

MOST SIGNIFICANT CONTRIBUTION

- I completed neonatal fellowship training at the University of Calgary in 2010, Neonatal Neurology Fellowship training at the University of British Columbia, and Targeted Neonatal Echocardiography training at Universities of British Columbia and Calgary in 2013. In 2014, I established the Neonatal Neuro-Critical Care program in Calgary (currently named Dr. Harvey Sarnat NNCC program) in collaboration with Pediatric Neurology. I am a founding member of the Sonographic Clinical Assessment of the Newborn (SCAN) program and the lead for the innovation and technology. I am a founding member of the Newborn Brain Society, chair of the society educational committee and member of Board of Directors. I chair Newborn brain health group in Canada and the national initiative to decrease preterm brain injury "Drive IVH to zero". My areas of clinical interest are innovation in education and Quality improvement, for that I established the innovation in neonatal neurology simulation lab which produced several simulators such as cranial ultrasonography phantoms and computer-based simulators, Neonatal EEG simulator, neonatal cerebral arteries doppler phantoms, Neonatal neurological exam using Virtual reality and simulating Mannequins, and smart phones applications. I developed several online teaching modules in Neonatal neurology and organized several conferences, workshops, and courses in Neonatal neuro-monitoring and Neonatal Neuro-Critical care locally and worldwide. The Quality improvement work led to significant reduction in mortality, brain injury, cerebral palsy, and cognitive delay in extremely premature infants, reduced mortality and brain injury term infants suffered from asphyxia and seizure. During my role as chair of the Newborn Brain Society Educational committee, we established Weekly Neonatal Neuro-critical care webinars with world-renowned speakers and between 200-400 attendees each time from 93 countries, created members educational portal, parental pathways, teaching modules and we created a task force to apply for Neonatal Neuro-Critical Care training accreditation in Canada and United states. My areas of research interest are innovation in education, brain perfusion, monitoring, and Quality Improvement neuroprotection strategies. In 2020, I was awarded the Emerging Leader in Neonatology by Canadian Pediatric Society, granted Academic Certification in Neonatal Perinatal Medicine by the Royal College of Physicians and Surgeons of Canada, and promoted to full clinical professor after two years of being clinical associate professor.

ACADEMIC RECORD AND POSITIONS

- **Fellow Of Royal College of Physicians and surgeons of Canada** | 2020/12/18 – Present
- **Clinical Professor of Pediatrics, Cumming School of Medicine, University of Calgary** July 2021-Present
- **Clinical Associate Professor of Pediatrics, Cumming School of Medicine, University of Calgary** July 2019-2021
- **Clinical Assistant Professor of Pediatrics, Cumming School of Medicine, University of Calgary** Sept 2014-June 2019
- **Fellow of Royal College of Physicians of Edinburgh, UK** | 2018/06/22 – Present
- **Staff neonatologist, Alberta Health Services, Calgary** | 2014/09/01 – Present
- **Neonatal-Perinatal Medicine Fellowship Training Program, University of Calgary** | 2013/01/01 -2014/08/31
- **Neonatal Neurology Fellowship Training Program, University of British Columbia** | 2011/01/01 -2012/12/31
- **Neonatal-Perinatal Medicine Fellowship Training Program, University of Calgary** | 2009/01/01-2010/12/31
- **Staff Physician, Neonatology Division, King Abdulaziz National Guard Hospital, Saudi Arabia** | 2007/07/01-2008/08/30
- **Pediatric Specialist, Royal Commission Medical Centre, Yanbu, Saudi Arabia** | 2006/03/01-2007/06/30
- **Master's Degree in Pediatrics, University of Damascus, Syria** | 2001/09/01-2005/09/01
- **Fellowship of Arab Board of Pediatrics (FABP), the Arab League** | 2001/11/01 - 2006/03/01
- **Doctor of Medicine - MD, University of Damascus, Syria** | 1996/10/01 - 2001/08/01

LEADERSHIP POSITIONS

- Neonatology Site lead, Alberta Children's Hospital, Section of Neonatology, Department of Pediatrics, university of Calgary |Sept 2021-present
- Co-chair, International Newborn Brain Society Neonatal Neuro-Critical Care Training accreditation task force, Royal College of Physicians and Surgeons of Canada application | 2021
- Member, Canadian National Perinatal Research (CNPRM) meeting steering committee | 2020
- Lead, Neonatal Neuro-Critical Care theme (CNPRM) | 2020
- Chair, Newborn Brain Society education committee | October 2019-present
- Member, Board of Directors, Newborn Brain Society | October 2019-present

- Chair, Newborn Brain health working group, Canadian Preterm Birth Network (CPTBN) | 2017-present
- NICU Lead, Neuro-Critical Care Program, Alberta Children's Hospital/Research Institute | 2016-present
- Chair, Neonatal Neuro-Critical Care committee, Alberta Health services, Calgary | 2015-2019
- Chief Fellow, Neonatal-Perinatal Medicine Fellowship Program, University of British Columbia | 2011-2012

COMMITTEES

- **International:** Chair: Education committee, Newborn Brain Society. Member: Pan-American Hemodynamic and TnECHO Collaborative group; Member: Neonatal Neuro-Critical care special interest group. Member: Board of directors Newborn Brain Society committee. Member: Scientific Committee, 13th international Newborn Brain Conference. Co-Chair: Neonatal Neuro-Critical Care accreditation taskforce, Royal College of physicians and Surgeons of Canada application.
- **National:** Chair: Neonatal Brain health working group, Canadian Preterm Birth Network. Member: Evidence based Practice to Improve Quality (EPIQ) steering committee; founding member
- **Local:** Member: Neonatal Neuro-Critical Care Committee; Founding Member: Sonographic Clinical Assessment of the Newborn (SCAN) Program; Member: Neonatal Point of Care Ultrasound Group; Member: Alberta Children Hospital NICU Advisory Committee; Member: Alberta Children Hospital NICU Steering Committee; Member: Alberta Children Hospital Gender equity Committee; Member: Neonatal Quality Improvement Committee; Member: Rockyview General hospital NICU Team Committee.

AWARDS

- Academic Certification in Neonatal Perinatal Medicine, Royal College of Physicians and Surgeons of Canada | 2020
- Emerging Leader in Neonatology Award, Canadian Pediatric Society | 2020
- Innovation 4 health 2019 health hack competition: best clinical research innovation model | 2019
- Neonatal fellowship teacher of the year award, University of Calgary | 2019
- Neonatal fellowship teacher of the year award, University of Calgary | 2016
- Neonatal fellowship teacher of the year award, University of Calgary | 2015
- Class of 2015 Clerkship Award for Excellence in Clinical Teaching, university of Calgary | 2015
- Department of Pediatric Fellow Research Award, University of British Columbia | 2012
- First star educator at Rocky View General Hospital Calgary NICU Jul 2010
- Award for **Most clinically applicable study**, Research Methodology Course, Alberta Children Hospital | 2009
- Certificate of Appreciation, King Abdul Aziz National Guard Hospital and Ministry of Health, Saudi Arabia | 2008
- Certificate of Appreciation, Royal Commission Medical Centre, Saudi Arabia | 2007

PROGRAMS ESTABLISHED FROM THE GROUND UP

Innovation in education Neonatal Neuro-Critical Care lab

Detailed about the lab: <https://nncceducation.thinkific.com/pages/nncc-innovation>

Established a state-of-the-art simulation lab in collaboration with Dr. Sonny Chan (department of computer Science, University of Calgary) and his group and Dr. Rachid Benlamri (Department of software Engineering, University of Lakehead) and his group, the simulators were used in Local, national, and international conferences and workshops. These include:

1. Neonatal Head ultrasound computer-based simulators featuring: Normal anatomy, Classic brain injury, post-hemorrhagic ventricular dilatation diagnosis and measurement and other brain injury and abnormalities
2. Neonatal 3D printed brain phantoms for ultrasound training both normal and hydrocephalus
3. Neonatal encephalopathy assessment Virtual reality project
4. Interventricular reservoir taping simulator
5. Neonatal EEG simulator
6. Neonatal Neurological Examination Mannequin
7. Anterior cerebral artery doppler
8. Neonatal Encephalopathy smartphones application for therapeutic hypothermia eligibility: the application has been used locally, nationally, and internationally (see "HIE calculator" in app store and google play)
9. Preterm brain injury diagnosis smartphone application

Neonatal Neuro-Critical Care program

In collaboration with section of pediatric neurology and support from section and department heads we established the NNCC program in Calgary. The Neonatal Neuro-Critical Care program has gained a national and international reputation as a center of excellence in education, clinical care, research, and training. Some of the program's accomplishments:

- a. Trained fellows and residents locally and from other programs through elective NNCC block rotation and 1-2 years fellowship program (17 locals and 6 from other programs) some with masters in neuroscience
- b. Developed, organized, and launched a series of lectures (Neonatal neuro-critical care lecture series) to cover fundamental areas of competencies in neonatal neuro-critical care then used the lectures (total of 39 lectures in 6 months) to create interactive teaching modules and put them on a webpage.
<https://nncceducation.thinkific.com/> . CME accreditation for the module is in preparation.
- c. Organized NNCC conferences and hands-on workshops in several countries around the world (India, Kuwait, and Oman) and helping those centers to build NNCCs in their respective NICUs, following our visits
- d. Founding member of the newborn brain society and member of board of directors
- e. Established Neonatal Neuroradiology Cross Canada rounds with participants from neonatology and radiology departments across the country
- f. **Clinical care and quality improvement:** after the implementation of the NNCC program the rate of mortality and brain injury was reduced significantly in at risk term and preterm infants (**Drive IVH to zero project and HIE neuro protection bundles**) which put our center among the lowest incidence compared to other level III centers in the country
- g. **Clinical Guidelines developed:** [*CPS position statement \(Neuroprotection from acute brain injury in preterm infants\)*](#), Neuroprotection bundle in preterm infants, Neuroprotection bundle in term infants with Hypoxic Ischemic Encephalopathy (HIE), HIE provincial care pathway, Neonatal seizure diagnosis and management, Post Hemorrhagic Ventricular Dilatation Diagnosis and Management, neuroimaging in term and preterm infants, Parental guide for infants with HIE, Neonatal seizure, PHVD, and IVH
- h. **National initiative to decrease variability in brain injury diagnoses:** two courses with participants from all level III centers (neonatologists and radiologists), the group developed a consensus statement on brain injury diagnoses by cranial ultrasonography
- i. **Teaching materials:** Step-by-Step visual guide to connect a neonate to EEG machine, how to start EEG study and trouble shoot the machine, Targeted neonatal neurological exam video for HIE, Full neonatal neurological exam, how to perform head ultrasound and measure ventricular indices, how to perform reservoir tap and Neonatal head ultrasound pod talk

Sonographic Clinical Assessment of the Newborn (SCAN) (Founding member)

The program trained local and national fellows in point of care ultrasound and conducted:

- a. Stand-alone advance neonatal cranial ultrasound hands-on workshops in Kuwait, Oman, India, Imperial College in London, Pediatric Academic Society (PAS) meeting in Baltimore, Winnipeg, Quito/Ecuador, and Bogota/Columbia.
- b. Several combined hands-on workshops with the SCAN program (>10 workshops in the last 3 years in 8 countries)
- c. Integrated the simulator into the NNCC and SCAN advanced NPM fellowships, and on NNCC elective rotations.
- d. Several simulation models: vascular, Cardiac, Central line, pericardiocentesis, paracentesis, bladder, and lung

RESEARCH PUBLICATIONS

LIST OF PUBLICATIONS: [My NCBI Collection 61970262 - PubMed \(nih.gov\)](#)

1. Soul JS, Glass HC, **Mohammad K**, Ment LR, Smyser CD, Bonifacio SL, et al. Continuous EEG monitoring still recommended for neonatal seizure management: commentary on NEST trial. *Pediatr Res.* 2022.
2. **Mohammad K**, Momin S, Murthy P, Zein H, Scott JN, Mehrem AA, et al. Impact of quality improvement outreach education on the incidence of acute brain injury in transported neonates born premature. *J Perinatol.* 2022.
3. Gurram Venkata SKR, Srivastava A, Murthy P, Scott JN, Zein H, Leijser L, Ghosh A, Momin S, Thomas S, **Mohammad K.** Hemodynamic Quality Improvement Bundle to Reduce the Use of Inotropes in Extreme Preterm Neonates. *Paediatr Drugs.* 2022;24(3):259-67.
4. Gurram Venkata SKR, Shah PS, Beltempo M, Yoon E, Wood S, Hicks M, Daboval T, Wong J, Wintermark P, **Mohammad K**; Canadian Neonatal Network Investigators. Outcomes of infants with hypoxic-ischemic encephalopathy during COVID-19 pandemic lockdown in Canada: a cohort study. *Childs Nerv Syst.* 2022:1-8.
5. Beltempo M, Wintermark P, **Mohammad K**, Jabbour E, Afifi J, Shivananda S, et al. Variations in practices and outcomes of neonates with hypoxic ischemic encephalopathy treated with therapeutic hypothermia across tertiary NICUs in Canada. *J Perinatol.* 2022.
6. Alburaki W, Scringier-Wilkes M, Dawoud F, Oliver N, Lind J, Zein H, Leijser LM, Esser MJ, **Mohammad K.** Feeding during therapeutic hypothermia is safe and may improve outcomes in newborns with perinatal asphyxia. *J Matern Fetal Neonatal Med.* 2022 Feb
7. Goswami IR, Abou Mehrem A, Scott J, Esser MJ, **Mohammad K.** Metabolic acidosis rather than hypo/hypercapnia in the first 72 hours of life associated with intraventricular hemorrhage in preterm neonates. *J Matern Fetal Neonatal Med.* 2021 Dec
8. Wintermark P, **Mohammad K**, Bonifacio SL. Proposing a care practice bundle for neonatal encephalopathy during

- therapeutic hypothermia. *Semin Fetal Neonatal Med.* 2021 Oct
9. Sandoval Karamian AG, Mercimek-Andrews S, **Mohammad K**, Molloy EJ, Chang T, Chau V, Murray DM, Wusthoff CJ. Neonatal encephalopathy: Etiologies other than hypoxic-ischemic encephalopathy. *Semin Fetal Neonatal Med.* 2021 Oct
 10. **Mohammad K**, Craig AK, Chang T, Tam EWY, Ayed M, de Vries LS, El-Dib MA, Esser MJ, Ferriero DM, Hellström-Westas L, Miller SP, Soul JS, Vollmer B, Glass HC, Smyser CD. Training in neonatal neurocritical care: a proposal for a hybrid model of competence by design and time-based methods. *Pediatr Res.* 2021 Sep
 11. Amanda G. Sandoval Karamian, Saadet Mercimek-Andrews, **Khorshid Mohammad**, Eleanor Molloy, Tae Chang, Vann Chau, Deirdre Murray, Courtney J. Wusthoff, Neonatal Encephalopathy: Etiologies other than Hypoxic Ischemic Encephalopathy, *Seminars in Fetal and Neonatal Medicine*
 12. Rios DR, Lapointe A, Schmolzer GM, **Mohammad K**, VanMeurs KP, Keller RL, Sehgal A, Lakshminrusimha S, Giesinger RE. Hemodynamic optimization for neonates with neonatal encephalopathy caused by a hypoxic ischemic event: Physiological and therapeutic considerations. *Semin Fetal Neonatal Med.* 2021 Aug
 13. **Mohammad K**, Dharel D, Abou Mehrem A, Esser MJ, Paul R, Zein H, Scott JN, Fiedrich E, Murthy P, Dossani S, Kopores K, Kowal D, Montpetit J, Al Awad E, Thomas S. Impact of outreach education program on outcomes of neonates with hypoxic ischemic encephalopathy. *Paediatr Child Health.* 2021 Aug.
 14. Leijser LM, Scott JN, Roychoudhury S, Zein H, Murthy P, Thomas SP, **Mohammad K**. Post-hemorrhagic ventricular dilatation: inter-observer reliability of ventricular size measurements in extremely preterm infants. *Pediatr Res.* 2021 Aug.
 15. Qureshi M, Shah PS, Abdelgadir D, Ye XY, Afifi J, Yuen R, Crossman SC, Taylor B, **Mohammad K**, Piedboeuf B, Aziz K. Gestational Age-Dependent Variations in Effects of Prophylactic Indomethacin on Brain Injury, and Intestinal Injury. *J Pediatr.* 2021 Aug
 16. Wood S, Crawford S, Hicks M, **Mohammad K**. Hospital-related, maternal, and fetal risk factors for neonatal asphyxia and moderate or severe hypoxic-ischemic encephalopathy: a retrospective cohort study. *J Matern Fetal Neonatal Med.* 2021 May
 17. Zein H, **Mohammad K**, Leijser LM, Brundler MA, Kirton A, Esser MJ. Cord Blood Cytokine Levels Correlate With Types of Placental Pathology in Extremely Preterm Infants. *Front Pediatr.* 2021;9
 18. **Mohammad K**, Scott JN, Leijser LM, Zein H, Afifi J, Piedboeuf B, de Vries LS, van Wezel-Meijler G, Lee SK, Shah PS. Consensus Approach for Standardizing the Screening and Classification of Preterm Brain Injury Diagnosed With Cranial Ultrasound: A Canadian Perspective. *Front Pediatr.* 2021;9
 19. Sarnat HB, Flores-Sarnat L, Fajardo C, Leijser LM, Wusthoff C, **Mohammad K**. Sarnat Grading Scale for Neonatal Encephalopathy after 45 Years: An Update Proposal. *Pediatr Neurol.* 2020 august
 20. Giesinger RE, Levy PT, Ruoss JL, El Dib M, **Mohammad K**, Wintermark P, McNamara PJ. Cardiovascular management following hypoxic-ischemic encephalopathy in North America: need for physiologic consideration. *Pediatr Res.* 2021 Sep
 21. Murthy P, Zein H, Thomas S, Scott JN, Abou Mehrem A, Esser MJ, Lodha A, Metcalfe C, Kowal D, Irvine L, Scotland J, Leijser L, **Mohammad K**. Neuroprotection Care Bundle Implementation to Decrease Acute Brain Injury in Preterm Infants. *Pediatr Neurol.* 2020 Sep.
 22. Dersch-Mills D, **Mohammad K**, Howlett A. An assessment of the impact of dexmedetomidine on opioid use in a neonatal intensive care unit. *J Matern Fetal Neonatal Med.* 2020 Aug
 23. Abdul Aziz AN, Thomas S, Murthy P, Rabi Y, Soraisham A, Stritzke A, Kamaluddeen M, Al-Awad E, **Mohammad K**. Early inotropes use is associated with higher risk of death and/or severe brain injury in extremely premature infants. *J Matern Fetal Neonatal Med.* 2020 Aug
 24. **Mohammad K**, Murthy P, Aguinaga F, Fajardo C, Eguiguren L, Castro Y, Guzman V, Scott JN, Chan S, Soraisham A, Stritzke A, Al Awad E, Kamaluddeen M, Thomas S. Simulation-Based Structured Education Supports Focused Neonatal Cranial Ultrasound Training. *J Ultrasound Med.* 2020 Jun
 25. Vayaltrikkovil S, Bashir R, Espinoza M, Irvine L, Scott JN, **Mohammad K**. Serum calcium derangements in neonates with moderate to severe hypoxic ischemic encephalopathy and the impact of therapeutic hypothermia: a cohort study. *J Matern Fetal Neonatal Med.* 2020 Mar
 26. Goswami IR, Whyte H, Wintermark P, **Mohammad K**, Shivananda S, Louis D, Yoon EW, Shah PS. Characteristics and short-term outcomes of neonates with mild hypoxic-ischemic encephalopathy treated with hypothermia. *J Perinatol.* 2020 Feb
 27. Yamamoto JM, Donovan LE, **Mohammad K**, Wood SL. Severe neonatal hypoglycaemia and intrapartum glycaemic control in pregnancies complicated by type 1, type 2, and gestational diabetes. *Diabet Med.* 2020 Jan
 28. **Mohammad K**. Assessing pupil reaction to light using ultrasound in a sick neonate with Hypoxic Ischemic Encephalopathy. *J Neonatal Perinatal Med.* 2020.
 29. Xu EH, Claveau M, Yoon EW, Barrington KJ, **Mohammad K**, Shah PS, Wintermark P. Neonates with hypoxic-ischemic encephalopathy treated with hypothermia: Observations in a large Canadian population and determinants of death and/or brain injury. *J Neonatal Perinatal Med.* 2020
 30. Roychoudhury S, Esser MJ, Buchhalter J, Bello-Espinosa L, Zein H, Howlett A, Thomas S, Murthy P, Appendino JP, Scott JN, Metcalfe C, Lind J, Oliver N, Kozlik S, **Mohammad K**. Implementation of Neonatal Neurocritical Care Program Improved Short-Term Outcomes in Neonates With Moderate-to-Severe Hypoxic Ischemic

- Encephalopathy. *Pediatr Neurol.* 2019 Dec
31. Khanafer-Larocque I, Soraisham A, Stritzke A, Al Awad E, Thomas S, Murthy P, Kamaluddeen M, Scott JN, **Mohammad K**. Intraventricular Hemorrhage: Risk Factors and Association With Patent Ductus Arteriosus Treatment in Extremely Preterm Neonates. *Front Pediatr.* 2019;7
 32. Stritzke A, Soraisham A, Murthy P, Kowal D, Paul R, Kamaluddeen M, **Mohammad K**, Al Awad EH, Thomas S. Neonatal Transport Clinician Performed Ultrasound Evaluation of Cardiac Function. *Air Med J.* 2019 Sep -
 33. Ryan M, Lacaze-Masmonteil T, **Mohammad K**. Neuroprotection from acute brain injury in preterm infants. *Paediatr Child Health.* 2019 Jul.
 34. Shah PS, Dunn M, Aziz K, Shah V, Deshpandey A, Mukerji A, Ng E, **Mohammad K**, Ulrich C, Amaral N, Lemyre B, Synnes A, Piedboeuf B, Yee WH, Ye XY, Lee SK. Sustained quality improvement in outcomes of preterm neonates with a gestational age less than 29 weeks: results from the Evidence-based Practice for Improving Quality Phase 3 1. *Can J Physiol Pharmacol.* 2019 Mar
 35. Vayalthrikkovil S, Vorhies E, Stritzke A, Bashir RA, **Mohammad K**, Kamaluddeen M, Thomas S, Al Awad E, Murthy P, Soraisham A. Prospective study of pulmonary hypertension in preterm infants with bronchopulmonary dysplasia. *Pediatric Pulmonol.* 2019 Feb
 36. Stritzke A, **Mohammad K**, Shah PS, Ye XY, Bhandari V, Akierman A, Harrison A, Bertelle V, Lodha A. Use, and timing of surfactant administration: impact on neonatal outcomes in extremely low gestational age infants born in Canadian Neonatal Intensive Care Units. *J Matern Fetal Neonatal Med.* 2018 Nov.
 37. Goswami I, Bello-Espinosa L, Buchhalter J, Amin H, Howlett A, Esser M, Thomas S, Metcalfe C, Lind J, Oliver N, Kozlik S, **Mohammad K**. Introduction of Continuous Video EEG Monitoring into 2 Different NICU Models by Training Neonatal Nurses. *Adv Neonatal Care.* 2018 Aug.
 38. Bashir RA, Vayalthrikkovil S, Espinoza L, Irvine L, Scott J, **Mohammad K**. Prevalence and Characteristics of Intracranial Hemorrhages in Neonates with Hypoxic Ischemic Encephalopathy. *Am J Perinatol.* 2018 Jun.
 39. Yamamoto JM, Benham J, **Mohammad K**, Donovan LE, Wood S. Intrapartum glycaemic control, and neonatal hypoglycaemia in pregnancies complicated by diabetes: a systematic review. *Diabet Med.* 2018 Feb
 40. Arun Babu T, Soliman Y, **Mohammad K**. Unusual complication of fulminant congenital cytomegalovirus infection. *J Neonatal Perinatal Med.* 2018.
 41. Sell E, Munoz FM, Soe A, Wiznitzer M, Heath PT, Clarke ED, Spiegel H, Sawlwin D, Šubelj M, Tikhonov I, **Mohammad K**, Kochhar S. Neonatal encephalopathy: Case definition & guidelines for data collection, analysis, and presentation of maternal immunisation safety data. *Vaccine.* 2017 Dec
 42. Roychoudhury S, **Mohammad K**, Yusuf K, Obaid H, Al-Awad E. Successful Outcome of Therapeutic Hypothermia in A Case of Sudden Postnatal Cardiac Arrest and Asphyxia: A Case Report and Literature Review. *Journal of pediatric care.* 2017 April.
 43. Goswami I, Lodha, Dagleish S, **Mohammad K**. Early Onset Escherichia coli Sepsis and Severe Intraventricular Hemorrhage in Extremely Premature Infants: Cases Series and Literature Review. *Academic Journal of Pediatrics & Neonatology.* 2017 February.
 44. Al-Mouqdad M, Al-Abdi S, Scott JN, Hurley A, Tang S, Creighton D, **Mohammad K**, Kamaluddeen M, Lodha A. A New IVH Scoring System Based on Laterality Enhances Prediction of Neurodevelopmental Outcomes at 3 Years Age in Premature Infants. *Am J Perinatol.* 2017 Jan.
 45. **Mohammad K**, Hicks M, Buchhalter J, Esser MJ, Irvine L, Thomas S, Scott J, Javadyan J, Kamaluddeen M. Hemodynamic instability associated with increased risk of death or brain injury in neonates with hypoxic ischemic encephalopathy. *J Neonatal Perinatal Med.* 2017
 46. Bashir RA, Espinoza L, Vayalthrikkovil S, Buchhalter J, Irvine L, Bello-Espinosa L, **Mohammad K**. Implementation of a Neurocritical Care Program: Improved Seizure Detection and Decreased Antiseizure Medication at Discharge in Neonates With Hypoxic-Ischemic Encephalopathy. *Pediatric Neurol.* 2016 Nov
 47. Al Awad E, Obaid H, Mohammad K, Amin H, Lodha A. Staphylococcus aureus sepsis inducing severe hemolysis in glucose-6-phosphate dehydrogenase (G-6-PD)-deficient preterm infant causing severe neonatal jaundice and kernicterus. *Journal of Neonatal-Perinatal Medicine.* 2011 June

ACCEPTED MANUSCRIPTS

SUBMITTED MANUSCRIPTS

1. **Khorshid Mohammad**, Sarfaraz Momin, Prashanth Murthy, Hussein Zein, James N Scott, Ayman Abou Mehrem, Anirban Ghosh, Artem Javadyan, Essa Al Awad, Sujith Gurram Venkata, Renee Paul, Bryan Rombough, Leah Bolderheij, Salma Dossani, John Montpetit, Peace Eshemokhai, Elsa Fiedrich, Sumesh Thomas, M. Impact of outreach education on the incidence of acute brain injury in transported neonates born premature, *Journal of Perinatology*
2. Marc Beltempo, Pia Wintermark, **Khorshid Mohammad**, Elias Jabbour, Jehier Afifi, Sandesh Shivananda, Deepak Louis, Stephanie Redpath, Kyong-Soon Lee, Carlos Fajardo, Prakesh S Shah. Variations in practices and outcomes of neonates with hypoxic ischemic encephalopathy treated with therapeutic hypothermia across tertiary NICUs in Canada, *Journal of Perinatology*
3. Sujith Kumar Reddy Gurram Venkata, Ankur Srivastava, Prashanth Murthy, James N Scott, Hussein Zein, Lara

- Leijser, Anirban Ghosh, Sarfaraz Momin, Sumesh Thomas, **Khorshid Mohammad**, Quality Improvement bundled approach reduces the use of Inotropes in extremely premature babies. *Pediatric Drugs journal*
4. Amina Benlamri , Prashanth Murthy, Hussein Zein, Sumesh Thomas, James N. Scott, Ayman Abou Mehrem , Michael J. Esser, Abhay Lodha, Jennessa Noort, Selphee Tang, Cathy Metcalfe, Derek Kowal, Leigh Irvine, Jillian Scotland, Lara Leijser, **Khorshid Mohammad**, Neuroprotection care bundle improved long term neurodevelopmental outcomes in infants born extremely premature. *Pediatric Neurology Journal*

MANUSCRIPTS IN PREPARATION FOR SUBMISSION

1. Elsharkawy A, **Mohammad K**, Nettel-Aguirre A, Wainer S, Lodha A, Oei J, Vento M7, Boulton J, Lodha A, Rabi Y, Peak serum bilirubin as an indicator of hypoxic ischemic encephalopathy severity
2. Eleanor Molloy; Janet Soul; Sandra Juul; Alistair Gunn; Manon Bender; Fernando Gonzalez; Cynthia Bearer; Yvonne Wu; Nikki Robertson; Mike Cotton; Sid Tan; Abbot Laptook; Topun Austin; **Khorshid Mohammad**; Elizabeth Rogers; Karen Luyt; Sonia Bonifacio: Preterm Neuroprotective therapies in the NICU: Present and Future, *Pediatric Research Journal*
3. Eleanor Molloy; Janet Soul; Sandra Juul; Alistair Gunn; Manon Bender; Fernando Gonzalez; Cynthia Bearer; Yvonne Wu; Nikki Robertson; Mike Cotton; Sid Tan; Abbot Laptook; Topun Austin; **Khorshid Mohammad**; Elizabeth Rogers; Karen Luyt; Sonia Bonifacio, Term Neuroprotective therapies in the NICU: Present and Future, *Pediatric Research Journal*
4. **K Mohammad**, B Alshaikh, F M Khan, N Berka, K Yusuf, Umbilical cord blood levels of endothelial progenitor cells (EPCs) and vascular endothelial growth factor (VEGF) and risk of intraventricular hemorrhage (IVH) in preterm infants
5. Vardhil Gandhi, Ipsita Goswami, **Khorshid Mohammad**, Abhay Lodha, Yacov Rabi., Alpha-Stat versus pH-Stat approaches to blood gas interpretation during therapeutic hypothermia of newborns with hypoxic-ischemic encephalopathy

RESEARCH MANUSCRIPTS REVIEWED

1. Profile of minor neurological findings after perinatal asphyxia, *Acta Paediatrica* ,SPAE-2021-0525
2. Improving consistency and accuracy of neonatal amplitude-integrated electroencephalography, *American Journal of Perinatology* # 21-Jul-M-0501
3. Methylene Blue versus Vasopressin Analog for Refractory Septic Shock in the Preterm Neonate: A Randomized Controlled Trial, *Journal of Neonatal-Perinatal Medicine*, #21-0824
4. Longitudinal reference values for cerebral ventricular size in preterms born 23-27 weeks *The Journal of Pediatrics*. Ms. No. 20211048R1
5. Predictive values of location and volumetric MRI injury patterns for neurodevelopmental outcomes in hypoxic-ischemic encephalopathy neonates. *Brain Imaging and Behavior*. BIOR-D-20-00327
6. Fluid management, electrolytes imbalance and renal management in neonates with neonatal encephalopathy treated with hypothermia, *seminars fetal and neonatal medicine journal* 2021
7. Challenges in neonatal respiratory management during therapeutic hypothermia, *seminars fetal and neonatal medicine journal* 2021
8. Optimizing neonatal resuscitation for infants with encephalopathy, *seminars fetal and neonatal medicine journal* 2021
9. Comparison of ultrasonographic versus infrared pupillary assessment, *The Ultrasound Journal*, August 2020
10. Why Do Neonates Receive Antiepileptics? *The Journal of Maternal-Fetal & Neonatal Medicine*, May 2020
11. Late onset oxygen requirement following neonatal therapeutic hypothermia, *Acta Paediatrica*, Feb 2020
12. Early Exit from Neonatal Therapeutic Hypothermia: A Single Institution Experience Using MRI to Guide Decision-making, *American Journal of perinatology*, Dec 2019
13. Lack of Progression of Intraventricular Hemorrhage in Premature Infants: Implications for Head Ultrasound Screening, *Research Square journal*, Nov 2019

14. Ventilation methods and neurodevelopmental disabilities in infants with RDS. Canadian journal of neurology. CJN-OA-2014-0180
15. Natural Drugs, Not So Natural Effects: Neonatal Abstinence Syndrome Secondary to 'Kratom, Journal of Neonatal-Perinatal Medicine,' manuscript 18-0063

REB APPROVED STUDIES

1. Principal Investigator, **REB21-2004**, Therapeutic Hypothermia for neonates with Hypoxic Ischemic Encephalopathy and Congenital Heart Disease, **Active**
2. Principal Investigator, **REB21-0497**, Mortality and morbidity of infants with perinatal asphyxia during the lockdown, **Active**
3. Principal Investigator, **REB21-1127**, Canadian Standardized Consensus classification of Preterm Brain Injury Diagnosed with Cranial Ultrasound in predicting Mortality and Long-term neurodevelopmental outcomes, **Active**
4. Principal Investigator, **REB17-2152**, Outcome following Mild Neonatal Hypoxic-Ischemic Encephalopathy, a ten year perspective, **closed**
5. Co-Investigator, **REB14-1466**, EPIQ Phase 3 – The Drive for Zero, **Active**
6. Principal Investigator, **REB19-1348**, The impact of Neuroprotection Bundle on long term neurodevelopmental outcomes in infants born extremely premature, **Active**
7. Co-Investigator, **REB16-1576**, The REDUCED Trial, **Active**
8. Co-Investigator, **REB20-1266**, CIRCUIT, **Active**
9. Co-Investigator, **REB19-1511**, GMA PILOT QI, **Active**
10. Co-Investigator, **REB19-1194**, The BIMP study, **Active**
11. Co-Investigator, **REB20-1220**, Validation of a Modified Cranial Ultrasound Scoring Tool to Predict Neurodevelopmental Outcome in Preterm Infants, **Active**
12. Co-Investigator, **REB20-1165**, Predicting trajectory of post-hemorrhagic ventricular dilatation in preterm infants, **Active**
13. Co-Investigator, **REB19-1502**, Stability of Cytokine Concentration in Cord Blood: A Proof of Principle, **Active**
14. Principal Investigator, **REB19-1368**, Targeted neurological examination training for neonatal nurses using Simulation, **Active**
15. Principal Investigator, **REB15-1249**, Prediction of adverse neurological outcomes in children who receive therapeutic hypothermia for HIE, **Active**
16. Co-Investigator, **REB18-1525**, Outcomes in neonatal HIE, **Active**
17. Principal Investigator, **REB15-1249**, Prediction of adverse neurological outcomes in children who receive therapeutic hypothermia for HIE, **Active**
18. Co-Investigator, **REB15-072**, Targeting Arterial Pressure of Carbon Dioxide (PaCO₂) in prevention of Intraventricular hemorrhage, **Active**
19. Co-Investigator, **REB16-1102**, Placental Pathology and Hypoxic Ischemic Encephalopathy, **Active**
20. Co-Investigator, **REB17-2300**, Patterns of brain injury and their correlation with placental pathology, **Active**
21. Principal Investigator, **REB17-1333**, The impact of Neonatal Neuro-Critical Care program on short term outcomes, **Active study (published)**
22. Co-Investigator, **REB17-1063**, Continuous EEG in the NICU, **Active**
23. Co-Investigator, **REB20-1039**, Respiratory Management of Extremely Preterm Neonates, **Active**
24. Principal Investigator, **REB17-1334**, The impact of educational outreach program on infants with Hypoxic Ischemic Encephalopathy, **Active s(published)**
25. Co-Investigator, **REB15-1436**, What is the optimal gestational age for delivery based on the competing risks of neonatal death and stillbirth? **Active**
26. Co-Investigator, **REB20-0794**, An Assessment of the Impact of Dexmedetomidine and a Weaning Protocol on Opioid use in the Alberta Children's Hospital Neonatal Intensive Care Unit, **Active**
27. Principal Investigator, **REB19-0299**, Early feeding in infants with HIE, **Active**
28. Co-Investigator, **REB15-3190**, Incidence and risk factors for asphyxia in the term fetus in Alberta, **Active (published)**
29. Co-Investigator, **REB18-1813**, Longitudinal outcomes in HIE, **Active**
30. Co-Investigator, **REB19-0653**, IVC and Abdominal aorta diameter measurements in preterm neonates, **Active**
31. Co-Investigator, **REB16-2093**, Neonatal Hypoglycemia after pregnancies with diabetes, **Active(published)**
32. Co-Investigator, **REB17-0534**, Dexmedetomidine and Clonidine Use in the NICU, **Completed and published**
33. Co-Investigator, **REB18-1916**, Persistent pulmonary hypertension (PPHN) in hypoxic ischemic encephalopathy

- (HIE), **Active**
34. Co-Investigator, **REB19-0181**, The Effect of Surfactant Administration on Cerebral Tissue oxygenation and Hemodynamics in Preterm Infants <29 Weeks of Gestation, **Active**
 35. Co-Investigator, **REB19-1948**, Validation of a Neonatal Adverse Event Severity Scale, **Active**
 36. Co-Investigator, **REB19-2018**, Southern Alberta Tele-Neonatology Project: A Retrospective Evaluation, **Active**
 37. Principal Investigator, **REB18-0180**, Targeted Training of Neonatologists on EEG Trends and analysis, **Active**
 38. Co-Investigator, **REB13-089**, Cytokines as prognostic markers in Neonatal Hypoxic Ischemic Encephalopathy, **Active**
 39. Co-Investigator, **REB19-065**, IVC and Abdominal aorta diameter measurements in preterm neonates, **Active (completed)**
 40. Principal Investigator, **REB16-2225**, Association between patent ductus arteriosus management and intraventricular hemorrhage, **completed and published**
 41. Principal Investigator, **REB15-2797**, The impact of Arterial PaCO₂ during the first 72 hours of life in extreme preterm neonates on risk of developing IVH, **completed and published**
 42. Principal Investigator, **REB16-1854**, Early use of inotropes and Intraventricular hemorrhage in preterm neonates, **Completed and published**
 43. Co-Investigator, **REB15-2600**, Blood gases in therapeutic hypothermia, **completed**
 44. Principal Investigator, **REB17-2150**, High Fidelity Ultrasound Simulation to support “Just in Time “point of care neonatal ultrasound teaching, **completed, and published**
 45. Principal Investigator, **REB15-2994**, Serum Calcium Derangements in Neonates with HIE with and without Therapeutic Hypothermia, **completed and published**
 46. Co-Investigator, **REB14-031**, Impact of Red Cell Transfusion on Superior Mesenteric Artery Flow Patterns and Intestinal Oxygenation in Fed Preterm Neonates, **completed**
 47. Co-Investigator **REB14-1805**, Pulmonary hypertension in preterm infants with bronchopulmonary dysplasia and their outcomes –A prospective study, **completed and published**
 48. Principal Investigator, **REB15-2993**, Intracranial and Extra-cranial Hemorrhages in Neonates with HIE, **completed and published**
 49. Co-Investigator, **REB15-156**, Early Surfactant and Intraventricular Hemorrhage, **completed and published**
 50. Principal Investigator, **REB13-1247**, Hemodynamic instability and brain injury in Neonates with encephalopathy, **completed and published**
 51. Principal Investigator, **REB15-2295**, Introduction of con EEG and use of AED, **completed and published**
 52. Co-Investigator, **REB13-0719**, New scoring system for IVH and neurodevelopmental outcomes, **completed and published**

RESEARCH JOURNAL EDITORIAL BOARD

1. Journal of Neonatal-Perinatal Medicine editorial board: January 2021-present

RESEARCH FUNDING HISTORY

2021 CO- Principal Investigator	Alberta Provincial Surveillance Program for Moderate to Severe Neonatal Hypoxic-ischemic Encephalopathy (HIE), \$894,336 CAD (over 5 years). Calgary Health foundation project grant PI: Stephen Wood
2021 CO-Applicant	Closed-loop Insulin delivery by glucose Responsive Computer algorithms In Type 1 diabetes pregnancies (CIRCUIT): Internal Pilot Trial, \$300,00 CAD (over 3 years). Operating Grants - Canadian Diabetes Association. PI (Principal Investigators): Lois Donovan
2021 Supervisor	Ventricular surface area measurement to better predict PHVD outcomes, \$6000 CAD (over 6 weeks). Brain Create, student awarded Mei Hou (bioengineer program)

2020 CO-Applicant	Alberta Provincial Surveillance Program for Moderate to severe Hypoxic-ischemic Encephalopathy (HIE), HIROC safety Grant. Amount: 17,500 CAD (one time) PI: Stephen Wood
2020 Co-applicant	Prediction, Prevention, and interventions for Preterm birth: the P3 cohort. Funding source: Calgary Health Trust, Team Grant Total funding: 5,000,000 CAD PIs: Amy Metcalfe; Lara Leijser; Donna Slater
2020 Principal Investigator	Point of Care ultrasound simulator to support Neonatal transportation training Funding source: multiple sources Total funding 28169.00
2019 Principal Investigator	Neonatal neurological examination Mannequin Funding source: Innovation for health 2019 health hack competition, best project in clinical category. Total Funding: 5000.00
2019 Co-applicant	Implementation of the PrechtI Qualitative Assessment of General Movements (GMA) in the Calgary Zone to facilitate the early diagnosis of cerebral palsy in high-risk neonates: A pilot quality improvement study Funding source: Maternal Newborn Child & Youth Strategic Clinical Network™ (MNCY SCN™) Health Outcomes Improvement Fund II (HOIF II) Total Funding: \$144,553.00. PI: Dr. Amina Ahlem Benlamri
2019 Principal Investigator	Respiratory management of extremely preterm neonates: Evidence generation and implementation by comparative effectiveness research (CER) using real world data (RWD) from practice-based research network (PBRN) Funding source: CIHR (Canadian Institutes of Health Research). Total funding: 451,352
2018 Principal Investigator	High Fidelity Ultrasound Simulation to support “Just in Time” Point of Care Neonatal Ultrasound Teaching. Funding Sources: Section of Neonatology Equipment Grant Award Total Funding: \$10,000
2018-2019 Co-Applicant	Sonographic Clinical Assessment of the Newborn Program. Funding Sources: Infrastructure and Simulation Teaching Funding, PGME, University of Calgary. Total funding: \$32,000
2015 - 2016 Principal Investigator	The impact of arterial pressure of carbon dioxide (PaCO ₂) during the first 72 hours of life in extremely preterm neonates: Risk stratification for developing intraventricular hemorrhage. Funding Sources: Department of Pediatrics Innovation Award, University of Calgary. Total Funding: \$21,000
2015-2016 Principal Investigator	The prediction of adverse neurological outcome in children who receive therapeutic hypothermia for hypoxic ischemic encephalopathy. Funding Sources: Department of Pediatrics Innovation Award, University of Calgary. Total Funding: \$21,000
2014-2015 Co-applicant	Impact of red cell transfusion on superior mesenteric artery flow patterns and intestinal oxygenation in fed preterm neonates (SPARTAN: SMA Pattern Related to Transfusion in Neonates). Funding Sources: Department of Pediatrics Innovation Award, University of Calgary. Total Funding - 21,000

BOOKS

1. **Book title: Neonatal Brain Injury - An Illustrated Guide for Clinicians Counselling Parents and Caregivers. Role: Co-editor. Publisher: Springer Nature Switzerland AG**
 - a. Introduction on development, maturation and vulnerability of the neonatal brain and factors contributing to injury (*Gerda Meijler & Khorshid Mohammad*)
 - b. Hypoxic-ischemic injury, including treatment (*Khorshid Mohammad & Frances Cowan*)
 - c. Subdural hemorrhage/traumatic brain injury (*Khorshid Mohammad, Miriam Martinez Biarge, Mohamed El-Dib*)
 - d. Miscellaneous (LSV, germinolytic cysts, etc.) (*Miriam Martinez Biarge & Khorshid Mohammad*)

SELECTED INVITED TALKS

1. NNCC training and accreditation: 13th International Newborn Brain conference, Feb 2022
2. Newborn Brain health annual report: EPIQ conference February 2022
3. IVH prevention a QI perspective: The International Congress of Pediatrics (ICP), Tehran University of Medical Sciences (TUMS), Feb 2022
4. Neonatal Care Bundle to Reduce Intraventricular Hemorrhage in Preterm Newborns, 17th Hot Topics in Neonatal

- Medicine, Saudi Arabia, Feb 2022
5. IVH prevention: a quality improvement perspective, Newborn Brain Society weekly webinars, December 2021
 6. Neuroprotection in Preterm Infants, Learn from the legend's series, India, December 2021
 7. Prevention of IVH and treatment of posthemorrhagic hydrocephalus, Neo Brain Brazil Highlights! Brazil , November 2021
 8. Brain injury is not a death sentence: how neuroplasticity can heal the young brain, 12th international ARAB NEONATAL CARE Conference, September 25th, 2021
 9. Preterm brain injury prevention: 4th Asia Neonatal Symposium & 8th Shanghai Neonatal Forum, July 16th, 2021
 10. Newborn brain plasticity through stories of resiliency, Premie chat, Canadian Premature Babies Foundation. Planned for September 10th, 2021
 11. Hypoxic Ischemic Encephalopathy management, PEDIATRIC AND NEONATAL MULTIDISCIPLINARY DEVELOPMENTAL PROGRAMME OF PAKISTAN, January 30th, 2021
 12. Neonatal Neurology case discussion, Lucknow, India, February 2nd, 2021
 13. Building a Neonatal Neuro-Critical Care program, Calgary experience, Ste-Justine hospital, Montreal, December 2020
 14. IVH prevention: a quality improvement perspective, Newborn brain Society weekly webinars December 2020, MUST program Uganda, December 2020.
 15. Dancing With the Brain: A Holistic Approach to Neuroprotection In HIE, EPIC Latino 2020, MUST program Uganda 2020, EPIQ series Lucknow, India 2020
 16. Neonatal Seizure diagnosis and management a clinical prospective: MUST program Uganda 2020, EPIQ series Lucknow, India 2020
 17. Ultrasound scanning protocols, Pocus Neo 2019, Winnipeg
 18. Other forms of brain abnormalities, Pocus Neo 2019, Winnipeg
 19. Neuroprotection in preterm infants, EPIQ Latino 2019, Bogota, Columbia
 20. Improving HIE identification, EPIQ Latino 2019, Bogota, Columbia
 21. Neuroprotection in HIE infants, EPIQ Latino 2019, Bogota, Columbia
 22. The drive IVH to zero project: lessons learned over 6 years, McMaster University, Canada, Feb 2019
 23. Decreasing brain injury diagnosis variability project: EPIQ meeting 2019, Toronto, Canada
 24. Prevention of preterm brain injury: a hemodynamics prospective, December 2018
 25. Neuroprotection Strategies in Neonates with Encephalopathy, the 2nd Kuwait Neonatology Conference; October 2018
 26. Brain MRI in Neonates with Moderate to Severe Encephalopathy, the 2nd Kuwait Neonatology Conference; October 2018
 27. Bundle of Prevention and Management of IVH. Quality Improvement Projects to Reduce IVH in NICUs, Neonatal Intensive Care Quality Improvement Forum and CMB Project Concluding Conference, Shanghai, China; September 2018
 28. What is new in Neonatology Management? Neonatal Hypoxic-Ischemic Encephalopathy, Rural Videoconference Series, Calgary, Alberta, Canada; September 2018
 29. The impact of Neonatal Neuro-Critical care program on short term outcomes in term neonates, CANN national conference, April 2018, Calgary, Canada
 30. HIE Cases with Unusual Outcomes: What is The Best Way to Predict? Neonatal Neuro-Critical Care Special Interest Group Webinar series; March 2018
 31. The impact of Neonatal Neuro-Critical Care Program on Short Term Outcomes in Term Neonates, Neuroprotection Conference, Quito, Ecuador; November 2017
 32. Neuroprotection in Preterm Neonates, Neuroprotection Conference, Quito, Ecuador; November 2017
 33. The role of Erythropoietin in Neonatal Neuroprotection, Neonatal Grand Round, Foothill Medical Centre; October 2017
 34. The impact of Neonatal Neuro-Critical Care Program on Short Term Outcomes in Preterm and Term Neonates, Excellence in Neonatology Cross Canada Series; September 2017
 35. Neonatal hypoxic ischemic encephalopathy in southern Alberta: Trends and short-term outcomes, Neuro-Critical Care round, Alberta Children's Hospital; July 2017
 36. Alberta Children's Hospital Neuro-Critical Care Program. PICU Grand Round, Alberta Children's Hospital; June 2017
 37. A New Approach for Intra-Ventricular Hemorrhage Grading in Preterm Neonates: A Collaboration between Neonatology and Neuroradiology, [Mini-Symposium on Pediatric Neuroimaging](#), University of Calgary; January 2017
 38. Optimization of Therapeutic Hypothermia, Neonatal Grand Round, University of Calgary; November 2016
 39. Drive to Zero IVH Project, Section of Neonatology, Edmonton, Alberta, Canada; March 2016
 40. Neuroprotection in Neonates with Hypoxic Ischemic Encephalopathy, Section of Neonatology, Edmonton, Alberta, Canada; March 2106
 41. Neonatal Brain Monitoring in NICU, The Alberta Neonatal Nurses Association Workshop, Alberta Children's Hospital, Calgary, Alberta, Canada; June 2014

42. Neonatal Neuro Critical Care Concept, Brain Monitoring Conference, University of Calgary, November 20, 2013
43. Hemodynamic Instability and Brain Injury in Preterm Neonates. Neonatal Grand Round, University of Calgary; June 2013
44. Hemodynamic Instability and Brain Injury in Preterm Neonates, Neuro-NICU Conference, Alberta Children's Hospital; February 2012
45. Neuro-Intensive Care Nursery. Neuroscience Round, Pediatric Neurology Department, University of BC; May 2012

SELECTED ACADEMIC STUDENTS SUPERVISED

- Currently mentor and co-mentor the following neonatology fellows In Calgary: Sujith Venkata, Sarfaraz Momin, Anirban Gosh, Alia Embaareeg
- 2021-ongoing:
Alam Randhawa (MSc candidate), Neuroscience (Clinical) program, project title: prediction of neurodevelopmental outcomes in neonates with hypoxic ischemic encephalopathy.
Role: supervising committee member
- 2020-ongoing:
Mei Hou, University of Calgary
Specialization: Biomedical Engineering-Alberta Children's Hospital Research Institute Summer Studentship Award
Project Title: Cerebral ventricles surface area measurement
Role: co-supervisor
- 2020-completed successfully, June 2020
Luo Qiu, the Hong Kong Polytechnic University
Specialization: Master's in health and Social Sciences
Project title: Comparison of Cerebral Blood Flow Velocity and Cerebrovascular Resistance Estimation Using Cranial Ultrasound Imaging for Early Prediction of Outcomes in Preterm neonates
Role: external examiner
- 2016-2020 (successfully defended the thesis, April 2020):
Dr. Hussein Zein, University of Calgary
Specialization: Neuroscience
Thesis/Project Title: cytokines and placental changes as markers for brain injury in extreme preterm neonates
Project Description: prospective cohort study looking at the serial levels of cytokines and the correlation with placental changes and brain injury on head ultrasound
Role: mentor, supervising committee member, thesis examiner
- 2016-2019 (successfully defended the thesis, April 2019):
Dr. Jennifer Yamamoto, University of Calgary
Specialization: Epidemiology
Thesis/Project Title: Neonatal hypoglycemia after pregnancies with diabetes
Retrospective cohort study investigating the impact of pregnancy glycemic control on neonatal hypoglycemia
Role: mentor, supervising committee member, thesis examiner
- 2016-2018 (successfully defended the thesis, September 2019):
Dr. Ipsita Goswami, University of Calgary
Specialization: Neuroscience
Thesis/Project Title: cytokines and brain injury in neonates with hypoxic ischemic encephalopathy
Project Description: prospective cohort study looking at the serial levels of cytokines and the correlation with brain injury on MRI
Role: mentor, supervising committee member, thesis examiner
- 2015-2018 (successfully completed, April 2018):
Nwanneka Okeoghene Onyejekwe, University of Calgary
Specialization: Degree of Master of Science, Graduate program in computer science
Alignment of Freehand 2-D Ultrasound Images for 3-D Volumetric Reconstruction
Role: co-supervisor and thesis examiner
- 2016-2017 (successfully completed):
Dr. Rani Bashir, University of Calgary
Specialization: Graduate Diploma in Clinical Epidemiology (GDCE), McMaster University
Implementation of a Neurocritical Care Program: Improved Seizure Detection and Decreased Anti-seizure Medication at Discharge in Neonates with Hypoxic-Ischemic Encephalopathy
Role: mentor and supervisor

CONFERENCES AND WORKSHOPS LED OR Co-ORGANIZED

1. Newborn brain society weekly Webinars (role, director): April 2020-ongoing
2. Amplitude integrated EEG and beyond (a collaboration between Newborn Brain Society and Arab Neonatal Care group): planned for August 28th, 2021
3. Sleep like a baby, the importance of seep in the NICU (a collaboration between Newborn Brain Society and Arab Neonatal Care group); July 10th, 2021
4. Ketogenic Diet and the young brain symposium (a collaboration between Newborn Brain Society and Arab Neonatal Care group): June 5th, 2021
5. First virtual interactive point of care ultrasonography: Lucknow, India, September 2020
6. Sonographic Clinical Assessment of the Newborn hands-on workshop: Edmonton, August 2019
7. Neonatal Cranial Ultrasound hands-on workshop: Pocus Neo Conference 2019, Winnipeg, Canada (Lead)
8. Neonatal Cranial Ultrasound hands-on workshop: Bogota, Columbia (Lead)
9. Neonatal Cranial Ultrasound hands-on workshop: Pediatric Academic society 2019 (Lead)
10. Neonatal Cranial Ultrasound course (Hands-on part): Hammersmith hospital Imperial College London, March 2019
11. Neonatal Cranial Ultrasound hands-on workshop: Muscat, Oman, March 2019 (Lead)
12. Therapeutic hypothermia and brain monitoring hands-on workshop: Muscat, Oman March 2019 (Lead)
13. Sonographic Clinical Assessment of the Newborn hands on 3-day course, Chennai and Mysuru, India, November 2018(Lead)
14. Neonatal Cranial Ultrasonography, one day course, Kuwait, October 2018 (Lead)
15. Beyond aEEG: EEG Trends for Neonatology, one day workshop, University of Calgary; March 2018 (co-lead)
16. National Sonographic Clinical Assessment of the Newborn Hands-on Workshop, Banff, Alberta, February 2018 (Lead)
17. Point of Care Ultrasound Hands on Workshop, Quito, Ecuador; November 2017 (co-lead)
18. Neonatal Neuro-Critical Care retreat, Alberta Children's Hospital; November 2017 (Lead)
19. Targeted Neonatal Echocardiography Hands on Workshop, University of Calgary; February 2016 (co-organizer)
20. Targeted Neonatal Echocardiography Hands on Workshop, University of Calgary; October 2016 (co-organizer)
21. Targeted Neonatal Echocardiography (TNE) and Neonatal Head Ultrasound Conference and Hands on Workshop, Quito, Ecuador; Feb 2015 (co-organizer)
22. First Neonatal Neurology Workshop for HIE in Quito, Ecuador; June 30th to July 2nd, 2014 (co-organizer)
23. First Neonatal Brain Monitoring Conference, University of Calgary; November 2013 (Lead)
24. Neonatal Neurology Day, Division of Neonatology and Pediatric Neurology, UBC; March 2012 (Lead)

CONFERENCES PAPERS AND ABSTRACTS

2021-2022:

1. Lara Leijser, James Scott, Hussein Zein, **Khorshid Mohammad**. Effectiveness of the Canadian Consensus Approach for Diagnosis and Grading of Preterm Brain Injury from Cranial Ultrasound, ID: 1181993, Poster presentation, PAS 2022
2. Alburaki W, Scringier-Wilkes M, Dawoud F, Oliver N, Lind J, Zein H, Leijser LM, Esser MJ, **Khorshid Mohammad**. Feeding during Therapeutic Hypothermia is safe and may improve outcomes in newborns with perinatal asphyxia. ID: 10, oral presentation, 13th INBC Feb 2022
3. Amina Benlamri , Prashanth Murthy, Hussein Zein, Sumesh Thomas, James N. Scott, Ayman Abou Mehrem , Michael J. Esser, Abhay Lodha, Jennessa Noort, Selphee Tang, Cathy Metcalfe, Derek Kowal, Leigh Irvine, Jillian Scotland, Lara Leijser, **Khorshid Mohammad**, Neuroprotection care bundle improved long term neurodevelopmental outcomes in infants born extremely premature preterm, poster presentation, 13th INBC Feb 2022
4. Sujith Kumar Reddy Gurram Venkata, Ankur Srivastava, Prashanth Murthy, James N Scott, Hussein Zein, Lara Leijser, Anirban Ghosh, Sarfaraz Momin, Sumesh Thomas, **Khorshid Mohammad**. Quality Improvement bundled approach reduces the use of inotropes in extremely premature babies. poster Symposium, 13th INBC Feb 2022
5. **Khorshid Mohammad**, Sarfaraz Momin, Prashanth Murthy, Hussein Zein, James N Scott, Ayman Abou Mehrem, Anirban Ghosh, Artem Javadyan, Essa Al Awad, Sujith Gurram Venkata, Renee Paul, Bryan Rombough, Leah Bolderheij, Salma Dossani, John Montpetit, Peace Eshemokhai, Elsa Fiedrich, Sumesh Thomas. Impact of outreach education on the incidence of acute brain injury in transported premature neonates. Poster presentation, 13th INBC Feb 2022
6. Alburaki W, Scringier-Wilkes M, Dawoud F, Oliver N, Lind J, Zein H, Leijser LM, Esser MJ, **Khorshid Mohammad**. Feeding during Therapeutic Hypothermia is safe and may improve outcomes in newborns with perinatal asphyxia. Oral presentation, 12th International Arab Neonatal Care conference, Dubai, Sep 2021

Pediatric Academic Society 2020:

1. Abstract Title: Placental Pathology as a Marker of Brain Injury in Infants with Hypoxic Ischemic Encephalopathy. Session Title: Neonatal/Infant Resuscitation 3. Session Date/Time: May 2, 2020, Board #: 526
Authors: Maria Liza Espinoza, Belal Alshaikh, Marie-Anne Bundle, **Khorshid Mohammad**, Kamran Yusuf
2. Abstract Title: Cardiovascular Management following Hypoxic Ischemic Encephalopathy in North America: Need for Physiologic Consideration. Session Title: Neonatal Cardiac Physiology/Pathophysiology 1. Session Date/Time: May 2, 2020, Board #544; Authors: Giesinger RE, Levy PT, Lauren Ruoss J, El Dib M, **Mohammad K**, Wintermark P, McNamara PJ
3. Abstract Title: Temporal profile of cytokine levels in association with placental pathology in extremely preterm infants. Session Title: Neonatal General: Placenta and Cytokines. Session Date/Time: May 4, 2020, Session Type: Platform
Authors: Hussein Zein, **Khorshid Mohammad**, Lara M. Leijser, Marie-Anne Brundler, Adam Kirton, Michael J. Esser

Pediatric Academic Society 2019:

1. Abstract Title: Post-hemorrhagic ventricular dilatation in extremely preterm infants: Interobserver reliability of indices of ventricular size, Poster Session Title: Neonatal Neurology: Clinical 1
Session Date/Time: April 27, 2019 from 1:15 PM to 2:30 PM, poster board # 706
authors L.M. Leijser, S. Roychoudhury, J. Scott, H. Zein, J. Riva-Cambrin, P. Murthy, S.P. Thomas, **K. Mohammad**; on behalf of the Neonatal Neuro-Critical Care Program
2. Abstract Title: Comparing commonly used ventricular size indices for predicting severity of post-hemorrhagic ventricular dilatation in extremely preterm infants, Poster Session Title: Neonatal Neurology: Clinical 4, Session Date/Time: April 29, 2019 from 5:45 PM to 7:30 PM, poster board # 547
authors L.M. Leijser, S. Roychoudhury, J. Scott, H. Zein, J. Riva-Cambrin, P. Murthy, S.P. Thomas, **K. Mohammad**; on behalf of the Neonatal Neuro-Critical Care Program
3. Abstract Title: Center variations in practices and outcomes of infants with hypoxic-ischemic encephalopathy treated with therapeutic hypothermia in Canada, Session Title: Neonatal Epidemiology, Health Services Research: Neurology, Session Date/Time: April 27, 2019 from 1:15 PM to 2:30 PM
Board # (if applicable): 473
Authors: Beltempo M, Wintermark P, Afifi J, Shivananda S, Louis D, Redpath S, Lee KS, Fajardo C, **Mohammad K**, Shah P, and the Canadian Neonatal Network
4. Abstract Title: Prophylactic indomethacin: The impact on brain and gut injury may be gestational age dependent, Session Title: Neonatology: Potpourri 3 Session Date/Time: April 30, 2019 from 7:30 AM to 9:30 AM, Board # (if applicable): 623, Authors: Mosarrat Qureshi, Prakesh S. Shah, Dalal Abdelgadir, Xiang Y. Ye, Jehier Afifi, Ryan Yuen, Sara Calderon, Barbara Taylor, **Khorshid Mohammad**, Bruno Piedboeuf, Khalid Aziz, and the Canadian Neonatal Network
5. Abstract title: Midline Head Positioning for Prevention of Intraventricular Hemorrhage (IVH) in Infants Born at 23-28 weeks gestation: a multicenter retrospective cohort study. AAP meeting August 2019, DOI: <https://doi.org/10.1542/peds.144.2.MeetingAbstract.660>. Authors: Kathryn Carroll, Praveen Kumar, Preetha Prazad, **Khorshid Mohammad**, Aarti Raghavan and Huaping Wang

Pediatric Academic Society 2018:

1. Abstract Title: Use of Just-in-time training module and high-fidelity simulation improved trainee competency in neonatalcranial ultrasonography Session Title: Med Ed 26: Simulation and Technology Session Type: Poster Session: Date/Presentation Time: May 5, 2018, from 1:15 PM to 2:30 PM Board #: 673
Authors: **Khorshid Mohammad**, Fernando Aguinaga, Carlos Fajardo, Luis Eguiguren, Yesi Castro, Amuchou Soraisham, Amelie Stritzke, Essa Al Awad, Prashanth Murthy, Majeeda Kamaluddeen, Sumesh Thomas
2. Abstract Title: Midline Head Positioning for Prevention of Intraventricular Hemorrhage (IVH) in Infants Born at 23-28 weeks' gestation: a multicenter retrospective cohort study Session Title: Neonatal Neurology: Preterm IVH and Hydrocephalus Session Date/Time: May 5, 2018, from 1:15 PM to 2:30 PM Presentation Time: 1:45 PM to 2:00 PM Board #: 741
Authors: Kathryn Carroll, Praveen Kumar, Preetha Prazad, **Khorshid Mohammad**, Aarti Raghavan, Huaping Wang
3. Abstract Title: Implementation of Neonatal Neuro-Critical Care (NNCC) program associated with improved short term outcomes in neonates with moderate to severe Hypoxic Ischemic Encephalopathy (HIE) Session Title: Neonatal Neurology:

HIE Session Date/Time: May 6, 2018 from 5:45 PM to 7:30 PM Presentation Time: 7:00 PM to 7:15 PM Board # : 83
Authors: Smita Roychoudhury, Michael Esser, Jeffrey Buchhalter, Luis Bello-Espinosa, Hussein Zein, Alexandra Howlett, Sumesh Thomas, Prashanth Murthy, Juan Appendino, Cathy Metcalfe, Jan Lind, Norma Oliver, Silvia Kozlik, **Khorshid Mohammad**

4. Abstract Title: Umbilical cord blood levels of endothelial progenitor cells (EPC) and vascular endothelial growth factor (VEGF) and risk of Intraventricular hemorrhage (IVH) in preterm infants. Session Title: Neonatal Neurology: Preterms Session Date/Time: May 7, 2018, from 8:00 AM to 10:00 AM Presentation Time: 8:15 AM to 8:30 AM Authors: K Yusuf, **M Khorshid**, B Alshaikh, F Khan, N Berka.
5. Abstract Title: Association between intraventricular hemorrhage (IVH) and the treatment of patent ductus arteriosus (PDA) in extreme preterm infants Session Title: Neonatal Neuroprotection: Preterm Session Date/Time: May 7, 2018, from 5:45 PM to 7:30 PM Presentation Time: 6:30 PM to 6:45 PM Board # 667 Authors: Ijab Khanafer-Larocque, Amuchou Soraisham, Amelie Stritzke, Essa Al Awad, Sumesh Thomas, Prashanth Murthy, Majeeda Kamaluddeen, **Khorshid Mohammad**
6. Abstract Title: Early inotropes use is associated with higher risk of death and/or severe brain injury in extremely premature infants Session Title: Neonatal Neurology: Preterms 1 Session Date/Time: May 7, 2018, from 5:45 PM to 7:30 PM Presentation Time: 7:15 PM to 7:30 PM Board # 614 Authors: Ahmad Abdul Aziz, Sumesh Thomas, Amuchou Soraisham, Murthy Prashanth, Rabi Yacov, Essa Al Awad, Amelie Stritzke, Majeeda Kamaluddeen, **Khorshid Mohammad**
7. Abstract Title: Comparison of three cooling methods for neonatal therapeutic hypothermia on transport: a single center Canadian experience Session Title: Neonatal Neuroprotection: Hypothermia Session Type: Poster Session Date/Presentation Time: May 7, 2018, from 5:45 PM to 7:30 PM Board #: 627 Authors: Hussein Zein, Sumesh Thomas, Kamran Yusuf, Alexandra Howlett, Renee Paul, Derek Kowal, Kaley Kopores, Salma Dossani, **Khorshid Mohammad**
8. Abstract Title: Significant Reduction in Mortality and Severe Brain Injury in Extremely Premature Infants with Implementation of Neuroprotection Care Bundle Session Title: Neonatal Neuroprotection: Preterm Session Date/Time: May 7, 2018, from 5:45 PM to 7:30 PM Presentation Time: 6:45 PM to 7:00 PM Board #: 668 Authors: Prashanth Murthy, Hussein Zein, Sumesh Thomas, Adarsh Patel, James Scott, Cathy Metcalfe, Jennessa Noort, **Khorshid Mohammad**
9. Abstract Title: Perinatal Outreach Education Improved the Care of Infants with Hypoxic Ischemic Encephalopathy (HIE) Session Title: QI Neo2 Session Type: Poster Session Date/Presentation Time: May 8, 2018, from 7:30 AM to 9:30 AM Board #: 469 Authors: **Khorshid Mohammad**, Hussein Zein, Prashanth Murthy, Renee Paul, Derek Kowal, Kaley Kopores, Salma Dossani, Sumesh Thomas

Canadian Neurological Sciences Federation 2018:

1. Abstract title: Introduction of Continuous Video EEG Monitoring into 2 Different NICU Models by Training Neonatal Nurses. Authors: Ipsita Goswami, Luis Bello-Espinosa, Jeffery Buchhalter, Harish Amin, Alexandra Howlett, Michael Esser, Sumesh Thomas, Cathy Metcalfe, Jan Lind, Norma Oliver, Silvia Kozlik, **Khorshid Mohammad**. Poster presentation
2. Abstract title: Neonatal Neuro-Critical Care (NNCC) program associated with improved short-term outcomes in neonates significant Hypoxic Ischemic Encephalopathy (HIE). Authors: Smita Roychoudhury, Michael Esser, Jeffery Buchhalter, Luis Bello-Espinosa, Hussein Zein, Alexandra Howlett, Sumesh Thomas, Prashanth Murthy, Juan Pablo Appendino, Cathy Metcalfe, Jan Lind, Norma Oliver, Silvia Kozlik, **Khorshid Mohammad**. Oral presentation
3. Abstract title: Utility analysis of continuous video EEG (cvEEG) monitoring during the treatment of hypoxic ischemic encephalopathy (HIE) in the NICU. Authors: Marvin Braun, Luis Bello-Espinosa, JP Appendino, Jeffrey Buchhalter, **Khorshid Mohammad**, Michael Esser. Poster presentation

Neonatal-Neuro-Critical Care and Anti-Seizure Medication Use Project:

1. Neonatal neuro-critical care and anti-seizure medication use project:
 - a. Bashir R, Espinoza L, Vayalthrikkovil S, Irvine L, Buchhalter J, Bello-Espinosa L, **Mohammad K**, Implementation of a Neonatal Neuro-Critical Care program (N-NCC (Neonatal Neuro Critical Care) (Neonatal Neuro Critical Care)): Improved Seizure Detection and Management in Neonates with Hypoxic Ischemic Encephalopathy (HIE), 45th national meeting of child neurology society [Poster presentation #206]
 - b. R Bashir, L Espinoza, S Vayalthrikkovil, J Buchhalter, L Bello-Espinosa, **K Mohammad**, The impact of Continuous video Electro-encephalopathy (cEEG) introduction on the use of anti-epileptic drugs (AEDs) in neonates with hypoxic ischemic encephalopathy (HIE), 2016 CNPRM meeting. [Poster presentation #W26]

- c. Bashir R, Espinoza L, Vayaltrikkovil S, Irvine L, Buchhalter J, Bello-Espinosa L, **Mohammad K**: Implementation of a Neonatal Neuro-Critical Care program (NNCC): Improved Seizure Detection and Management in Neonates with Hypoxic Ischemic Encephalopathy (HIE), Clara Christie research day, May 2016 [oral presentation]
 - d. Bashir R, Espinoza L, Vayaltrikkovil S, Irvine L, Buchhalter J, Bello-Espinosa L, **Mohammad K**: Implementation of a Neonatal Neuro-Critical Care program (N-NCC): Improved Seizure Detection and Management in Neonates with Hypoxic Ischemic Encephalopathy (HIE), AAP district VIII annual conference 2016 [Oral presentation]
 - e. RA Bashir, L Espinoza, S Vayaltrikkovil, J Buchhalter, L Bello-Espinosa, **K Mohammad**, The impact of Continuous video Electro-encephalopathy (cEEG) introduction on the use of anti-epileptic drugs (AEDs) in neonates with hypoxic ischemic encephalopathy (HIE), [2016 CPS annual meeting](#) [Poster presentation]
2. Prevalence of extra cranial and intracranial hemorrhage in neonate with HIE project:
 - a. Vayaltrikkovil S, Bashir RA, Espinoza L, Irvine I, **Mohammad K**, Prevalence, and characteristics of Intracranial and Extracranial hemorrhages in neonates with hypoxic ischemic encephalopathy (HIE), [ACHRI \(Alberta Children s Hospital Research Institute\) symposium April 2016](#)[Poster presentation # 55]
 - b. S Vayaltrikkovil, RA Bashir, L Espinoza, L Irvine, **K Mohammad**, Prevalence, and characteristics of Intracranial and Extracranial hemorrhages in neonates with hypoxic ischemic encephalopathy (HIE), [2016 CPS annual meeting](#) [Poster presentation # 101]
 - c. Prevalence and characteristics of Intracranial and Extracranial hemorrhages in neonates with hypoxic ischemic encephalopathy (HIE), S Vayaltrikkovil, R Bashir, L Espinoza, L Irvine, K Mohammad, [2016 CNPRM meeting](#) [Poster presentation# T68]:
 3. Serum calcium and HIE project:
 - a. R Bashir, S Vayaltrikkovil, L Espinoza, **K Mohammad**, Serum Calcium Derangement in neonates with hypoxic ischemic encephalopathy (HIE) with and without Therapeutic Hypothermia, [2016 CPS annual meeting](#) [Poster presentation # 99]
 - b. Rani A Bashir, S Vayaltrikkovil, L Espinoza, L Irvine, **K Mohammad**, Serum Calcium Derangement in neonates with hypoxic ischemic encephalopathy (HIE) with and without Therapeutic Hypothermia, [2016 CNPRM meeting](#) [Poster presentation # W27]
 4. Neonatal Neuro-Critical care program development project:
 - a. I Goswami, J Buchhalter, L Bello-Espinosa, M Esser, and **K Mohammad**, Developing a consultation model of Neonatal Neurocritical: a 2 Year Experience. [Neonatal Brain Monitoring Conference, Ireland](#) October 2015, [Theme 1: poster presentation #13]
 - b. **K Mohammad**, I Goswami, J Buchhalter, L Bello-Espinosa, Developing a consultation model of Neonatal Neurocritical: a 2 Year Experience, , [2016 CPS annual meeting](#)[Poster presentation]
 - c. Developing a consultation model of Neonatal Neurocritical: a 2 Year Experience, I Goswami, **K Mohammad**, [2016 CNPRM meeting](#) [Poster presentation # W68]
 - d. I Goswami, J Buchhalter, L Bello-Espinosa, M Esser, and **K Mohammad**, Developing a Consultation Model of Neonatal Neurocritical Care program, [ACHRI symposium April 2016](#) [Poster presentation #28]
 5. Neonatal head ultrasound simulation project:
 - a. A Babu Thirunavukkarasu, M Abousaleh, S Thomas, M Kamaluddeen, P Murthy, **K Mohammad**, Poster presentation: A novel neonatal head ultrasound simulator, Residency Simulation Education & Research Symposium, University of Calgary, Calgary, October 2015 [poster presentation]
 - b. A Babu Thirunavukkarasu, M Abousaleh, S Thomas, M Kamaluddeen, P Murthy, **K Mohammad**, A novel neonatal head ultrasound simulator, [2016 CPS annual meeting](#) [poster presentation]
 - c. A Babu Thirunavukkarasu, M Abousaleh, S Thomas, M Kamaluddeen, P Murthy, **K Mohammad**, A novel neonatal head ultrasound simulator model, [2016 CNPRM meeting](#) [Poster presentation #T64]
 6. Umbilical cord VEGF and EPCs and shorter outcome in preterm infants' project:
 - a. K Yusuf, **K Mohammad**, I Khan, N Berka, H Liacini, Umbilical Cord Blood Levels of Endothelial Progenitor Cells and Vascular Endothelial Growth Factor and Risk of Bronchopulmonary Dysplasia, [Paediatr Child Health. 2015 Jun-Jul; 20\(5\): e30.](#) [Oral presentation]
 - b. **K Mohammad**, I Khan, N Berka, H Liacini, K Yusuf, Umbilical Cord Blood Levels of Endothelial Progenitor Cells and Vascular Endothelial Growth Factor and Risk of Intra-Ventricular Hemorrhage (IVH) in preterm infants,[2016 CNPRM meeting](#) [Poster presentation #T25]
 7. Hypotension and White Matter Injury in preterm infants' project:
 - a. Hypotension and White Matter Injury (WMI) in Preterm Neonates, **K Mohammad**, **K Poskitt**, **V Chau**, **A Synnes**, **R Grunau**, **J Rigney**, **S Miller**, 2014 CPS annual meeting https://doi.org/10.1093/pch/17.suppl_A.8A [Oral presentation]

- b. **Mohammad K**, Poskitt K, Chau V, Synnes A, Grunau R, Rigney J, Miller S, Hypotension, and white matter injury (WMI) in preterm neonates, [Pediatric research day](#), University of British Columbia, March 2012 [Oral presentation]
 - c. **Mohammad K**, Poskitt K, Chau V, Synnes A, Grunau RE, Brown-Lum M, Rigney J, Miller S. Hypotension, and white matter injury (WMI) in preterm neonates. Pediatric Academic Societies' (PAS) Annual Meeting 2012, April 28th - May 1st, 2012, Boston, MA, USA. [Oral Presentation]
8. Methods of cooling on transportation project:
 - a. Zein H, Thomas S, Yusuf K, Vayaltrikovil S, Paul R, Dossani S, Kapores K, Pearson-Mitchel K, **Mohammad K**, Comparing three methods of therapeutic hypothermia on transportation: A single center Canadian experience. [3rd Edition of Transport of High Risk Infants](#) [Oral presentation #12]
 - b. Zein H, Thomas S, Yusuf K, Vayaltrikovil S, Paul R, Dossani S, Kapores K, Pearson-Mitchel K, **Mohammad K**, Platform presentation, Comparing three methods of therapeutic hypothermia on transportation: A single center Canadian experience, CNPRM 2018 [Oral presentation # 0143_0218_000249]
 9. Ipsita Goswami, A Lodha, S Dalgleish, **K Mohammad**: Early onset neonatal Escherichia coli sepsis possibly associated with severe intra-ventricular hemorrhage, [2016 CNPRM meeting](#) [Poster presentation # W69]
 10. A Abdul Aziz, S Thomas, P Murthy, A Patel, J Scott, J Rabi, A Howlett, A Soraisham, A Stritzke, M Kamaluddeen, E Al Awad, K Mohammad, Early use of inotropes is associated with higher risk of death or severe brain injury in extreme premature infants. CNPRM 2018 [Poster presentation #0143_0218_000322]
 11. S Roychoudhury, M Esser, J Buchhalter, L Bello-Espinosa, H Zein, A Howlett, S Thomas, P Murthy, J P Appendino, C Metcalfe, J Lind, N Oliver, S Kozlik, **K Mohammad**, Implementation of Neonatal Neuro-Critical Care (NNCC) program associated with improved short-term outcomes in neonates with moderate to severe Hypoxic Ischemic Encephalopathy(HIE). CNPRM 2018, [Poster presentation # 0143_0218_000259]
 12. P Murthy, H Zein, A Patel, S Thomas, J Scott, J Noort, C Metcalfe, **K Mohammad**, Neuroprotection care bundle is associated with significant reduction in mortality and severe brain injury in extremely premature infants. CNPRM 2018 [Poster presentation # 0143_0218_000277]
 13. **K Mohammad**, H Zein, P Murthy, R Paul, D Kowal, K Kopores, S Dossani, S Thomas, Perinatal Outreach Education Improved the Care of Infants with Hypoxic Ischemic Encephalopathy (HIE). CNPRM 2018 [Poster presentation # 0143_0218_000245]
 14. I Khanafer, A Soraisham, A Stritzke, E Al Awad, S Thomas, P Murthy, M Kamaluddeen, **K Mohammad**, Association between intraventricular hemorrhage (IVH) and the treatment of patent ductus arteriosus (PDA) in extreme preterm infants. CNPRM 2018 [Poster presentation # 0143_0218_000359]
 15. Chakkarapani E, **Mohammad K**, Wong D, Poskitt K, Miller S, Belanger S, Chau V. Systemic hypothermia alters MRI brain imaging features in term hypoxic ischemic encephalopathic infants. Pediatric Academic Societies' (PAS) Annual Meeting 2013, May 4th - 7th, 2013, Washington, DC, USA. [Oral Presentation]

VOLUNTEER WORK

During my fellowship at the University of British Columbia in 2011-2012 I participated in collecting, sorting, and shipping 2 medical supply containers to field hospitals in Syria. I continued this work in Calgary 2013-2017 and we shipped two more containers of medical supplies. I participated in tele-ICU initiatives where I was helping physicians in field hospitals managing sick newborns. I was awarded a recognition award by the Canadian Syrian Association for my exceptional dedication and lasting contribution to the Syrian Medical Relief Initiative. Recently I have been involved in virtual education for pediatricians inside Syria through didactic lectures and mentoring. I am mentoring four pediatricians inside Syria who wants to pursue neonatology training. I helped develop the OSCE examination for them and was one of the examiners