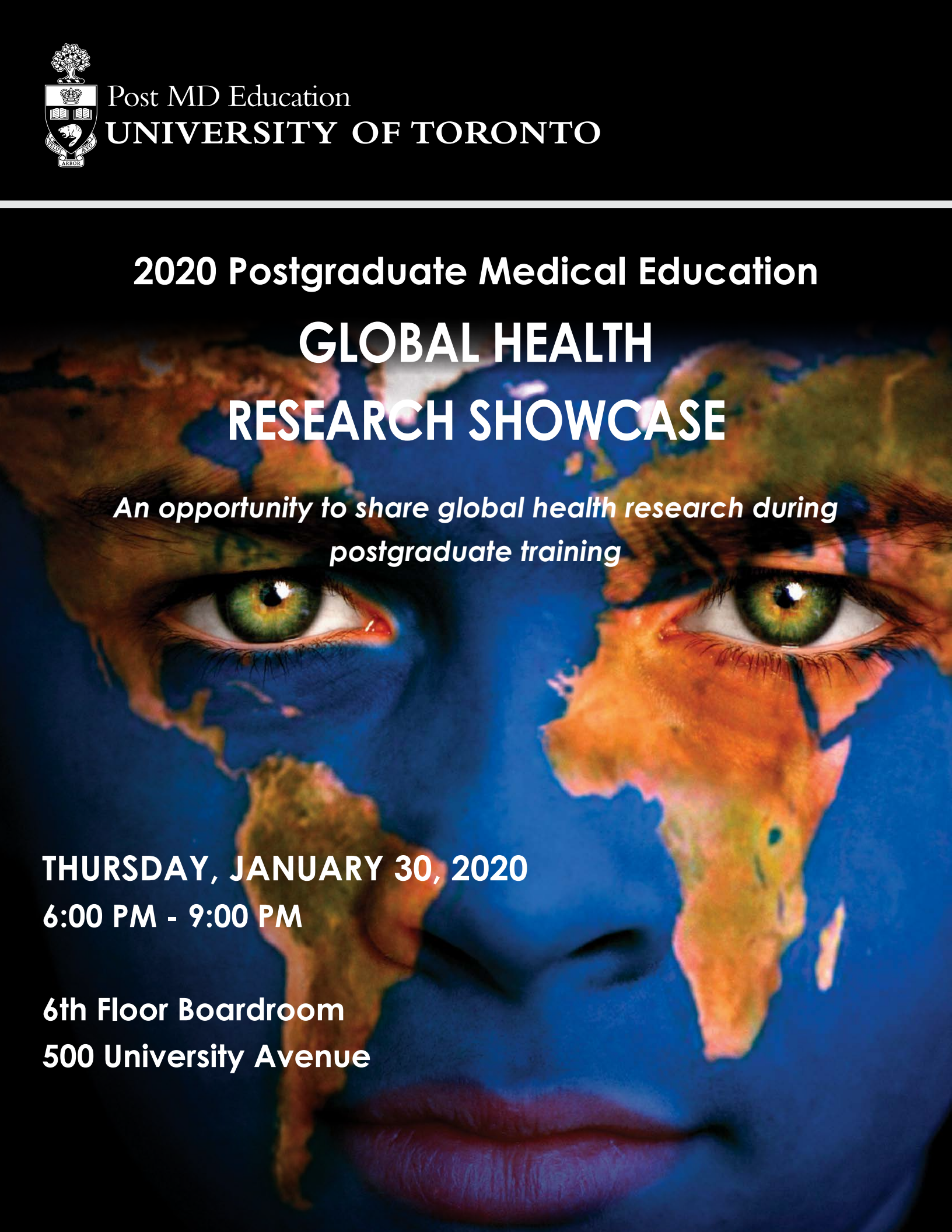
Post MD Education
UNIVERSITY OF TORONTO

2020 Postgraduate Medical Education

GLOBAL HEALTH RESEARCH SHOWCASE

An opportunity to share global health research during postgraduate training



THURSDAY, JANUARY 30, 2020
6:00 PM - 9:00 PM

6th Floor Boardroom
500 University Avenue

PROGRAM

6:15pm *Opening comment by Dr. Barry Pakes, Global Health Academic Lead, PGME*
Moderated by Dr Revathy Krishnamurthy, Clinical Fellow Radiation Oncology and
Dr. Martha Smith, PGY1 Obstetrics and Gynaecology

6:20pm 1. Contemporary outcomes of aortic and mitral valve surgery for rheumatic heart disease in sub-Saharan Africa; Dr. Amine Mazine, Surgery/Cardiac Surgery PGY4

6:30pm 2. Health Needs of Newcomer Children: An Integrative Scoping Review;
Bonnie Cheung, Pediatrics PGY2

6:40pm 3. Intestinal parasitoses in patients on hemodialysis in Cape Coast, Ghana: A cross sectional study; Arti Dhoot, Internal Medicine PGY2

6:50pm 4. Resource availability as a determinant to providing culturally competent care to immigrant women with breast cancer: a qualitative study; Matthew Castelo, Pediatric Surgery PGY3

7:00pm BREAK

7:10pm 5. High Incidence of Early Onset Colorectal cancer in Ethiopia: Clinical and Therapeutic Evaluation with Genetic Mutational Analysis; Abdulsemed Nur, Adult Gastroenterology Fellow

7:20pm 6. Social Determinants of Maternal and Child Mortality in the Americas;
Daniela Gattini, Hepatology and Liver Transplant Fellow

7:30pm *Discussion moderated by Dr Revathy Krishnamurthy, Radiation Oncology Fellow and*
Dr. Martha Smith, Obstetrics and Gynaecology PGY1

8:30pm END

ABSTRACTS

1. Contemporary outcomes of aortic and mitral valve surgery for rheumatic heart disease in sub-Saharan Africa

Author 1. Amine Mazine, Surgery/Cardiac Surgery PGY4

Background. Rheumatic heart disease (RHD) is endemic in sub-Saharan Africa. There is a paucity of data on outcomes of valvular surgery for RHD in the developing world.

Purpose. To evaluate the outcomes of aortic and mitral valve surgery for RHD in Ethiopia.

Methods. Between 2009 and 2017, 240 consecutive patients with RHD underwent aortic and/or mitral surgery at the Cardiac Center of Ethiopia, in Addis Ababa. These surgeries were performed in the context of 22 international humanitarian missions. Median follow-up was 2.3 [IQR: 0.5–4.0] years and was 96% complete. Outcomes were compared between patients who underwent mechanical valve implantation (n=90, 38%), bioprosthetic valve implantation (n=58, 24%), and valve repair (n=92, 38%).

Results. Mean age was 19±8 years and 136 (57%) patients were female. Operative mortality occurred in 5 (2%) patients, and was not significantly different between the groups. Eleven (5%) additional patients died at follow-up, and 55 (23%) suffered at least one major adverse valve-related event (MAVRE). Propensity score-adjusted Cox regression analysis demonstrated higher rates of death in the bioprosthetic group compared with the mechanical group (HR [95% CI]: 8.82 [1.64-47.39], p=0.011). Survival was not significantly different between the repair and mechanical groups (HR [95% CI]: 1.09 [0.17-7.16], p=0.93). Similarly, rates of MAVRE were higher in the bioprosthetic group compared with the mechanical group (HR [95% CI]: 2.71 [1.13-6.49], p=0.025), but not significantly different between the repair and mechanical groups (HR [95% CI]: 1.98 [0.89-4.39], p = 0.092).

Conclusions. Left-sided valve surgery for RHD in sub-Saharan Africa is associated with acceptable perioperative outcomes, but a high incidence of MAVRE at follow-up. The use of bioprosthetic valves is associated with poor outcomes in this patient population.

2. Health Needs of Newcomer Children: An Integrative Scoping Review

Author 1. Bonnie Cheung, Paediatrics PGY2
Author 2. Pardeep Kaur Benipal, Undergraduate student, Research Assistant, St. Michael's Hospital
Author 3. Shazeen Suleman, Staff Paediatrician, St. Michael's Hospital

Background. Newcomer children may have complex health needs and often face barriers accessing health services. Previous literature discussing health needs of newcomer children primarily focus on nutritional deficiencies, infectious diseases, and oral health. To date, there has been no summary of health care needs of newcomer children. Given the recent influx and change in demographics of newcomer children, it is imperative to identify health status in order to guide whether current healthcare services designed for newcomer children, are reflective of their specific needs.

Objective. To identify and address the health needs of newcomer children to Canada and the USA.

Methods. English and French original research articles published from 2009 onwards, describing health needs of newcomer children to Canada and/or the USA, were included. Data were extracted and analyzed according to Arksey and O'Malley's descriptive analytic model for scoping reviews.

Results.155 studies met criteria and were included. Studies focus on oral health, nutritional deficiencies, infectious diseases, sexual health, development, and the impact of immigrant maternal health on child health outcomes. There were limited studies focusing on mental health needs of newcomer children. The adolescent cohort seemed to be less understood in literature. Studies emphasized the need for culturally competent care, especially concerning preferences in treatment modalities.

Conclusion. To date there has been no comprehensive summary of health needs of newcomer children and youth to Canada and the USA and minimal studies provided recommendations to allow findings to be transferable to health care settings and to inform health policy.

3. Intestinal parasitoses in patients on hemodialysis in Cape Coast, Ghana: A cross sectional study

Author 1. Arti Dhoot, Internal Medicine PGY2
Author 1. Ganiwu Mumim Dalawi, University of Cape Coast, BSc Medical Science
Author 2. Isaac Bogoch, University of Toronto, Infectious Disease, Staff
Author 3. Richard Ephraim, University of Cape Coast, Chemical Pathology

Background. Hemodialysis (HD) is the mainstay in those with chronic kidney disease (CKD) in Ghana since peritoneal dialysis and transplantation are not widely available [1]. Chronic kidney disease is associated with numerous morbidities, such as anemia, which can be further worsened by concomitant chronic infections by intestinal parasites[2]. Thus, treatment of intestinal parasitic infection would be a relatively simple and reversible cause of anemia and morbidity in this population.

Objectives. The objective of this study was to evaluate the prevalence of intestinal parasitic diseases in individuals with CKD on HD in a cohort in Ghana as an ongoing quality improvement strategies.

Methods. This cross-sectional study was conducted in Ghana after ethics approval. All consenting individuals on HD that had not received any anti-parasitic medications in the past three months were included. Stool samples were processed via wet mount and staining techniques.

Results. Of the 61 participants, 7 had evidence of an intestinal helminth or protozoal infection with only less than two thirds exhibiting diarrheal symptoms. Five different organisms were detected, most common intestinal parasite was Gardia lambila, detected in three of the seven infected individuals and one case (14.3%) of Entamoeba histolytica, Entamoeba coli, Bastocystis hominis, and hookworm was detected.

Conclusion. In this study 11.5% of patients with CKD on HD had intestinal parasitic infection. This was a lower prevalence for intestinal parasites compared to previous studies in Turkey [3], Brazil [4], and Iran[5]. A confounder to this could increase access to sanitation in urban areas found in this study. Screening and treatment of parasitic infections is an inexpensive and effective measure to reduce morbidity in HD patients.

4. Resource availability as a determinant to providing culturally competent care to immigrant women with breast cancer: a qualitative study

Author 1. Matthew Castelo, General Surgery PGY3
Author 2. Emma Reel, MSW, Research Assistant General Surgery
Author 3. Nancy N Baxter, MD PhD, Staff General Surgeon
Author 4. Adena S Scheer, MD MSc, Staff General Surgeon

Background. There are disparities in breast cancer outcomes for immigrant women in Canada and improving cultural competency is an important strategy to reduce health inequities. However, there are important barriers facing clinicians who wish to practice in a culturally competent manner.

Objectives. We aimed to study perceived barriers and facilitators with respect to the delivery of culturally competent care by Canadian breast cancer surgical practitioners.

Methods. We conducted semi-structured interviews using maximum variation sampling with breast cancer surgical practitioners actively working in Canada. Transcripts were coded for emergent themes and patterns using an inductive iterative approach.

Results. Twenty practitioners were interviewed before thematic saturation was achieved. We focused on the emergent theme of resource limitations and 4 sub-themes that were discussed most frequently and felt to be most impactful. Immigrant women had unique needs that required more time to adequately address, but practitioners often could not meet this need. The important roles that nurses and other specialized allied health providers in multidisciplinary clinics filled were raised extensively. Brochures and educational materials were rarely available in languages other than English or French. Finally, professional translation services were preferred to family-based translation, and practitioners were satisfied with telephone-based translation services.

Conclusions. This study has identified several resources that may be targets for future work to improve culturally competent care for immigrant breast cancer patients in Canada. These results underscore the importance of investment in multidisciplinary clinics with specialized personnel. This study highlights the system-level determinants that are acutely perceived by frontline practitioners.

5. High Incidence of Early Onset Colorectal cancer in Ethiopia: Clinical and Therapeutic Evaluation with Genetic Mutational Analysis

Author 1. Abdulsemed M. Nur, Addis Ababa University, Addis Ababa Ethiopia;
Adult Gastroenterology - Advanced Endoscopy, Fellow, Department of Medicine,
University Health Network, Toronto
Author 2. Amir Sultan, Addis Ababa University, Addis Ababa Ethiopia
Author 3. Grace Braimoh, Hennepin Healthcare, USA
Author 4. Jose D. Debes, University of Minnesota, Minneapolis, MN, USA

Background. Colon cancer has been reported to occur early in certain African regions, but understanding of the genetic modifications leading to early disease is incomplete. Here we present a study of cases of early colon cancer and genetic modifications leading to these tumors in Ethiopia.

Methods. We evaluated all colon masses detected between 2015 and 2018 at Black Lion Hospital, Ethiopia. Clinical, endoscopic and pathology descriptions were assessed for all cases, ≤ 30 years. Subsets of pathology block-tissues were evaluated for genetic modifications
.
Results. A total of 38 cases of colon cancer ages 30 or earlier were identified. These represented 13% of all cases of colon cancer in the three-year period. The median age was 27 years, and 50% were females. None of the cases reported a family history of colon cancer or had evidence of inflammatory bowel disease. Longer duration of symptoms correlated with the presence of metastasis on diagnosis. All but one sample were identified as adenocarcinoma, and 65% had distant metastasis or locally advanced disease at the time of diagnosis. Surgery (23%) and chemotherapy (15%) were the most frequently used treatments. Genetic analysis of biopsy tissue in a subset of 3 individuals showed alterations in APC, K-ras and mismatch repair genes.

Conclusions. We report a high burden of early age colon cancer in Ethiopia with no family history or IBD. Most patients presented with rectal bleeding. Genetic analyses in a subset of patients showed APC and K-ras alterations as well as modifications of mismatch repair pathways.

6. Social Determinants of Maternal and Child Mortality in the Americas

Author 1. Daniela Gattini, Hepatology and Liver Transplant Fellow,
Division of Gastroenterology, Hepatology and Nutrition, The Hospital for Sick Children, University of Toronto
Author 2. Cesar Gattini, Associate Professor, School of Public Health, University of Chile

Background. Social determinants of health (SDH) are socio-economic factors that contribute to health outcomes, such as maternal and child mortality. Important SDH include income, poverty, education, housing, clean water, sanitation and access to healthcare.

Objectives. To evaluate the association between social determinants of health with maternal and child mortality amongst countries in America.

Methods. Cross sectional study based on indicators for 2018 or last available year obtained from data of the Pan-American Health Organization, United Nations Development Programme and the World Bank. Pearson correlations coefficients were used to assess correlations between SDH with maternal and child mortality. Linear regressions were used for multivariate analysis.

Results. Maternal mortality was significantly associated with Human Development Index (-0.556, P=0.001); Multidimensional Poverty Index (0.807, P<0.001); access to safe water (-0.683, P<0.001); access to sanitation (-0.707, P<0.001); access to antenatal care (-0.370, P=0.052); and percentage of hospital births (-0.522, P=0.002). Mortality under-5 years of age was significantly associated with HDI (-0.719, P<0.00); MPI (0.868, P<0.001); safe water (-0.815, P<0.001); sanitation (-0.810, P<0.001); hospital births (-0.736, P<0.001); access to polio vaccination (-0.426, P=0.012); and MMR vaccination (P-0.379, P=0.027). These associations were similar for neonatal and infant mortality. After multivariate analysis, only access to sanitation remained significantly associated with maternal (-0.865, P<0.001), neonatal (-0.592, P=0.020), infant (0.739, P=0.001) and under 5-year mortality (-0.860, P<0.001).

Conclusions. Various social determinants of health are associated with maternal and child mortality in America. Access to sanitation seems to one of the greatest contributing factors.

Special Thanks to . . .

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