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New Publications

Ungar WJ, Prosser LA, Burnett H. **Values and evidence colliding: Health technology assessment in child health.** *Expert Review of Pharmacoeconomics and Outcomes Research*, 13(4):417-419, 2013 (lead article).

Caulfield T, Evans J, McGuire A, McCabe C, Bubela T, Cook-Deegan R, Fishman J, Hogarth S, Miller FA, Raviskty V, Biesecker B, Borry P, Cho M, Carroll JC, Etchegary H, Joly Y, Kato K, Soo-Jin Lee S, Rothenberg K, Sankar P, Szego MJ, Ossorio P, Pullman D, Rousseau F, Ungar WJ, Wilson B. **Reflections on the cost of “low-cost” whole genome sequencing: Framing the health policy debate.** *PLoS Biology* 11(11): e1001699. doi:10.1371/journal.pbio.1001699, 2013

Ungar WJ, Costa V, Burnett H, Feldman BM, Laxer RM. **The use of biologic response modifiers in polyarticular-course juvenile idiopathic arthritis: A systematic review.** *Seminars in Arthritis and Rheumatism*, 42(6):597-618, 2013.

TASK

Technology Assessment at Sick Kids

<http://www.sickkids.ca/Research/TASK/>

March 2014

Dear friends and colleagues,

2013 has been a highly productive year for TASK – the only research unit devoted to the development of methods for and the conduct of technology assessment in child health. We are excited to fill you in on the changes and new faces since our last newsletter, including some of our recent activity and our upcoming plans for the 2014. Thank you for your ongoing support!

Wendy Ungar, PHD, Director, TASK

2012 PEDE Update

The **Paediatric Economic Database Evaluation (PEDE)** database is a searchable repository that houses detailed information on over 2,400 paediatric economic evaluations published since 1980. The PEDE database has been updated with 122 economic evaluations from 2012. The PEDE database now includes a searchable utility weight database. A description of the health state (as reported by the author), utility weight, and literature source or method used to derive the utility weight are presented in easy-to-read tables which can be exported or e-mailed from the PEDE site. The database is freely accessible on the internet with a user-friendly search engine. **Search PEDE today at:** <http://pede.ccb.sickkids.ca/pede/search.jsp>

We moved!

In November of 2013, we moved to the fabulous new state-of-the art SickKids Peter Gilgan Centre for Research and Learning.

Peter Gilgan Centre for Research and Learning
686 Bay St.,
Toronto, Ontario,
M5G 0A4
Canada



New Publications

Tsimicalis A, Stevens B, Ungar WJ, McKeever P, Greenberg M, Agha M, Guerriere D, Naqvi A, Barr R. **A mixed method approach to describe the out-of-pocket expenses incurred by families of children with cancer.** *Pediatric Blood and Cancer*, 60(3):438-445, 2013

Gauvreau C, Ungar WJ, Köhler JC, Zlotkin S. **The use of cost-effectiveness analysis for pediatric immunization in developing countries.** *The Milbank Quarterly*, 90(4):760-788, 2012

Ungar WJ. **Understanding the value of information from pediatric clinical research.** *Pediatric Drugs*, 14(5):295-297, 2012

Tsimicalis A, Stevens B, Ungar WJ, McKeever P, Greenberg M, Agha M, Guerriere D, Barr R, Naqvi A, Moineddin R. **A prospective study to determine the costs incurred by families of children newly diagnosed with cancer in Ontario.** *Psycho-Oncology*, 21(10):1113-1123, 2012

Kromm SK, Bethell J, Kraglund F, Edwards S, Laporte A, Coyte PC, Ungar WJ. **Characteristics and quality of pediatric cost-utility analyses.** *Quality of Life Research*, 21(8):1315-1325, 2012

Funding Awards

TASK has been awarded a knowledge synthesis grant from the Canadian Institutes of Health Research entitled **Thiopurine S-methyltransferase (TPMT) testing for averting drug toxicity in pediatric patients receiving thiopurines: An application of enhanced meta-analysis of diagnostic tests.** This project includes a comprehensive systematic review followed by an enhanced meta-analysis and cost-effectiveness analysis to address the needs of clinical, policy, and research knowledge users related to measuring TPMT status in children. The aims of the study are to generate new knowledge regarding appropriate TPMT diagnostic testing in children and to improve the methods used in meta-analysis of diagnostic genetic tests.

TASK is also leading the Integrated GE3LS study, **Health technology assessment of genetic testing in Autism Spectrum Disorder diagnosis**, funded by a Large Scale Applied Genome Canada grant. This study is assessing the cost-effectiveness of whole-genome sequencing (WGS) to identify genetic risk factors in patients with developmental delay and suspected autism. Results from this economic evaluation will help hospitals and health ministries in deciding how to best deploy this new technology.

Technical Reports

TASK has published two technical reports in the last year available for download at <http://www.sickkids.ca/Research/TASK/Reports/index.html>

Thiopurine dosing using TPMT status: a systematic review of clinical guidance, evaluated guidelines that describe testing for thiopurine S-methyltransferase (TPMT). Thiopurines are immunosuppressive and chemotherapeutic drugs widely used to treat chronic inflammatory conditions including inflammatory bowel disease, autoimmune hepatitis, idiopathic arthritis, and a number of dermatologic conditions. Thiopurines are also used as maintenance therapy in acute lymphoblastic leukemia and to prevent post-transplant organ transplant rejection. Both a laboratory and genetic test are available to determine a patient's TPMT status and TPMT testing represents the foremost example of clinical translation of pharmacogenomics in pediatrics. Twenty different guidelines for TPMT testing have been produced from 17 clinical organizations. Guidelines vary widely in their recommendations regarding which type of TPMT test to use, when to test, and how to adjust thiopurine dosage. The quality of guidelines also varied widely with poor quality guidelines failing to adhere to rigorous methods for use of evidence to support recommendations.

The second report is **The cost-effectiveness of clinic-based chloral hydrate sedation versus general anaesthesia for paediatric ophthalmological procedures.** This innovative early HTA study used a cross-over design to assess an emerging hospital-based technology. The study evaluated the incremental costs and outcomes of paediatric eye examinations carried out in the clinic under sedation using oral chloral hydrate compared to the operating room using general anaesthesia from a societal perspective. Results demonstrated significant savings when ophthalmologic exams were carried out in an outpatient clinic using chloral hydrate sedation, albeit with fewer procedures completed per exam. When taking into account the proportion of failed sedations that have to be repeated in the operating room, the clinic approach remained cost-saving. Exams carried out in the operating room under general anaesthetic may be more appropriate when a large number of procedures per patient are required.

New Publications

Burnett HF, Regier DA, Feldman BM, Miller FA, Ungar WJ. **Parents' preferences for drug treatments in juvenile idiopathic arthritis: A discrete choice experiment.** *Arthritis Care & Research*, 64(9):1382-1391, 2012

Ungar WJ, Boydell K, Dell S, Feldman BM, Marshall D, Willan A, Wright J. **A parent-child dyad approach to the assessment of health status and health-related quality of life in children with asthma.** *Pharmacoeconomics*, 30(8):697-712, 2012

Hancock-Howard RL, Ungar WJ, Marshall D, Einarson A, Koren G. **Public preferences for teratology counseling services: a discrete choice experiment.** *Birth Defects Research Part A: Clinical and Molecular Teratology*, 94(7):532-539, 2012.

Woo G, Tomlinson G, Yim C, Lilly L, Therapondos G, Wong DKH, Ungar WJ, Einarson TR, Sherman M, Heathcote EJ, Krahn M. **Health state utilities and quality of life in patients with hepatitis B.** *Canadian Journal of Gastroenterology*, 26(7):445-451, 2012.



New TASK Force Members

Lilla Roy, RN, BScN, MSc, Clinical Research Project Coordinator

Lilla assists with numerous TASK projects and is primarily involved with the systematic review, meta-analysis and economic modeling for the enhanced meta-analysis TPMT study. Lilla obtained her MSc in Pharmaceutical Sciences in 2013 from the University of British Columbia and continues to be actively involved in nursing. Her MSc thesis was in the research disciplines of epidemiology, biostatistics and health economics and was entitled "Deriving health utility weights for infants with Respiratory Syncytial Virus".

Naaz Bashir, MSc, MBA, PMP, PhD candidate

For her doctoral dissertation, Ms. Bashir is performing a health technology assessment of personalized disease management strategies in pediatric inflammatory bowel disease, in collaboration with pediatric gastroenterologists at Sick Kids.

Melanie Penner, MD, FRCPC, MSc candidate

A pediatrician completing her residency in developmental pediatrics, Dr. Penner is investigating the cost-effectiveness of alternative clinical diagnostic approaches in autism spectrum disorder for her MSc thesis.

For more information on TASK, contact:

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