Presented by

Institute of Health Policy, Management & Evaluation
UNIVERSITY OF TORONTO

Welcome to Research and Impact Day 2024

IHPME's 20th annual student-led conference, renamed this year to **Research and Impact Day,** is the largest showcase of student work and provides our community with the opportunity to share, learn, recognize, and celebrate the exciting and impactful work of students across program disciplines.
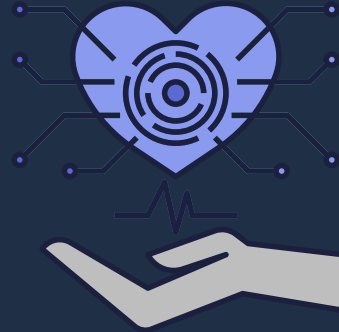
Our theme this year is **"Navigating the Future: The Role of AI in Transformative Healthcare"** which will focus on the importance of examining the intersecting role of Artificial Intelligence (AI) in healthcare systems. AI holds tremendous potential to revolutionize healthcare delivery, improve patient outcomes, and enhance the efficiency of healthcare systems worldwide. However, navigating the ethical, regulatory, and practical challenges accompanying this transformative journey is equally important. By fostering collaboration, embracing responsible AI practices, and prioritizing patient-centred care, we can harness the full potential of AI to create a healthier and more equitable future for all.

Share highlights from Research and Impact Day on Twitter and Instagram by using **#IHPMEimpact**

As a reminder, the use of a medical mask in high-density indoor spaces when physical distancing is not possible is strongly encouraged. The University is a mask-friendly environment, and we ask everyone to respect each other's decisions, comfort levels, and health needs.

Program at a Glance

TIME AND LOCATION	PROGRAMMING
8:30-9AM - 6th floor	Registration and breakfast
9-10AM - 6th floor	Student poster presentations
10-11:30AM - Rooms 614, 618, 696, 734, 740, 790	Student oral presentations
11:30AM-12:45PM - 6th floor auditorium (room 610)	Welcome address and Expert Panel on AI in Healthcare
12:45-1:30PM - 6th floor, 7th floor lounge	Lunch catered by Santiguida Fine Foods
1:30-3PM - Rooms 614, 618, 696, 734, 740, 790	Student oral presentations
3-4PM - 6th floor	Student poster presentations
4-5PM - 6th floor auditorium (room 610)	Keynote speech Dr. Muhammad Mamdani
5-6PM - 6th floor auditorium (room 610)	Awards ceremony
6-7:30PM - 6th floor, 7th floor lounge*	Wine and cheese catered by DVOURR

*Note: no alcohol permitted on the 7th floor

Please note, by entering the conference, you acknowledge and agree that photos and videos will be taken and shared for promotional materials related to this event and future events.

Research and Impact Day Speakers

KEYNOTE SPEAKER: DR. MUHAMMAD MAMDANI

Dr. Mamdani is Vice President of Data Science and Advanced Analytics at Unity Health Toronto and Director of the University of Toronto Temerty Faculty of Medicine Centre for Artificial Intelligence Research and Education in Medicine (T-CAIREM).

Dr. Mamdani's team bridges advanced analytics including machine learning with clinical and management decision making to improve patient outcomes and hospital efficiency. Dr. Mamdani is also Professor in the Department of Medicine of the Temerty Faculty of Medicine, the Leslie Dan Faculty of Pharmacy, and the Institute of Health Policy, Management and Evaluation of the Dalla Lana School of Public Health. He is also an Affiliate Scientist at IC/ES and a Faculty Affiliate of the Vector Institute.

In 2010, Dr. Mamdani was named among Canada's Top 40 under 40. He has published over 500 studies in peer-reviewed medical journals. Dr. Mamdani obtained a Doctor of Pharmacy degree (PharmD) from the University of Michigan (Ann Arbor) and completed a fellowship in pharmacoeconomics and outcomes research at the Detroit Medical Center. During his fellowship, Dr. Mamdani obtained a Master of Arts degree in Economics from Wayne State University with a concentration in econometric theory. He then completed a Master of Public Health degree from Harvard University with a concentration in quantitative methods.

Expert Panel: TRANSFORMATIVE AI IN HEALTHCARE

This year's expert panel centres on the transformative role of AI in healthcare, gathered by a distinguished panel of experts who will share their perspectives, experiences, and insights on how AI is revolutionizing healthcare as we know it.

PANEL MODERATOR: DR. CHRISTINE SHEA

Dr. Christine Shea is the Program Director of the MSc. in Quality Improvement and Patient Safety concentration, and an Assistant Professor (teaching stream). She has over 25 years of experience working around the world as a consultant in high reliability safety critical organizations on safety and risk, in particular the relationship of people with safety, risk and performance in health care, aviation, rail and the nuclear industry.

PANEL SPEAKER: DR. AMOL VERMA

Dr. Amol Verma is a general internist and scientist at St. Michael's Hospital and the Temerty Professor of AI Research and Education in Medicine at the University of Toronto. He is a health services researcher, studying and improving hospital care using electronic clinical data. Amol co-founded and co-leads GEMINI, Canada's largest hospital clinical data research network, which is collecting data from >30 hospitals in Ontario. He is a Provincial Clinical Lead for Quality Improvement in General Medicine at Ontario Health.

PANEL SPEAKER: DR. QUYNH PHAM

Dr. Quynh Pham is committed to advancing a culturally competent digital health research agenda that champions the use of technology to support ethnic minority communities realize equitable health outcomes. She currently serves as the Scientific Director and Principal Investigator of the globally-renowned Centre for Digital Therapeutics at the University Health Network. She is also an Associate Scientist at Stepped Care Solutions supporting the evaluation of the federally-funded Wellness Together Canada portal for mental health and substance use support. In 2022, Dr. Pham was recognized by her peers as a Woman Leader in Digital Health for her achievements as "a female visionary who is harnessing the power of IT to transform health and healthcare in Canada."

Dr. Pham's program of research focuses on building novel digital therapeutics to support patients and families manage the impact of chronic disease on their health and wellbeing. She conducts collaborative research across the continuum of digital health innovation, from ideation through to impact. In recent years, she has expanded her portfolio to focus on (1) family-centered digital health for older ethnic adults and their family caregivers, and (2) student mental health stepped care portals. Her clinical interests lie in the digitally-mediated management of chronic conditions, particularly heart failure, asthma, cancer survivorship, and mental health. She leads an all-star research team to design, develop, evaluate, and implement therapeutics that can bridge the digital divide and meet the transcultural health and social needs of all people living across Canada and Canadians living abroad.

PANEL SPEAKER: DR. MARK MILLER

Dr. Mark Miller is a philosopher of cognition. His research explores what recent advances in the cognitive sciences can tell us about happiness and well-being, and what it means to live well in our increasingly *technologically-mediated* world. Currently Mark is the Senior Research Fellow at the Monash University's Centre for Consciousness and Contemplative Studies (Australia), and is cross affiliated at both the University of Toronto (Canada) and Hokkaido University (Japan).

PANEL SPEAKER: DR. ZAHRA SHAKERI

Dr. Zahra Shakeri is an Assistant Professor of Health Informatics and Information Visualization and the director of the Health Informatics, Visualization, and Equity (HIVE) Lab at the Institute of Health Policy, Management and Evaluation at the Dalla Lana School of Public Health, University of Toronto. Dr. Shakeri's research centers on health informatics, machine learning, natural language processing, information visualization, precision (public) health, digital health, and social media analysis.

Student Showcase

Poster Presentations: Morning Session 9-10AM

1	Anum Ali	The association between multi-morbidity and treatment of high risk fragility fracture patients in an Ontario coordinator-based fracture screening prevention program
2	Sean Ong	Association between infectious diseases consultation and mortality in hospitalized patients with Gram-negative bloodstream infection: a population-wide retrospective cohort study
3	Kristel Leung	Population assessment of primary sclerosing cholangitis-inflammatory bowel disease: epidemiologic support for a distinct illness
4	Carolyn Sun (Virtual)	Late kidney and blood pressure outcomes after pediatric hematopoietic stem cell transplant: a systematic review and meta-analysis
5	Caroline Cristofaro	Metal hypersensitivity in foot & ankle orthopaedic surgery: A systematic review
6	Anam Shahil-Feroz	Remote Moderated Usability Testing of a Mobile Phone App for Remote Monitoring of Pregnant Women at High Risk of Preeclampsia in Karachi, Pakistan
7	Raja Faisal Abbas	(Dis)Organized Medicine and AMR Health policy in LMICs
8	Sedigheh (Sedi) Shaeri	Accuracy of etiological classification of out- of-hospital cardiac arrest: A Scoping Review
9	Shohinee Sarma (Virtual)	The Association of Weight Change and Risk of Hip Fracture among Older Adults with Dysglycemia: A Cardiovascular Health Study

Oral Presentations: Morning Sessions 10-11:30AM

Room 1 (HS 614) - Artificial Intelligence and Machine Learning

1	Gemma Postill	Machine Learning Prediction of Premature Mortality Among Persons with Inflammatory Bowel Disease: A Population-Based, Matched Cohort Study
2	Xun Zhao	Machine Learning model that accurately predict spontaneous recovery in acute liver failure: Pathway to a personalized clinical tool
3	Hwayeon (Danielle) Shin	Analyzing YouTube Videos on Suicide-Related Thoughts and Behaviours: A Study Using Topic Modeling and Discourse Analysis
4	Jethro Kwong	An artificial intelligence-based model to predict progression risk in non-muscle invasive bladder cancer (PROGRxN-BCa) and improve substratification of intermediate-risk patients: A Canadian-wide model development and validation study
5	Yacine Marouf	Predicting Time to Diabetes Diagnosis Using Random Survival Forests

Room 2 (HS 618): Health Equity

1	Adeteju Ogunbameru	Health and non-health benefits and equity impacts of individual-level economic relief programs during epidemics/pandemics in high income settings: A Scoping Review
2	Teresa Semalulu	Evaluation of methods for ascertainment and categorization of race and ethnicity for clinical research: an umbrella review
3	Adom Bondzi-Simpson	Association of socioeconomic status and the receipt of adjuvant chemotherapy in stage III colon cancer: a population-based cohort study
4	Laleh Rashidian	Diabetes Care and Outcomes among South Asian Individuals Living in Ontario
5	Eduardo Gus	Epidemiological trends in pediatric burn injury in Ontario, Canada

Room 3 (HS 696): Epidemiology

1	Darby Little	Seven-Year Analysis of National Rehabilitation Trends and Outcomes Among Burn Patients
2	Carolyn Sun (Virtual)	The extent of screening for chronic kidney disease (CKD) development and monitoring for CKD complications in childhood cancer survivors: a single-centre retrospective cohort study
3	Sean Ong	Follow-up blood cultures do not reduce mortality in hospitalized patients with Gram-negative bloodstream infection: a retrospective population-wide cohort study.
4	Caroline Cristofaro, Colleen Kerrigan	Management of isolated femoral metastatic lesions in postmenopausal hormone receptor positive breast cancer: A decision analysis
5	Shohinee Sarma (Virtual)	Association of sodium glucose co-transporter-2 inhibitors with risk of diabetic ketoacidosis among hospitalized patients: a multi-centre cohort study

Room 4 (HS 734): Health Systems Research

1	Julian Daza	Joint Models Improve the Longitudinal Assessment of Patient-Reported Outcomes in Clinical Trials: A Simulation Study and Secondary Analysis of the Restrictive versus Liberal Fluid Therapy for Major Abdominal Surgery (RELIEF) Randomized Controlled Trial
2	Suzanna Apostolovski	Communication Strategies for Ductal Carcinoma In Situ
3	Katherine Sawicka	Self-management in youth with multiple sclerosis during transition to adult care and adulthood: A qualitative study using interpretive description
4	Hadiya Elahmar	Systemic review and Meta-analysis of prevalence of cutaneous manifestations in NF1
5	Husain Shakil	Days Alive and At Home After Treatment of Spinal Metastases: Validating a Patient Centred Outcome Using Population Health Data

Room 5 (HS 740): Health Policy

1	Mary Elias	Uptake Pattern of Flash Glucose Monitoring Systems Among Older Adult Residents of Ontario, by Immigrant Status
2	Otuto Amarauche Chukwu	Improving access to cancer control services in low- and middle-income countries; a novel framework on policy change for pharmacists' involvement
3	Rafael Miranda	Development of wait-time benchmarks for risk-based prioritization in transcatheter aortic valve implantation: a simulation study
4	Guan Wang	The effect of health insurance on annual working time and employment income among Middle-aged Chinese residents

Room 6 (HS 790): Global Health and Climate Change

1	Alastair Fung	Severe infection among young infants in Dhaka, Bangladesh: effect of case definition on incidence estimates
2	Jessica Cuppage	Hospital Climate Informatics: Toward a Healthier Future
3	Christopher Yarnell	An international randomized vignette-based survey of intubation decisions in acute hypoxemic respiratory failure
4	Anam Shahil-Feroz	Exploring Caregivers' Perspectives and Perceived Acceptability of a Mobile-Based Telemonitoring Program to Support Pregnant Women at High-Risk for Preeclampsia in Karachi, Pakistan: A Qualitative Descriptive Study

Oral Presentations: Afternoon Sessions 1:30-3PM

Room 1 (HS 614): Artificial Intelligence and Machine Learning

1	Chloe Wong	The Accuracy of Artificial Intelligence Models in Hand/Wrist Fracture and Dislocation Diagnosis: A Systematic Review and Meta-Analysis
2	Juan Medina	Exploring the Social Determinants of Long Covid: A Natural Language Processing Approach
3	Omid Jafarinezhad (Virtual)	Enhancing Collaborative AI Model Development: Innovating with Federated Learning Through a Dynamic Web Platform

Room 2 (HS 618): Health Equity

1	Anum Ali	Examining treatment targets and equity in bone-active medication use within secondary fracture prevention: a systematic review and meta-analysis
2	Chantal Valiquette	Conducting an institutional ethnography for economic evaluations: developing a theoretical and methodological approach
3	Michael Geurguis	An overview into how equity related factors have been considered in Choosing Wisely literature in the context of intervention studies and overuse: A global scoping review
4	Alyssa Kelly	Proposal to explore how health equity is conceptualized, operationalized, implemented, and evaluated in a sample of Ontario hospitals
5	Anum Ali	Quantifying Gender Disparities: Creating Gender Scores for Fragility Fracture Patients from Ontario Fracture Screening and Prevention Program Data

Room 3 (HS 696): Epidemiology

1	Husain Shakil	Incidence and Timing of Spinal Metastases After Cancer Diagnosis: A Population-Based Epidemiological Analysis
2	Priti Gros	Participants with Early Parkinson Disease Seen in Teaching Hospitals: Are They Representative of the Overall Parkinson Disease Population?
3	Calvin Diep	The impact of perioperative complications on employment and earnings after elective knee or hip replacement: a population-based cohort study
4	Sarah Malecki	Characteristics and outcomes of pediatric complexity in adult hospitalization data
5	Omri Arbiv	Safety of Triple-Dose Rifampin in Tuberculosis Treatment: A Systematic Review and Meta-Analysis

Room 4 (HS 734): Health Systems Research

1	Carly Butkowsky	How do patients with hereditary cancer syndromes navigate the healthcare system? A qualitative comparative study across Canada
2	Kainat Bashir	The influence of networks in effective infection prevention and control in Ontario's long-term care homes
3	Maria Espinosa Perez	Burnout in Anesthesiology: prevalence, prevention, and management

Room 5 (HS 740): Health Economics

1	Selai Akseer, Shant Torkom Yeretzian	Cost-Effectiveness of Geriatric Assessment and Management in Older Adults with Cancer: Model-Based Economic Evaluation
2	Armaan Malhotra	The Impact of Traumatic Brain Injury on Unemployment and the Loss in Personal Income
3	Aranie Vijayaratnam	Cost Effectiveness Analysis of a Parent Training Program for Families with Children with Neurodevelopmental Disabilities
4	Elliott Yee	Inpatient palliative care consultation for patients with severe burn injury: A cost utility analysis
5	Roaa Shoukry	A Cost Effectiveness Analysis of Mega Team for Cognitive Rehabilitation in Children with Attention-Deficit/Hyperactivity Disorder

Room 6 (HS 790): Health Informatics

1	Anam Shahil-Feroz	Perceived barriers and facilitators of implementing a sustained smartphone-based telemonitoring program for pregnant women at high-risk for pre-eclampsia in the public and private sectors in Pakistan
2	Neesha Hussain-Shamsy	Participating in videoconferencing-based group therapy for postpartum depression: qualitative experience
3	Sayyed Mohammad Pourya, Momtaz Esfahani	Navigating patient experiences through nlp techniques: insights from covid-19 and beyond in Ontario, Canada
4	Seyed-Mohammad Fereshtehnejad, Angela Tan, Kruti Shah, Aditya Prashar, Afreen Rehman	Personalized multi-domain dementia prevention platform (pmdp): an ontology analysis of a digital health solution for a paradigm shift in dementia care

Poster Presentations: Afternoon Session 3-4PM

1	Anam Shahil-Feroz	[Exploring Digital Health Interventions for High-Risk Pregnant Women in Low- and Middle-Income Countries: A Scoping Review]
2	Leonet Reid	Differences in Aspirin Use Among High-Risk Pregnancies and Associated Maternal-Fetal Outcomes - a retrospective cohort study.
3	Hasmik Beglaryan	Cervical Cancer Screening in Women with Disabilities: a systematic review
4	Sonya Grewal	How to conduct equitable genetics research to include underserved populations: a systematic review of best practices
5	Shohinee Sarma (Virtual)	Readiness for Behaviour Change after Gestational Diabetes Mellitus: A Prospective Cohort Study
6	Pratyasha Acharya (Virtual)	Valuing Health Gains: Cross-State Economic Performance in India, 1981-2019