronto, ON, Canada, (3)Institute for Clinical Evaluative Sciences, Toronto, ON, Canada, (4)Cancer Care Ontario, Toronto, ON, Canada, (5)Baycrest, Toronto, ON, Canada

Purpose:

To estimate and compare real-world total health care costs for clinically relevant androgen deprivation therapy (ADT) regimens and indications for prostate cancer (PC).

Method:

Using a cancer registry and health care administrative databases in the province of Ontario, Canada, PC patients who started >90 days of ADT at age >66 in 1995 to 2005 were selected and classified by ADT regimen and indication. We used an outpatient prescription drugs database and hospital records to determine ADT regimen: medical castration; orchiectomy; anti-androgen monotherapy; combined androgen blockade (CAB) medical (medical castration plus anti-androgen); CAB surgical (orchiectomy plus anti-androgen). We used prescription drug data, hospital procedure codes, and diagnostic codes to determine indications for ADT: neoadjuvant, adjuvant, metastatic disease, biochemical recurrence, primary (non-metastatic). Using nonparametric regression methods we computed first-year, five-year, and ten-year longitudinal total direct medical costs (CAD2009).

Result:

The cohort numbered 21,818 (mean age 75 years; 54% alive on December 31, 2007). Mean first-year costs were highest among metastatic patients: from \$24,403 for orchiectomy to \$32,221 for anti-androgen monotherapy. Mean first-year costs for all other regimens and indications were below \$20,000 except for medical castration for recurrence (\$24,716). Primary treatment with orchiectomy was the least costly (\$14,218). CAB medical was the most costly regimen in the first year for primary, neo-adjuvant, and adjuvant indications. Mean five-year and ten-year costs were lowest for neo-adjuvant treatment, with differences of <\$3,000 between regimens. Orchiectomy regimens were the least costly, but limited to primary and metastatic indications. CAB Medical was generally more costly than anti-androgen monotherapy or medical castration alone. Annual costs were highest in the first year of ADT, likely due to drug/orchiectomy and costs associated with indication (radiation, metastases, recurrence). Outpatient drugs, including pharmacological ADT, accounted for 17% to 65% of total first-year costs.

Conclusion:

Surgical castration, if clinically relevant, represents considerable cost savings over pharmacological ADT. Monotherapies are more economical than CAB. Metastatic disease is the most costly indication. Administrative data allow estimation of costs in large population-based cohorts over long periods of time. Their lack of detailed clinical data can be overcome by developing algorithms, eg. for treatment regimens and indications. Our real-world costs provide high quality data for PC cost-effectiveness and decision models.

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1:30 PM - 3:00 PM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Session Chairs:

- *Sorapop Kiatpongsan, M.D.*
- *Eric A. Finkelstein, PhD, MHA*

Session Summary:

1:30 PM - 1:45 PM

**CAN AN INTERACTIVE DECISION AID IMPROVE SHARED DECISION MAKING?
PRELIMINARY BASELINE RESULTS FROM DATES (DECISION AID TO
TECHNOLOGICALLY ENHANCE SHARED DECISION MAKING)**

1:45 PM - 2:00 PM

**PHYSICIAN ROLE IN PATIENTS' DECISIONS ABOUT PROSTATE CANCER
TREATMENT**

2:00 PM - 2:15 PM

**EVALUATION OF RISK FACTORS TO PREDICT NOSOCOMIAL INFECTION IN
CHILDREN IN INDONESIA**

2:15 PM - 2:30 PM

**VALUATION OF PATIENT AND PHYSICIAN PREFERENCES FOR STROKE
PROPHYLAXIS IN ATRIAL FIBRILLATION**

2:30 PM - 2:45 PM

**A RANDOMIZED STUDY OF THE IMPACT OF INFORMATION ON POTENTIAL SIDE
EFFECTS AND OVERTREATMENT ON INTENT TO PARTICIPATE IN CERVICAL
CANCER SCREENING**

Abstracts:

**CAN AN INTERACTIVE DECISION AID IMPROVE SHARED DECISION MAKING?
PRELIMINARY BASELINE RESULTS FROM DATES (DECISION AID TO
TECHNOLOGICALLY ENHANCE SHARED DECISION MAKING)**

1:30 PM - 1:45 PM: Tue. Jan 7, 2014

Masahito Jimbo, MD, PhD, MPH¹, *Melissa Plegue, MA¹*, *Ananda Sen, PhD¹*, *Sarah T. Hawley, PhD, MPH²*, *Karen Kelly-Blake, PhD³* and *Mack Ruffin IV, MD, MPH¹*, (1)University of Michigan, Ann Arbor, MI, (2)University of Michigan, Ann Arbor VA Health System, Ann Arbor, MI, (3)Michigan State University College of Human Medicine, East Lansing, MI

Purpose: Provide a preliminary baseline report on the impact of a web based decision aid (DA) on colorectal cancer (CRC) screening in a 4-year National Cancer Institute funded study (R01CA152413), Decision Aid to Technologically Enhance Shared Decision Making (DATES).

Method: This is a 2-armed randomized controlled trial (target: 300 patients per arm). Intervention Arm features DATES Web, the interactive DA that elicits patient risk for CRC and clarifies preference for a specific CRC screening test option. Control Arm features a web-based DA with the same information but without the interactive features. Setting is 10 community and 1 university-based primary care practices in Metro Detroit. Participants are adults aged 50 to 75 years, not current on CRC screening, and scheduled for a regular visit with their physicians. In the clinic before the patient-physician encounter, participants complete a Patient Baseline Survey before being randomized. Data are collected after the patient reviews the respective website (Post-Intervention Survey), during the patient-physician encounter (digital audio recording) and after it (Post-Encounter Survey). A 6-month chart audit is performed to determine whether the patient underwent CRC screening. Primary outcomes are: patient uptake of CRC screening, patient decision quality (knowledge, preference clarification, intent), degree of shared decision making, and patient-physician agreement regarding test preference. Independent samples t-tests and Pearson's Chi-squared tests were used to compare the baseline demographic and web usage data between the arms.

Result: So far, 258 participants have been recruited. Mean age + standard deviation 58.9 (6.9) years; racial distribution 44.1% Caucasian and 48.0% African American; gender distribution 52.5% women and 47.5% men, difference between the 2 arms statistically not significant (NS). Differences in knowledge, attitude, perceived self-efficacy, decision-making preference, and test preference at baseline are statistically NS between the 2 arms. Average duration of website usage is 23.9 minutes in the Control Arm vs. 25.6 minutes in the Intervention Arm (NS).

Conclusion: The recruitment and randomization process have been successful. The results of our study will be among the first to examine the effect of a real-time preference assessment exercise on CRC screening and mediators, and, in doing so, will shed light on the patient-physician communication and shared decision making "black box" that currently exists between the delivery of DAs to patients and the subsequent patient behavior.

PHYSICIAN ROLE IN PATIENTS' DECISIONS ABOUT PROSTATE CANCER TREATMENT

1:45 PM - 2:00 PM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 4](#)

Angela Fagerlin, PhD¹, Margaret Holmes-Rovner, PhD², Sara J. Knight, PhD³, Bruce Ling, MD, MPH⁴, Stewart Alexander, PhD⁵, James A. Tulsky, MD⁵, David Rovner, MD⁶, Valerie C. Kahn, MPH⁷ and Peter A. Ubel, MD⁵, (1)VA Ann Arbor Healthcare System & University of Michigan, Ann Arbor, MI, (2)Center for Ethics, E. Lansing, MI, (3)Department of Veterans Affairs, Washington, DC, (4)University of Pittsburgh, Pittsburgh, PA, (5)Duke University, Durham, NC, (6)Michigan State University, East Lansing, MI, (7)University of Michigan, Ann Arbor, MI

Purpose: The role of physicians in medical decisions is critical and it is important to understand how patients' interactions with their physicians affect their treatment preferences and their perception of the decision making process.

Method: 1015 men were recruited from 4 VA hospitals immediately after receiving a biopsy for suspicion of prostate cancer. Men received an education intervention and completed 3 surveys: at their biopsy, immediately before receiving their cancer diagnosis, and one week following diagnosis. Only patients with a positive biopsy result indicating localized prostate cancer (PSA<20, Gleason score of 6-7) were eligible to complete Time 2 and 3 surveys (N = 335). Key measures included the COMRADE (combined outcome measure for risk communication and treatment decision making effectiveness), the PICS (Perceived Involvement Scale), perceptions of physician recommendations, and treatment preferences and treatment received.

Result: Overall, patients reported high satisfaction with their physician and their communication with their physician (Ms=4.25 and 4.43 on COMRADE Subscales and M=0.73 on PIC doctor facilitation subscale). Neither race, education, literacy, nor numeracy predicted patients' satisfaction with their physician. Higher scores on PICS predicted more desire for a strong physician role in decision making (and thus less patient role in decision making; B=-0.14, p=0.03).

Patients indicated that they believed that it is very important to undergo the treatment that their doctor thinks is best for them (M=8.6 on a 10-point scale). 73.8% of patients received a treatment recommendation from their urologist (45.0% of the recommendations were for surgery, 3.3% for radiation, and 32.8% for active surveillance). Patients indicated that the recommendations were moderately strong (M=3.8 on 5-point scale) and were moderately influential on their treatment decision (M=3.7 on 5-point scale).

After talking to their doctor about their treatment choices, the only factors that influenced the treatment patients' received was their physicians' recommendations (factors not influential included race, numeracy, literacy, patients' own treatment preferences, knowledge).

Conclusion: Physicians play an important role in patients' decisions, both by self-report and as reflected in the patients' actual treatment decisions. Patients' reported high satisfaction with their interaction with their urologists and believe that their recommendations play a role in their decision making process. However, there is concern that patients' values may not be reflected in decisions given the strong impact of physicians' recommendations.

EVALUATION OF RISK FACTORS TO PREDICT NOSOCOMIAL INFECTION IN CHILDREN IN INDONESIA

2:00 PM - 2:15 PM: Tue. Jan 7, 2014

Indah K. Murni, MD, MMed, Department of Pediatrics, Dr. Sardjito Hospital/Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia, Trevor Duke, MD, PhD, FRACP, Centre for International Child Health, Department of Pediatrics, the Royal Children's Hospital, the University of Melbourne, Melbourne, Australia, Sharon Kinney, MN, PhD, Department of Nursing and Pediatrics, the University of Melbourne, the Royal Children's Hospital Melbourne, Melbourne, Australia, Andrew J. Daley, MBBS, MMed, FRACP, Department of Microbiology, Infection Prevention and Control, the Royal Children's Hospital Melbourne, Melbourne, Australia and Yati Soenarto, MD, PhD, Department of Pediatrics, DR. Sardjito Hospital/Faculty of Medicine Universitas Gadjah Mada, Yogyakarta, Indonesia

Purpose:

Nosocomial infections are one of significant causes of morbidity and mortality. Evaluating risk factors to predict nosocomial infection is important to improve clinical outcomes. We aimed to evaluate the accuracy of risk factors to predict nosocomial infections in children.

Method:

A prospective cohort study was conducted during 28 months at a teaching hospital in Yogyakarta, Indonesia. All consecutive patients admitted to the Pediatric ICU and pediatric wards >48 hours were eligible. Those eligible patients were observed daily to identify the presence of nosocomial infection based on Centers for Disease Control and Prevention (CDC) criteria. The risk factors of nosocomial infections were identified. Logistic regression was used to identify independent predictors and assigned the risk score (value). We then computed the score for each patient and chose the cutoff value of score. We finally performed a receiver operating characteristic (ROC) curve analysis and computed the area under the curve (AUC).

Result:

Total of 2646 patients were recruited. Of 400 were diagnosed as nosocomial infections. The cumulative incidence of nosocomial infection was 15.1%. In multivariate analysis; length of stay >7 days, suffered from syndrome, use of central venous line (CVL), urine catheter, mechanical ventilation, and exposed to irrational antibiotics were independently associated with increased risk of nosocomial infections with adjusted OR (95%CI): 22.46(14.73-34.26), 1.98(1.33-2.93), 2.45(1.18-5.08), 3.56(2.34-5.40), 2.50(1.57-3.99), and 2.13(1.58-2.87), respectively. A score of these risk factors accurately predicts nosocomial infections with the area under ROC curve of 0.86.

Conclusion:

This study proves that length of stay >7 days, syndrome, use of CVL, urine catheter, mechanical ventilation, and irrational antibiotics increased risk of nosocomial infections in children. The score of these risk factors accurately predicts nosocomial infections.

Key words: risk factor, nosocomial infection, children, developing countries, Indonesia

2:15 PM - 2:30 PM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 4](#)

I. fan Kuo, BSc, (Pharm), PharmD¹, Carlo A. Marra, PharmD, PhD¹, Ross Tsuyuki, BSc(Pharm), PharmD, MSc², Karin Humphries, MBA, DSc³, Robert Boone, MD, MSc, (Epi)⁴ and Larry D. Lynd, PhD¹, (1)University of British Columbia, Vancouver, BC, Canada, (2)University of Alberta (Cardiology), Edmonton, AB, Canada, (3)Providence Health Care Research Institute, Vancouver, BC, Canada, (4)Providence Health Care St. Paul's Hospital, Vancouver, BC, Canada

Purpose:

To derive and compare relative preferences of physicians and patients for selecting oral antithrombotics in atrial fibrillation (AF).

Method:

Elicitation task: Best worst scaling (BWS) choice experiments were constructed from literature review and expert opinion, reflecting four attributes relevant to oral antithrombotics selection in the setting of stroke prevention in AF – frequency of laboratory monitoring, annual risk of stroke, annual risk of major bleed, availability of reversible agent.

Main survey. BWS experimental design was developed using Sawtooth Software. Each physician respondent answered 20 questions and patient respondent answered 16 questions. Patients were recruited through the Atrial Fibrillation Clinic at Vancouver General Hospital and physicians were invited to participate through the local health authority's email listserv and research broadcast.

Analysis. Relative utilities based on the BWS choice data were derived using the latent class analysis. To determine the difference in preference for each attribute level between physician and patient respondents, the Wilcoxon signed-rank test was performed to assess the difference between the best-worst score for the two groups.

Result:

The survey was completed by 33 physicians and 58 patients. Both groups favoured “annual stroke risk of 0%” as the most valued attribute-level with mean utility estimates of 4.58 (p-value <0.001) and 6.5032 (p-value <0.001), respectively. In comparison, “annual stroke risk of 10%” was chosen as the least favourable attribute-level for both physicians and patients with mean utility estimates of -3.66 (p-value <0.001) and -4.86 (p-value <0.001), respectively. Patients preferred “having reversibility agent available” over “laboratory monitoring every year” and deemed “annual stroke risk of 6%” to be a better attribute level than “annual major bleeding risk of 6%”. The reverse was found for the physician respondents in both cases. Wilcoxon signed-rank results revealed significant preference differences between the two perspectives for several of the attribute levels including: “laboratory monitoring every month”, “annual stroke risk of 10%”, “annual bleeding risk of 2%”, and “reversibility agent not available”.

Conclusion:

Preferences for stroke prophylaxis differ between physicians and AF patients. This is the first study known to compare valuation between the two perspectives using a BWS choice experiment and provides important insights to clinical decision-making in a patient-centered care model.

A RANDOMIZED STUDY OF THE IMPACT OF INFORMATION ON POTENTIAL SIDE EFFECTS AND OVERTREATMENT ON INTENT TO PARTICIPATE IN CERVICAL CANCER SCREENING

2:30 PM - 2:45 PM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [CONCURRENT ORAL PRESENTATIONS, SESSION 4](#)

Anita L. Iyer, MPhil¹, Mary Kate Bundorf, PhD², Dorte Gyrd-Hansen³, Jeremy D. Goldhaber-Fiebert, PhD⁴ and Ivar Sonbo Kristiansen, MD, PhD, MPH¹, (1)University of Oslo, Oslo, Norway, (2)Stanford University, Palo Alto, CA, (3)University of Southern Denmark, Odense, Denmark, (4)Stanford University, Stanford, CA

Purpose: Cervical cancer is the 13th most prevalent female cancer in Norway. A national screening program has existed since 1995, but is currently facing declining participation. Efforts have been made to increase screening participation through the use of information letters. The aims of this study were to evaluate the extent to which additional information regarding overtreatment and potential side effects associated with cervical cancer screening impacts the stated intention of women to participate in screening and pursue recommended treatment, to study women's preferences regarding the timing of such information, and to explore women's knowledge about the incidence of cervical cancer.

Method: A 27 question web-based questionnaire was developed and administered to a panel of Norwegian women aged 25- 69. Respondents were randomized into 3 groups based on when in the screening process information regarding overtreatment and the potential impact of surgical treatment on future pregnancy was first introduced: 1) when a Pap test is first suggested, 2) when a second test is recommended following the detection of abnormal cells, and 3) when surgical treatment is recommended. A fourth group served as a control group and was not provided information about overtreatment or side effects during all three points. This project is part of a larger international comparative study.

Results: 1,060 women responded to the survey. Additional information about overtreatment and side effects made no significant difference on women's stated intentions at the first two time points; however it appears to create uncertainty when surgery becomes an option, χ^2 (DF=6, N=1060, p=.014). Of the women surveyed, 945 (89.2%) believed that cervical cancer is among the three most common types of cancer among Norwegians. This overestimation is reflected in estimations of incidence, where 302 women (28.5%) correctly identified cervical cancer incidence rates in Norway at approximately 300 cases per year, while 71 (6.7%) underestimated the incidence rate, and 422 (39.8%) placed incidence rates at over 1000 cases a year. Over 80% of women state a preference for receiving information about all potential side effects.

Conclusions: Norwegian women overestimate the risk of cervical cancer. Their intention to undergo Pap tests is largely unaffected by the presence of additional information; however, this information may result in greater uncertainty when surgical intervention is suggested.

PLENARY SESSION: DEVELOPING AND IMPLEMENTING EFFECTIVE MODELS OF PATIENT CENTERED CARE IN THE CULTURALLY DIVERSE AND/OR RESOURCE CHALLENGED ENVIRONMENTS OF THE ASIA-PACIFIC REGION

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3:30 PM - 5:00 PM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Session Chairs:

- *Anirban Basu, PhD*
- *Dana L. Alden, PhD*

Session Summary:

3:30 PM - 4:00 PM

PRESENTER 1

4:00 PM - 4:30 PM

PRESENTER 2

4:30 PM - 5:00 PM

PRESENTER 3

Abstracts:

PRESENTER 1

3:30 PM - 4:00 PM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [PLENARY SESSION: DEVELOPING AND IMPLEMENTING EFFECTIVE MODELS OF PATIENT CENTERED CARE IN THE CULTURALLY DIVERSE AND/OR RESOURCE CHALLENGED ENVIRONMENTS OF THE ASIA-PACIFIC REGION](#)

Chirk Jenn Ng, *Faculty of Medicine, University of Malaya, Wilayah Persekutuan, Malaysia*

Dr. Chirk Jenn Ng is a Professor in the Department of Primary Care Medicine, University of Malaya, Malaysia. He practices as a consultant family physician at the University Malaya Medical Centre and teaches family medicine at the undergraduate and postgraduate levels in the Faculty of Medicine, University of Malaya. He is the deputy editor of the Malaysian Family Physician and chaired the Malaysian Primary Care Research Group 2010 – 2012. He is involved in promoting primary care research in Malaysia and the region by organising research conferences and conducting regular research workshops. He is currently the coordinator of the research module of the Advanced Training

Programme at the Academy of Family Physician of Malaysia. Professor Ng obtained PhD from UK focusing on the implementation of shared decision making in general practice. He currently leads a number of research on medical decision making across private, public and university-based settings. His other research interests include evidence based medicine and men's health.

PRESENTER 2

4:00 PM - 4:30 PM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [PLENARY SESSION: DEVELOPING AND IMPLEMENTING EFFECTIVE MODELS OF PATIENT CENTERED CARE IN THE CULTURALLY DIVERSE AND/OR RESOURCE CHALLENGED ENVIRONMENTS OF THE ASIA-PACIFIC REGION](#)

Somsak Chunharas, Ministry of Public Health

Dr. Somsak is a medical doctor with master of public health and additional training in medical education, health financing and project management. Starting his career as a physician and director in community hospitals in rural Thailand, he then shifted to international health and health planning with particular interest and experiences in health policy and system research, research ethics, information system, human resource development, and knowledge management and learning organization with articles and book chapters in Thai and English. He has worked extensively with various international organizations e.g. WHO, UNICEF, COHRED, ASPHR, and UNESCO. He currently runs NHF, an NGO working to promote knowledge-based health policy and system development.

PRESENTER 3

4:30 PM - 5:00 PM: Tue. Jan 7, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [PLENARY SESSION: DEVELOPING AND IMPLEMENTING EFFECTIVE MODELS OF PATIENT CENTERED CARE IN THE CULTURALLY DIVERSE AND/OR RESOURCE CHALLENGED ENVIRONMENTS OF THE ASIA-PACIFIC REGION](#)

Lyndal Trevena, MBBS, MPH, PhD, University of Sydney, Sydney, Australia

Dr. Trevena will discuss research findings in general and her latest research in particular that address issues related to adapting Western-based models of PCC in Asian cultures and resource constrained environments. As a key member of Centre for Medical Psychology & Evidence-based Decision-making (CeMPED) and an active general practitioner, Dr. Trevena's main research interest is the application of evidence in general practice, particularly in evidence-based clinical decision-making. She continues to develop and evaluate a number of decision tools and clinical practice guidelines, which assist clinicians and patients to individualize population-level research into practice. Much of this work has been in cancer and other disease prevention. More detail about this research program can be found at <http://www.psych.usyd.edu.au/cemped/>. She is particularly interested in preventive primary care strategies in disadvantaged groups & has worked with homeless people, low literacy groups and more recently in low-income country settings.

STUDENT ORAL ABSTRACT PRESENTATIONS

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*9:00 AM - 10:30 AM: Wed. Jan 8, 2014
Royal Pavilion Ballroom I-III (The Regent Hotel)*

Session Summary:

9:00 AM - 9:15 AM

THE IMPACT OF PUBLIC PRIVATE MIX ON IMPROVEMENTS IN TB AND MDR TB OUTCOMES: AN INDIAN MICROSIMULATION CASE STUDY

9:30 AM - 9:45 AM

TOWARD AN AUTOMATED MEDICAL IMAGE DATABASE SEARCH FRAMEWORK FOR SUPPORTING CLINICAL DECISION MAKING

9:45 AM - 10:00 AM

IMPLEMENTATION OF A PATIENT DECISION AID ON TYPE 2 DIABETES: OPPORTUNITIES AND CHALLENGES FACED BY HEALTHCARE PROFESSIONALS IN MALAYSIA

10:00 AM - 10:15 AM

GEOGRAPHIC VARIATION IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) GUIDELINE COMPLIANCE RATES ACROSS HOSPITAL REFERRAL REGIONS (HRR) IN TEXAS: AN ANALYSIS OF PRIVATE INSURANCE POPULATION

10:15 AM - 10:30 AM

FEASIBILITY AND EFFECTIVENESS OF A SMARTPHONE APP FOR SMOKING CESSATION DECISION-MAKING IN ASIA-PACIFIC

Abstracts:

THE IMPACT OF PUBLIC PRIVATE MIX ON IMPROVEMENTS IN TB AND MDR TB OUTCOMES: AN INDIAN MICROSIMULATION CASE STUDY

*9:00 AM - 9:15 AM: Wed. Jan 8, 2014
Royal Pavilion Ballroom I-III (The Regent Hotel)
Part of Session: [STUDENT ORAL ABSTRACT PRESENTATIONS](#)*

Sze-chuan Suen, MS¹, Eran Bendavid, MD, MS¹, Kimberly Babiarz, MA, PhD² and Jeremy Goldhaber-Fiebert, PhD¹, (1)Stanford University, Stanford, CA, (2)Centers for Health Policy and Primary Care and Outcomes Research, Stanford, CA

Purpose: Despite the availability of public sector tuberculosis (TB) control programs in many Asian countries, private sector clinics provide a substantial proportion of care. Such clinics often use inappropriate diagnostics and ineffective treatments that can select for multidrug resistant (MDR) TB. Given the roll out new TB technologies and StopTB advocacy of public private mix (PPM) to improve private sector care in countries including India, China, and Thailand, we evaluate the likely impacts if improvements are made in the public sector, private sector or both, using India as a case study.

Method: We developed a dynamic transmission microsimulation model that follows India's population stratified by age, sex, TB, drug resistance, and treatment status. We calibrate the model to Indian demographic, epidemiologic, and TB healthcare patterns in the public and private sectors. Control interventions include: 1) improving treatment effectiveness in the public sector only; 2) improving the accuracy and rapidity of TB diagnosis and drug sensitivity testing in the public and/or the private sector; 3) increasing referrals from the private sector to the public sector through PPM; 4) reducing inappropriate medication use to prevent MDR in the private sector; 5) combinations of these efforts. Outcomes include incidence and prevalence of active non-MDR and MDR TB in 2023 relative to 2013 levels.

Result: Without interventions, the model projects declines in non-MDR TB incidence (12%) and prevalence (12%) and increases in MDR incidence (15%) and prevalence (19%). For non-MDR TB, increasing referrals from the private to the public sector (through PPM) alone or in combination with improved diagnostics yields 15-17% lower incidence and 34-47% lower prevalence. Synergies provided by combined public and private sector interventions are evident for MDR outcomes. Exclusively private sector interventions result in MDR incidence and prevalence increases of 13-16%, whereas exclusively public sector interventions result in 2-7% declines. Combinations of PPM and increases in non-MDR TB treatment effectiveness to avoid generating MDR reduce incidence by 13-19%. Likewise, although MDR prevalence increases 14-18% with PPM alone, PPM combined with rapid, accurate diagnostics results in MDR prevalence declines of 55-58%.

Conclusion: Combining public and private sector interventions to improve and link TB care and rapid, accurate diagnostics is a promising approach for reducing non-MDR and MDR TB in India and similar Asian countries.

TOWARD AN AUTOMATED MEDICAL IMAGE DATABASE SEARCH FRAMEWORK FOR SUPPORTING CLINICAL DECISION MAKING

9:30 AM - 9:45 AM: Wed. Jan 8, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [STUDENT ORAL ABSTRACT PRESENTATIONS](#)

Anh T. Dinh, Bachelor¹, Tomi Silander, PhD¹, Tchoyoson C. C. Lim² and Tze-Yun Leong, PhD¹, (1)National University of Singapore, Singapore, Singapore, (2)National Neuroscience Institute,

Purpose: To retrieve relevant images from medical image databases for diagnosis, research and education.

Method: Currently, many challenges in segmentation, feature design and modelling make medical image mining a labour intensive process that requires medical expertise. Consequently, much of the information in medical image databases is currently not effectively used to support diagnosis, research and education. We propose to sidestep segmentation and feature design by automatically extracting general purpose, localized visual features using Gabor filters. We then sidestep model construction and model based classification by applying an ensemble of of case based image reconstruction methods that yield a sparse presentation of the new image. This combination of techniques offers an easy to deploy system for retrieving useful old images that are similar to the new image from image databases.

The symbolic information in the old images can then be used to automatically suggest annotations to the new image. In our work we have used the pathology class information attached to the computer tomography (CT) images of the traumatic brain injury (TBI) to suggest classification of the new images. However, the method is not specific to CT scans and it scales well to large image databases.

Results: We applied our method to 847 CT images of TBI obtained from the database of the Neuroradiology Department in a tertiary referral hospital specializing in neurological diseases in Singapore. Our stratified cross-validation results demonstrate the capability of our method to automatically classify the types of traumatic brain injuries into subdural hematoma, extradural hematoma, and intracerebral hemorrhage. This functionality allows searching for medical images by their diagnosis based on the image content only. We also demonstrate a tool that shows the relevant images used in these automatic classifications.

Conclusions: Our method offers an easy way to use information in medical image databases. The tool based on the methodology can be used to support diagnosis, and possibly in future, prognosis in medical decision making process.

IMPLEMENTATION OF A PATIENT DECISION AID ON TYPE 2 DIABETES: OPPORTUNITIES AND CHALLENGES FACED BY HEALTHCARE PROFESSIONALS IN MALAYSIA

9:45 AM - 10:00 AM: Wed. Jan 8, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [STUDENT ORAL ABSTRACT PRESENTATIONS](#)

Yew Kong Lee, BA¹, Chirk Jenn Ng², Khatijah Lim Abdullah², Syahidatul Akmal Azmi, B.Sc¹, Ee Ming Khoo², Ping Yein Lee, MBBS, MMed, (Family, Medicine)³, Wah Yun Low² and Azah Abdul Samad, MBBS⁴, (1)University of Malaya, Kuala Lumpur, Malaysia, (2)Faculty of Medicine, University of Malaya, Wilayah Persekutuan, Malaysia, (3)Universiti Putra Malaysia, Serdang, Malaysia, (4)Ministry of Health Malaysia, Kuala Lumpur, Malaysia

Purpose: This study aimed to explore the challenges and opportunities faced by Malaysian healthcare

professionals (HCPs) when implementing a patient decision aid (PDA) on insulin initiation in patients with type 2 diabetes.

Method: We conducted a qualitative study to capture the experiences of HCPs who have used the PDA in primary care consultations. In-depth interviews and focus group discussions were conducted after the consultations at university-based primary care clinics, public healthcare clinics and private general practices in 2012-2013. Participants included general practitioners (n=2), medical officers (n=7), diabetes nurses (n=3), and pharmacists (n=1). The interviews were audio-recorded, transcribed verbatim, checked and managed using Nvivo 9 software. A thematic analysis was used.

Result:

The challenges faced by HCPs include patient barriers (e.g. patient's unwillingness to read the PDA, visual impairment); system barriers (e.g. lack of time to use the PDA in consultations, lack of reading space for patients); and potential medico-legal risks in using the PDA (e.g. negative health outcomes).

HCPs identified opportunities to use PDA at two levels: the health system and individual consultations. At the system level, HCPs suggested incorporating the PDA use into the existing patient care pathway and individualising the timing of introducing the PDA to patients (e.g. before, during or take home after consultations). When selecting patients to use the PDA, the HCPs considered patients' literacy, the decision maker (patient or significant others), patient preparedness to decide, and knowledge of insulin.

At the individual consultation level, the use of the PDA by the HCPs was influenced by the following factors: being aware of different ways of using the PDA (e.g. cover to cover, focusing only on patient concerns, using the PDA over multiple consultations), being willing to modify their consultation style to use the PDA, giving more guidance to patients who had difficulty in understanding the PDA, and being able to use different language versions of the PDA. Some HCPs would avoid discussing the PDA at the initial consultation as they perceived that this might influence the patient's decision to start insulin.

Conclusion: HCPs identified patient and system barriers in implementing the PDA. The implementation of the PDA would depend on integrating the PDA into existing clinic pathway and being flexible when using the PDA with individual patients.

GEOGRAPHIC VARIATION IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) GUIDELINE COMPLIANCE RATES ACROSS HOSPITAL REFERRAL REGIONS (HRR) IN TEXAS: AN ANALYSIS OF PRIVATE INSURANCE POPULATION

10:00 AM - 10:15 AM: Wed. Jan 8, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [STUDENT ORAL ABSTRACT PRESENTATIONS](#)

[Suthira Taychakhoonavudh, BPharm, Msc](#), University of Texas School of Public Health, Bangkok, Thailand and [Luisa Franzini, PhD](#), The University of Texas School of Public Health, Houston, TX

Purpose: To explore the geographic variation in the adherence to guideline recommended care in

patients post-discharged from COPD-related hospitalizations or emergency department (ED) visits in a private insured population in Texas

Method: All hospital admissions and ED visits for COPD during the period of 2008 to 2011 were identified from the Blue Cross Blue Shield of Texas claims data. Patients were included in the study if they: were enrolled in PPO, PPO+, RPO and POS plan; had drug benefits with BCBS of TX plan; were 40 years of age and over and resided in a Texas Hospital Referral Region (HRR). Patients were identified as a recipient of guideline recommended care if within 30 days of discharge, they had at least one claim of prescription fills for any long-acting bronchodilators either beta2-agonists and/or anticholinergics with or without inhaled corticosteroids AND had at least one follow up visit with a primary care physician or pulmonologist. The adherence to guideline recommended care rates for each HRR were calculated by dividing number of discharges that received guideline recommended care by number of COPD-related hospitalizations/ED visit for each HRR. Index of variation (each HRR guideline compliance rate compare to overall Texas means) and coefficients of variation (CV; standard deviations from the Texas means) were calculated to examine the variation in guideline compliance rate.

Result: Of the 2,326 COPD-related hospitalizations/ED visit (1,100 ED visits and 1,226 admissions), 23.99% (29.85% of ED visits and 17.45% of admissions) had at least one prescription filled for maintenance medication and at least one follow up visit with primary care physician or pulmonologist within 30 days of discharge. Guideline compliance rates ranges from 15.38% in Waco HRR to 33.33% in Longview HRR with Texas coefficient of variation equal to 0.12.

Conclusion: Variations in guideline compliance rates were found among HRRs in Texas indicating inefficiencies in the treatment of COPD patients. Further investigation on factors contribute to this variation will provide insights for better policies and program interventions that may increase guideline compliance rates and reduce preventable COPD readmission.

FEASIBILITY AND EFFECTIVENESS OF A SMARTPHONE APP FOR SMOKING CESSATION DECISION-MAKING IN ASIA-PACIFIC

10:15 AM - 10:30 AM: Wed. Jan 8, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [STUDENT ORAL ABSTRACT PRESENTATIONS](#)

Nasser F. BinDhim, PhD, candidate and Lyndal Trevena, MBBS, MPH, PhD, University of Sydney, Sydney, Australia

Purpose: This is a two-phase study, (1) Assessing the feasibility of recruiting participants and collecting data via an app (able to be downloaded from the Apple App Store and Google Play) in Australia and Singapore. (2) Conducting an automated randomized control trial (RCT) using a smart-phone app decision aid, to help smokers decide on the best available quitting method for them, and to support the implementation of their quitting decision.

Method: In Phase 1 (feasibility) adults aged ≥ 18 years were passively recruited over 5 months by downloading the Study app via the app stores. Participants were invited to enter data about demographics, smoking behavior, stage of change and use of health-related apps. In Phase 2

(effectiveness,) the RCT app will be released in the app stores. When the app is opened for the first time, participants are asked to answer the baseline questionnaire. The app then randomizes them in blocks to the decision aid or information only sub-apps. Participants will be followed up at 4 time-points (10 days, 1 month, 3 months, and six months) to measure their smoking behavior. In addition, comparing groups in terms of informed choice, on our multidimensional measure of informed choice for smoking, at the first follow up (10 days).

Result: The total number of app downloads (after 5 months) was 451 (31% Australia and 69% Singapore), with 84% being Apple users. 140 participants of the 451 completed the questionnaire (55% Australia and 44% Singapore). There were no significant differences between countries in terms of education, operation system used, quitting attempts last year, and stage of change. Majority of participants 73% in Australia, and 61% in Singapore were ready to quit within the next 30 days. Participants that never seek professional quitting help (e.g. Quitline) were about 70% in both countries.

(Phase 2) will be commenced September 2013, results of the first follow up will be presented.

Conclusion: The study results show that the smartphone app effectively reaches smokers across a both countries who are most ready to quit and eschewing professional help. In addition to comparing the interventions effects on quitting decision and period of quitting, this project provides a new method of conducting an automated global RCT with no human intervention utilizing smartphone capabilities.

HEALTH POLICY ROUND: RESPONSES TO DEMENTIA IN AN AGING ASIA

[« Previous Session](#) | [Next Session »](#)

11:00 AM - 12:30 PM: Wed. Jan 8, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Session Chairs:

- *Jeremy D. Goldhaber-Fiebert, PhD*

Session Summary:

11:00 AM - 11:30 AM

PRESENTER. 1

11:30 AM - 12:00 PM

PRESENTER. 2

12:00 PM - 12:30 PM

PRESENTER. 3

Abstracts:

PRESENTER. 1

11:00 AM - 11:30 AM: Wed. Jan 8, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [HEALTH POLICY ROUND: RESPONSES TO DEMENTIA IN AN AGING ASIA](#)

***Martin Prince, MD MSc FRCPsych**, Institute of Psychiatry, London, United Kingdom*

Martin Prince is the Professor of Epidemiological Psychiatry at the Institute of Psychiatry in London. He is the Co-Director (with Vikram Patel) of the new KHP/ LSHTM [Centre for Global Mental Health](#). He trained in Psychiatry at the Maudsley Hospital and in Epidemiology at the London School of Hygiene and Tropical Medicine.

His main focus is upon mental health priorities in developing countries. In the IoP's Section of Epidemiology, PhD students from Ethiopia, Pakistan, India, China, Thailand, Sri Lanka and Brazil have studied diverse topics; women's mental health, maternal depression and infant development, migration, suicide, problem drinking; all of them public health and social priorities for the region concerned. He has coordinated, since 1998 [The 10/66 Dementia Research Group](#), a network of over 100 researchers, mainly from the developing world, who have worked together to promote more good research into dementia in those regions. 10/66 is part of Alzheimer's Disease International, and a major aim of the group is to disseminate evidence in such a way as to increase awareness of the

major problems to be faced now and in the future. Aside from his work in developing countries, Martin coordinates the study of mental and cognitive health in the 10 nation Study of Health and Retirement in Europe, and the UK National Psychiatric Morbidity Survey. He was a co-editor, with Vikram Patel and Shekhar Saxena, of the Lancet Series on Global Mental Health

PRESENTER. 2

11:30 AM - 12:00 PM: Wed. Jan 8, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [HEALTH POLICY ROUND: RESPONSES TO DEMENTIA IN AN AGING ASIA](#)

Jacob Roy Kuriakose, Alzheimer's Disease International (ADI)

Dr. Jacob Roy Kuriakose, an Indian national, graduated from Mysore University in 1976 with a diploma in Child Health from National University of Ireland in 1983 and a Fellow of Royal Academy of Medicine, Ireland. He has been a Senior Consultant at the Malankara Medical Mission Hospital, Kunnankulam, Kerala since 1985. He also worked as a medical officer in the Maldives and Nigeria. In 1986, he founded the Tropical Health Foundation of India, a voluntary organization working in the realm of rehabilitation of the disabled. He is also the founder of Alzheimer's & Related Disorders Society of India, a national voluntary organization dedicated to dementia care, support and research; established in 1992. He joined Alzheimer's Disease International (ADI), the world federation of 79 national Alzheimer's associations, in 1993 and served ADI as member of the executive, elected board and vice chairman. In 2012 he was elected as chairman for 3 years, the first Asian to get this honor. He is a global dementia advocate, pioneer in developing services for people with dementia and an invited speaker to a number of national and international dementia conferences.

PRESENTER. 3

12:00 PM - 12:30 PM: Wed. Jan 8, 2014

Royal Pavilion Ballroom I-III (The Regent Hotel)

Part of Session: [HEALTH POLICY ROUND: RESPONSES TO DEMENTIA IN AN AGING ASIA](#)

Raymond Chua, Health Sciences Authority, Singapore

Asst Prof Raymond Chua began his medical career after graduating from the Faculty of Medicine in National University of Singapore in 1997. He underwent numerous medical and surgical postings in the public sector hospitals till October 2000. Asst Prof Chua then took up his Public Health training with the Ministry of Health, Singapore, before he became certified as a Registered Public Health specialist and Fellow with the Academy of Medicine, Singapore in 2007. He was awarded a scholarship by the Ministry of Health to take up a Masters of Science in Public Health with the London School of Hygiene and Tropical Medicine, University of London, in 2002. Asst Prof Chua also holds a MBA degree from the University of Nottingham and a Graduate Diploma in Change Management, Institute of Public Administration and Management, Singapore in 2007.

In 2007, he left the public service to join Eisai Co Ltd in June 2007 as the Managing Director of Eisai Clinical Research Singapore, to oversee, execute and manage the development and operations of the global and regional clinical research activities within Asia-Pacific and Middle East. In 2010, he joined Shire Pharmaceuticals as their International Medical Director to oversee the growth and development of Shire's products in Asia-Pacific. In July 2011, Asst Prof Chua joined Health Sciences Authority (HSA) and was designated as the Group Director of the Health Products Regulation Group (HPRG) since May 2012. He oversees and provides the strategic directions to the HPRG as a national professional pre- and postmarket regulatory body of all health related products including drugs, medical devices, complementary health products and tobacco, taking into account the wider context of regional and international regulatory advances in alignment with the Vision and Mission of HSA.

Asst Prof Chua holds other appointments as Council Member of the Singapore Medical Council and an Adjunct Assistant Professor in the Saw Swee Hock School of Public Health in National University of Singapore. In addition, he is an appointed member of the International Committee, Faculty of Pharmaceutical Physicians, London, Fellow of the Royal College of Physicians and Surgeons (Glasgow) and a Fellow of the Royal College of Public Health (London). He is also a Deputy Registrar of the Registrar of Marriages since 2004.

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