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Health Economics with BGI
CHEOS and BGI, one of the world’s largest genomics organizations, based in Shenzhen in southern China, engaged in a research partnership in which personalized medicine is the area of focus.

The health economics program at CHEOS, led by Dr. Wei Zhang, is conducting a research project regarding the health economics of next generation sequencing-based personalized medicine.

As a part of a larger partnership between Providence Health Care, St. Paul’s Foundation, Genome B.C., Deloitte Inc., and BGI, this inaugural project initiates the B.C.-BGI relationship and will guide the success of future joint endeavours.

Million Dollar Meds
Million Dollar Meds, is a collaboration between the CIHR New Emerging Team for Rare Diseases, led by CHEOS’ Dr. Larry Lynd, and the University of British Columbia (UBC) School of Journalism.

The multi-media campaign is aimed at raising awareness about rare diseases, access to medication, and related issues faced by Canadian patients, their families, and policy makers.

This awareness campaign received the 2016 Edward R. Murrow Award in the International category. The award, presented by the Radio Television Digital News Association recognizes achievements in electronic journalism.

BC SUPPORT Unit
Advancing patient-oriented research

Continued Involvement in Patient-Oriented Research
This year, CHEOS continued to engage with the BC Support for People and Patient-Oriented Research and Trials (SUPPORT) Unit. As a part of CIHR’s Strategy for Patient-Oriented Research (SPOR), the Unit is an organization created to support, streamline, and improve patient-oriented research throughout the province.

CHEOS Scientists: Drs. Hubert Wong and Nick Bansback were announced as leads for the Real-World Clinical Trials and Health Economics and Simulation Modelling Method Clusters, respectively. They join CHEOS Scientist Dr. Linda Li, the existing lead for the Knowledge Translation and Implementation Science Cluster, as methods cluster leads.

Youth Mental Health in B.C.
This year was a significant one for Dr. Steve Mathias and Foundry, for which he serves as Executive Director. Foundry, formerly known as the B.C. Integrated Youth Services Initiative, is an organization committed to providing comprehensive mental health care and wellness services to B.C.’s young people. Dr. Mathias was quoted in February in a CTV story about youth suicide, Foundry, and access to care.

Dr. Mathias was also featured in an article in Promise Magazine, a publication of the St. Paul’s Foundation, about the expansion of the Foundry program through the opening of five new centres, one in each of the provincial health regions. The new centres are in addition to the existing flagship Granville Youth Health Centre in Vancouver.

With commitment from the provincial government, Foundry Kelowna was launched in the fall of 2016 and covered by CBC and Global News.

Organ Transplantation
Dr. Jagbir Gill was interviewed by the Vancouver Sun about the dangers of travelling abroad to pay for an organ transplant on the black market, known as transplant tourism.

Dr. John Gill, another CHEOS nephrologist, spoke at an Organ Trafficking and Transplant Tourism Summit in Vatican City and was quoted in Crux. Both he and CHEOS Scientist Dr. Adeera Levin were invited to the two-day Summit where organ trafficking was declared a crime against humanity.

In early 2017, Drs. Gill and Gill wrote a letter to the editor, published in The Globe and Mail, in response to an article about increasing organ donation in Canada.

Opioid Crisis
With the relentless rise of the opioid crisis and the release of the primary results of the SALOME study, Drs. Eugenia Oviedo-Joekes, Martin Schechter, and Michael Krausz were quoted by several outlets about the crisis, Crossstown clinic, prescription opioids, and drug policy. CBC, the Vancouver Sun, VICE, Metro News, The Lancet, Cited podcast, and The Province were among those seeking input from the CHEOS Scientists.

Preventative Care
Dr. Nadia Khan, appointed as president of Hypertension Canada in early 2017, was interviewed by MSNBC about some early testing and interventions used at St. Paul’s Hospital to prevent hypertension and related health complications.

Key Research Areas
CHEOS organizes its key research areas and leadership under nine distinct research programs. Each research area is led by a CHEOS Scientist as the Program Head:

- Biostatistics – Dr. Hubert Wong
- Clinical Trials – Dr. Joel Singer
- Decision Sciences – Dr. Nick Bansback
- Health Economics – Dr. Wei Zhang
- Health Services and Outcomes – Dr. Jason Sutherland
- Knowledge Translation – Dr. Amy Salmon
- Patient-Reported Outcomes – Dr. Rick Sawatzky
- Program Evaluation – Dr. Beth Snow
- Psychosocial Epidemiology – Dr. Chris Richardson

Media Highlights

Success with CIHR
Fourteen CHEOS Scientists received funding from the 2016 Foundation and Project Grant competition through the Canadian Institutes of Health Research (CIHR).

Dr. Martin Schechter was awarded a Foundation Grant over a 7-year period to develop and test HIV prevention and treatment programs that build on Indigenous peoples’ cultural strengths to promote resiliency and health, both in Canada and globally.

CHEOS in 2016-2017

Above: Dr. Larry Lynd of the CIHR New Emerging Team for Rare Diseases

SALOME Results
Groundbreaking results from the Study to Assess Longer-term Opioid Medication Effectiveness (SALOME) found hydromorphone to be as effective as diacetylmorphine (pharmaceutical-grade prescription heroin) for treating people with long-term opioid dependence who have not benefited from previous treatments, such as methadone or suboxone.

CHEOS Scientist and Study Principal Investigator Dr. Eugenia Oviedo-Joekes was awarded the 2016 Providence Health Care (PHC) Research and Mission Award for her work. The story made local and international headlines, including in The Guardian and The New York Times.

Dr. Mark Harrison, Rick Sawatzky, Patricia Spittal, and John Staples were awarded funding as Principal Investigators. Several other Scientists will serve as Co-Investigators on a wide range of projects. The awards were announced in June of 2016.
New Scientists

Skye Barbic, PhD, M.Sc., B.Sc.(OT), B.Sc., Scientist
Dr. Barbic joined CHEOS in 2016. She is an Assistant Professor in the Department of Occupational Science and Occupational Therapy at UBC. She is also a registered occupational therapist with a clinical interest in rehabilitation of adults with serious mental illness. Dr. Barbic is interested in patient-reported outcome measures in clinical practice, community integration and recovery of youth with mental illness, and understanding quality of life and functional outcomes of adults and youth with mental illness who experience homelessness or reside in single-room occupancy housing.

Annalijn Conklin, PhD(Cantab), MPH, M.Sc.(Research), B.Sc.(Hons), Scientist
Dr. Conklin joined CHEOS in early 2017 after a CIHR Postdoctoral Fellowship at UCLA and completion of a PhD from the University of Cambridge. Dr. Conklin’s research examines the broader social factors that influence nutrition-related behaviours and outcomes in adults, with a strong policy interest in improving the design and evaluation of interventions to prevent and manage chronic conditions. She uses novel approaches to assess how social and economic factors predict individual variations in diet and weight status using existing survey data.

Ehsan Karim, PhD, M.Sc., Scientist
Dr. Karim joined CHEOS in late 2016 as a Scientist and Biostatistician. He obtained his PhD in Statistics from UBC and completed postgraduate training at the Department of Epidemiology, Biostatistics, and Occupational Health at McGill University. His current research focuses on causal inference, longitudinal and observational data analyses, machine learning, and Bayesian methodologies. As a Biostatistician at CHÉOS, Dr. Karim provides research support for study design and data analysis planning.

Joseph Puyat, PhD, M.Sc., MA(Psych), Scientist
Dr. Puyat was appointed as a CHEOS Scientist in the fall of 2016. Before graduating with his PhD at UBC’s School of Population and Public Health, he worked at CHEOS as a Research Scientist, a position he held since 2012. His doctoral work used linked, large health administrative data to examine gaps and disparities in depression treatment and to estimate the impact of physician incentives on reducing treatment gaps in B.C. He collaborates with other researchers who conduct studies in applied physiology, physical activity, sedentary behaviour, and aging. He is also a researcher with PHC’s Mental Health Program.

Caren Rose, PhD, M.Sc., Scientist
Dr. Rose joined CHEOS in November 2016. She completed a bachelor’s degree in Mathematics and Life Sciences at UBC, an M.Sc. in Statistics at Dalhousie University, and a PhD in Health Services and Epidemiology at UBC’s School of Population and Public Health. Dr. Rose is a member of the UBC Division of Nephrology, where she focuses on health services and policy research related to kidney transplantation and organ donation. Her current research focuses on predicting patient and graft longevity to determine rules for increasing efficiency in deceased donor kidney allocation while maintaining equitable access.

Our Investigators

Our research teams work in a variety of health disciplines including, but not limited to: epidemiology and population health, health economics, statistics and research methodology, knowledge translation, program evaluation, personalized medicine, pharmacology and toxicology, psychiatry and psychology, and other medical sciences.

Aslam Anis, PhD, FCAHS
Najib Ayas, MD, MPH, FRCPC
Nick Bansback, PhD
Skye Barbic, PhD, M.Sc., B.Sc.(OT), B.Sc.
Sean Barbour, MD, M.Sc., FRCPC
Monica Beauilleu, MD, FRCPC, MHA
Carl J. Brown, MD, M.Sc., FRCCS
Annalijn Conklin, PhD(Cantab), MPH, M.Sc., B.Sc.
Geoffrey W. Cundiff, MD, FACOG, FACS, FRSCS
Peter Dodek, MD, M.HSc.
Jim Frankish, MD, MA
Ehsan Karim, PhD, M.Sc.
Nadia Khan, MD, M.Sc., FRCPC
Mieke Koehoorn, PhD
Michael Krausz, MD, PhD, FRCPC
Jane Lea, MD, FRCCS
Adeera Levin, MD, FRCPC
Linda Li, MD, M.Sc., B.Sc.(PT)
Larry D. Lynd, PhD, BSP
Martha Mackay, PhD, RN CCN(C)
Steven Mathias, MD, FRCPC
Rita McCracken, MD, CCFF, PhD (Candidate)
Eugenia Oviedo-Joekees, PhD
Anita Palepu, MD, MPH, FRCPC, FACP
P. Terry Phang, MD, M.Sc., FRCCS
Joseph Puyat, PhD, M.Sc., MA
Devin Harris, MD, CCFF(EM), FCPF, M.HSc.
Mark Harrison, PhD, M.Sc.
Karim Humphries, D.Sc., M.Sc., MBA
Garth Hunte, MD, PhD, FCPF
Ehsan Karim, PhD, M.Sc.
Jason Sutherland, PhD, Program Head – Health Services and Outcomes
Dr. Sutherland became a CHEOS Scientist in the summer of 2016. Dr. Sutherland obtained his PhD in Statistics from Simon Fraser University. He is also a Michael Smith Foundation Scholar, a Senior Researcher at the Agency for Healthcare Research and Quality, and an Affiliated Investigator at the Vancouver Coastal Health Research Institute. Dr. Sutherland is currently studying changes in health attributable to elective surgery using patient-reported outcomes (PROs), patients’ health over time, and the impact of funding policy. He is an Associate Professor at UBC’s School of Population and Public Health and a CHEOS Program Head.

Wei Zhang, MM, MA, PhD, Program Head – Health Economics
Dr. Zhang first joined CHEOS in 2006 as a health economist after earning her master’s degree from the University of Ottawa. After finishing her PhD at UBC’s School of Population and Public Health she completed her postdoctoral training with UBC and CHEOS. She was appointed as a CHEOS Scientist in early 2017 and serves as a Program Head. Her primary research interests include measurement and valuation of work productivity loss due to illness, economic evaluation of health care interventions, and pharmaceutical policy.
Below is a selection of recognition awards for the year:

**Dr. Adeera Levin** was invested as a Member of the Order of Canada and received the National President’s Award from the Kidney Foundation of Canada. Dr. John Gill was acknowledged with the Established Investigator Award from the American Society of Transplantation. Dr. Anita Palepu was awarded a Mastership in the American College of Physicians.

**Dr. John Staples** was presented with the 2017 VCHRI Investigator Award.

Dr. Martha Mackay received a 4-year Embedded Clinician Researcher Salary Award from CIHR and the 2016 Nursing Research Excellence Award from the Canadian Council of Cardiovascular Nurses.

Dr. Rick Sawatzky and Ms. Aggie Black both accepted awards from the Association of Registered Nurses of B.C.

Dr. Martin Schechter received the George Elliot Award from the School of Population and Public Health and the Distinguished Achievement Award for Overall Excellence from the UBC Faculty of Medicine.

Dr. Eugenia Oviedo-Joekes was given the Distinguished Achievement Award for Excellence in Clinical or Applied Research, also from the CIHR. She was awarded the Leadership Challenge Award from the Maurice McGregor Award from the Canadian Association of Registered Nurses of B.C.

Dr. Mark Harrison was granted the 2016 New Investigator Research Award from the Association of Faculties of Pharmacy of Canada. Dr. Nick Bansback was also recognized for his early career achievements with the Maurice McGregor Award from the Canadian Agency of Drugs and Technologies in Health.

Dr. Dr. Nick Bansback was also recognized for his early career achievements with the Maurice McGregor Award from the Canadian Agency of Drugs and Technologies in Health.

We would like to welcome the addition of our Research Associates Aggie Black and Alison Hoens. Aggie is an Adjunct Professor at the UBC School of Nursing and a Research Leader at PHC. Alison is a Clinical Professor and Knowledge Broker in the UBC Department of Physical Therapy.

We would like to thank departing Scientist Dr. Natalie Henrich for her contributions to CHÉOS and wish her the best in the future.

**New staff members in 2016–2017:** Erin Cherban, Pinky Hapsari, Raymond Khanano, Leslie Love, Rowan Monteiro, Derek Ouyang, Yossi Shariandjevis, Robert Sindelar, Claire Song, Julie Sou, and Joanne Zhou.

Please join us in thanking the following staff for their service: Danielle Arseneau, Samantha Bruin, Stacey Forester, Min Gao, Nazrul Islam, Marian Krawczyk, Daphne Ling, Jane Liu, Sarah Sheridan, Mandana Sotoodeh, Stanley Wong, and Wendy Zubyk.

Summer students: Simran Bhamra, Angela Du, Joel Lee-Dodek, and Rui Zhu.

**Kirsten Marchand** (PhD candidate) was awarded the Leadership Challenge Scholarship from the American Public Health Association. She also received a Doctoral Research Award and a Travel Award, both from CIHR.

**Heather Palis** (PhD candidate) was also awarded a CIHR Doctoral Award as well as a Four-Year Doctoral Fellowship from UBC. Both Heather and Kirsten are supervised by Dr. Eugenia Oviedo-Joekes.

**Fiona Choi,** a postdoctoral fellow working with Dr. Michael Krausz, received a 20-month Mitacs Accelerate Internship to study the use of mobile mental health technology in an acute care setting.

Outside of our own research, CHÉOS assists other investigators and groups by providing a full spectrum of research support services. Our outcomes-related research services help clinicians and researchers conduct studies, including clinical trials, and publish evidence-based academic papers on health outcomes. The Centre has also developed capacity to support and conduct program, developmental, and other related evaluations, along with knowledge translation initiatives. The CHÉOS team is made up of programmers, project managers, clinical educators, data managers, program evaluators, health economists, statisticians, epidemiologists, and regulatory specialists.

The services we provide include:

- Health Economics
- Regulatory Affairs
- Data Management
- Clinical Trial Management
- Study Methodology & Statistics
- Clinical Trial Monitoring and Auditing
- Programme Evaluation
- Clinical Research Certification (SoCRA CCRP®)

New this year, Ms. Erin Cherban joined CHÉOS as the Chief Clinical Research Officer.

With previous positions at CHÉOS, the CIHR HIV Clinical Trials Network (CTN), and the Rick Hansen Institute, Erin brings significant depth of knowledge to our Clinical Research Team. Her clinical support expertise includes trial development; international, multi-centre project management; monitoring/auditing; and collaborative leadership of multidisciplinary teams.

She is the only person in Western Canada authorized to proctor the Society of Clinical Research Associates (SoCRA) certification exam.

For more information or to submit a service request, please visit www.cheos.ubc.ca/services or contact researchsupport@cheos.ubc.ca

In addition to the research conducted at the Centre, CHÉOS staff provided research support services to more than 150 projects over the past year. The Centre received 106 new requests for research support services from 54 different groups during this time.

While the majority of inquiries came from UBC and PHC, requests were also received from local and international partners, including academic institutions, research centers, and government organizations, as well as industry.

**150+ projects supported in 2016/17**


Hasari P, Pumarine J, Oviedo-Jeannes L, Richardson CG. Examining the relationships between health literacy, health services and the intention to use, the initiation of use in the emergency department: Using administrative data. Mountain/Alpine College of Physicians/Alberta Medical Association Internal Medicine Conference. Whistler, BC, Nov 2016. Poster presentation.