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Society for Pediatric and Perinatal Epidemiologic Research Annual Meeting: Looking Back, Looking Forward

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The 27th annual Society for Pediatric and Perinatal Epidemiologic Research (SPER) meeting, held in Seattle, Washington on 23 and 24 June 2014 proved to be yet another stimulating and enlightening event. We heard high calibre presentations on new methods, hypotheses, and results on a range of topics, each with impact on our field of study.

For the 9th year, SPER offered an advanced methods workshop before the formal onset of the meeting. Under the tutelage of Matthew Fox from the Boston University School of Public Health, MA, USA and Jennifer Hutcheon from the Department of Obstetrics and Gynecology at University of British Columbia, Canada, two fundamental issues in epidemiology were addressed. Dr Fox showed how simulation methods can be used to better understand common sources of bias and random error with quantitative bias analyses (including accomplishing these in Excel), followed by Dr Kelly Getz's description of her application of these methods for dependent error between an exposure and a confounder. Dr Hutcheon described the different conceptual frameworks for risk prediction models versus aetiologic models. Interleaved between Dr Hutcheon's conceptual points was Laura Schummers, who described model building to predict outcomes for various preconception weight patterns.

Monday evening's opening reception and poster session featured over 100 poster presentations on preconception and pregnancy outcomes and maternal behaviours. The Heinz Berendes International Travel Award winner Jessica Tearne, from the Telethon Institute for Child Health Research in Australia, presented her poster on late childbearing and childhood outcomes in this poster session as well as the Tuesday poster session. Dr Judy Hall gave a provocative presentation on her theory that totems from the Northwest Aboriginal peoples pay specific homage to persons with rare inherited phenotypes.

Early risers on Tuesday morning chose from five roundtable discussions on some of the more common outcomes studied among SPER members. Sessions on fetal growth

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restriction, twinning, pre-eclampsia, childhood outcomes, and the placenta were well lead, attended and received.

Four plenary sessions showcased nineteen excellent presenters. The first session theme was 'Counting Time Matters' with presentations on successive pregnancy loss and time-to-pregnancy, circadian rhythms and placental abruption, timing of miscarriage, left truncation as an explanation for the protective effect of smoking on pre-eclampsia, and generational effects of low birth weight and recurrent preterm birth. The second session, 'Behaviors Matter', covered maternal exercise, childhood sexual abuse, aspirin use, trends in income equality, and fruit and vegetable intake each in relation to different reproductive outcomes. 'Mediating on Mediation Matters' included four different research questions and whether associations were mediated by a factor in the causal pathway. The last session was devoted to childhood outcomes, including allergic disease, autism, weight gain, and neurodevelopment. All speakers were engaging and their presentations spurred ideas for next steps.

The Mentoring Award this year was presented to Dr KS Joseph from the Department of Obstetrics and Gynecology and School of Population and Public Health at the University of British Columbia, Canada. By prioritising the professional and personal development of his students over his own research agenda, Dr Joseph has not only trained, but also inspired many young investigators. The Rising Star Award was for Dr Sunni L. Mumford, Earl Stadtman Investigator at the Epidemiology Branch, Division of Intramural Population Health Research at the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, USA. Dr Mumford's research focuses on pressing questions related to the impact of dietary and lifestyle factors on reproduction and infertility. Her ability to synthesise knowledge from biology, reproductive epidemiology, and epidemiologic methods has allowed her to tackle important biological questions with the most sophisticated methodological approaches.

We heard a presentation by Quaker Harmon, who won the Student Prize Paper and proved to not only be an excellent writer, but an excellent speaker as well. Through her work at the National Institute of Environmental Health Sciences and using data from Norway, she showed that fetal death was higher for pre-eclampsia-affected pregnancies, regardless of gestational age at delivery.

The second poster session during the noontime break included another 108 posters. Presentations in this session covered the areas of social and environmental risk factors, parturition, childhood outcomes, and methods.

Dr Judy Hall, Medical Geneticist and Professor Emeritus at University of British Columbia, was the keynote speaker. Her ambitious presentation on epigenetic mechanisms was broad, providing historical evidence that modification of inherited factors can affect health outcomes, reviewing current research efforts, and identifying future directions. Dr Hall made clear that epigenetic mechanisms are complex and hold much promise for epidemiologic research going forward in our quest to understand the causes of disease.

The conference concluded with a business meeting where SPER membership, finances, conference contributions, attendance and content, state of the *Paediatric and Perinatal Epidemiology* journal, and other procedural and administrative matters were discussed. Outgoing officers, past President Robert Platt, Treasurer Danelle Lobdell, Member-at-Large Claudia Holzman, and Student Representative Samantha Parker, were thanked and incoming officers, President-Elect Suzan Carmichael, Treasurer Candace Robdelo, Member-at-Large Emily Harville, International Liaison Jennifer Zeitlin, and Student Representative Audrey Flak, were welcomed. A new SPER member grant review system was discussed with the rollout planned for this coming year. The last minutes of the conference were devoted to present our preliminary goals for next year, which may be modified after analysing the data from a brief survey sent to the membership after the meeting.

Looking forward, we will continue the trajectory of SPER as a rigorous forum for methodological training and discussions. We will work to maintain SPER success fostering the focus on cutting-edge methods and their application to perinatal and paediatric epidemiology, the development of trainees and the involvement of junior members in the Society. In addition, during the next year, we will increase our emphasis on translational science. In the SPER 2015 conference, we would like to enhance the focus on relevant causal questions with direct impact in clinical or public health practice by promoting research that identifies which interventions work best to prevent or treat adverse perinatal and paediatric outcomes.

To keep up with the high scientific quality of the meeting, we need your involvement. Yes, we need you, whether you are considering submitting an abstract for the first time or you were a founder of the field. The new generations fuel our meetings with their energy, methodological skills, passion for research, and familiarity with new technologies and social media. SPER provides the space to exchange ideas and facilitate the growth of future leaders in the field. However, we cannot forget those who took us where we are today. By attending SPER meetings, we all learn from the experience of colleagues. If you have ever attended a SPER conference, you will probably remember the sharp but kind remarks from Allen Wilcox and Germaine Louis, to name a few, after podium presentations. This has been always the experience at SPER meetings: exciting, inspiring, challenging, and nurturing. This year, during SPER 2014, many of us listened to comments and question by Nigel Paneth, David Savitz, and Cande Ananth (again just naming a few) and realised how much we can keep learning from them.

We are looking forward to seeing you in Denver in June 2015. Bring your ideas and your running clothes for a healthy surprise!

Biography

Martha Werler is the SPER outgoing President, and Chair and Professor of Epidemiology at the Boston University School of Public Health. Her research focuses on risk factors for birth defects and outcomes among children affected with craniofacial malformations. She is Director of the Boston University Reproductive, Perinatal, and Pediatric Epidemiology Training Program. Sonia Hernández-Díaz is the current SPER President and an Associate

Professor in the Department of Epidemiology at Harvard School of Public Health, where she focuses on the application of methods to reduce biases in obstetric and perinatal observational studies. Her main area of research has been the assessment of the comparative safety and effectiveness of drugs during pregnancy.