



ANNUAL REPORT 2021-2022

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MESSAGE FROM THE DIRECTOR



WELCOME TO OUR 2021/22 ANNUAL REPORT

Thanks for reading (at least this far...)

We have continued to work mostly remotely during the pandemic. It's amazing to see how well our team works under these circumstances. In April, 2022, we started coming into the office on Tuesdays and that seems to work well.

Some numerical highlights of this year:

- Over 25 years of service to researchers
- 550 investigators served
- 2/3 of grants submitted were successful
- 962 cumulative projects

Enough with the numbers, we are all about people, and I'd like to highlight a few things:

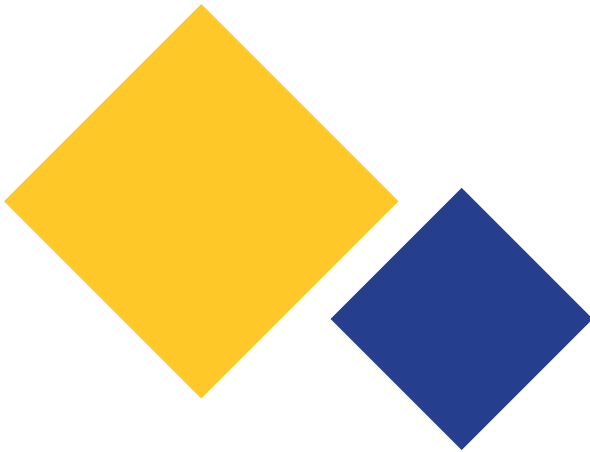
- We continue to focus on trainees' success in research. We feel that this is an important investment in our future (see pages 14-18).
- Welcome to our new postdoctoral fellow, Dr. Stephanie Gysel (see page 28). Steph is running our newest signature project, LiveRx, which boldly aims to eradicate hepatitis C in Alberta through a unique pharmacy-based test and treat protocol (see page 8).

- Our relationship with the Alberta SPOR Support Unit (Ab-SPORU) has changed. We are now a service partner (see page 5), still providing methodology, data management, and biostatistical support to Alberta investigators
- Ugh! I can't function. Glennora Dowding, the only assistant I have ever had, has retired after 25 years with me and EPICORE Centre. Expect more typos and missed meetings from me... seriously, all the best, Glen, you've earned it.
- Congratulations to Bo Pan on your wedding (page 26)! Although you can't see it in the photo, it was FREEZING that day for their outdoor wedding (welcome to Edmonton...). Bo is also working on getting his driver's license – which should be easier than getting an MSc...
- We welcome Ben Vandermeer (page 25). Ben is an accomplished biostatistician, with over 20 years of experience. He's also very skilled in teaching biostatistical principles, and we plan on capitalizing on that.
- Also, we welcome Ariel Qin (see page 24), who is an informatics analyst, and is also completing his MSc in computer science.
- Congrats also to Dr. Yazid Al Hamarneh, who was appointed as an Assistant Professor in the Department of Pharmacology. He'll be starting a new course in Clinical Pharmacology in January, 2023. Students beware, hahaha!

We are so excited about our new projects and how we can transform the research landscape by providing our expertise to all who want it.

Stay safe, everyone!

Dr. Ross Tsuyuki
Professor and Chair, Department of Pharmacology
Professor of Medicine (Cardiology) and Director, EPICORE
Centre
Faculty of Medicine and Dentistry
University of Alberta



WHO WE ARE

Open access: A unique aspect of EPICORE Centre is that we are an open group – we make our skills and services available to all, rather than the traditional academic approach of only serving ourselves.

EPICORE Centre is an operating unit within the Departments of Medicine and Pharmacology, Faculty of Medicine and Dentistry at the University of Alberta.

EPICORE CENTRE SUPPORTS THE MISSION OF THE DEPARTMENT OF PHARMACOLOGY AND THE DEPARTMENT OF MEDICINE THROUGH:

- Conducting innovative research that makes a difference in health and health care
- Furthering excellence through high quality service to other health researchers
- Educating and training of the next generation of health researchers through graduate student programs, postdoctoral fellowship training and courses
- Partnering with like-minded individuals and organizations

FACULTY OF MEDICINE AND DENTISTRY MISSION:

Our medical school develops diverse, competent and compassionate physician leaders to serve the health needs of Alberta, northern communities and Canada through adaptive innovation and social accountability.

EPICORE MISSION:

To serve the Faculty and our community by generating new knowledge in the areas of health and health care through the design, execution and analysis of clinical trials, health outcomes research and epidemiologic studies

WHAT WE DO

Our Goal is to support clinical and health services research by providing high quality research services to investigators. EPICORE Centre is involved in the full range of activities necessary for the conduct of health research, including protocol/ research design consultations, assistance with grant preparation, case report form design, database creation, study management, implementation, site coordination (for multicentre trials), data management, biostatistical consultation and analyses.



LONG TRACK RECORD

Celebrating over 25 years of exemplary service



HIGH QUALITY SERVICE

Design/methods, data management and biostatistics



SATISFIED INVESTIGATORS

550 satisfied investigators



HIGHLY SUCCESSFUL

High success rate (67%) in helping researchers obtain grants



OUTREACH

962 projects from a variety of health disciplines supported and implemented



BUILDING CAPACITY

Starting residents, graduate students, trainees and early career researchers on the right foot and facilitating research conduct

**ALBERTA STRATEGY
FOR PATIENT ORIENTED
RESEARCH SUPPORT FOR
PEOPLE AND PATIENT-
ORIENTED RESEARCH AND
TRIALS UNIT (AbSPORU)**

AbSPORU

As of April 2021, Alberta SPOR SUPPORT Unit (AbSPORU) moved into phase 2.

EPICORE Centre's role has changed in phase 2 as it became a service partner that provides specific services on behalf of AbSPORU.

Those services include; design/methods, data management and biostatistics (see figure below for more details).

Also in phase 2, our own Dr. Yazid Al Hamarneh became the Scientific Officer of the unit.

01 DESIGN/METHODS SERVICES:

1. Research question refinement
2. Project design
3. Methods consultation
4. Grant review and assistance

02 DATA MANAGEMENT

1. Development of case report forms (data collection sheets)
2. Database development and maintenance
3. Randomization
4. Quality Assurance

03 BIOSTATISTICS

1. Development of analytical plans
2. Sample size calculation
3. Statistical analysis
4. Clinical event adjudication

AbSPORU
Alberta SPOR SUPPORT Unit

To find out more about the ABSPORU, please visit absporu.ca



Highlighted Projects

ERADICATING HEPATITIS C IN ALBERTA - TEST-AND-TREAT INTERVENTION (LIVER_x)

INVESTIGATORS:

Mark Swain, Ross Tsuyuki, Yazid N Al Hamarneh, Stephanie Gysel, Alexandra Kanters, and the LiveRx study team.



OVERVIEW:

Patients with chronic Hepatitis C (HCV) infection who belong to priority populations experience or perceive inequities in access to HCV testing and treatment across Alberta. Community-based pharmacists in Alberta are well positioned to provide priority populations with easily accessible and non-judgmental HCV care within their community.

Primary objective: To evaluate the effect of a community pharmacy-based case finding and intervention program on cure rates in patients living with HCV, assessed by a sustained virologic response 12-weeks after completion of HCV treatment.

Secondary objectives: To understand patient-reported quality of life and satisfaction with pharmacist-led HCV care; to assess patient treatment adherence, treatment type, required intervention complexity, component activation, and workflow integration; to evaluate SVR by geographic regions within Alberta.

Design: Multi-centre, mixed-methods, before-after hybrid implementation study

Setting: Up to 100 rural and urban community pharmacies across Alberta

Population: Adults belonging to priority populations (including

those experiencing homelessness or unstable housing, and/or who inject drugs, and/or who have interacted with the Corrections system, and/or who identify as Indigenous, and/or who are residents of rural Alberta) who are HCV positive, non-cirrhotic, and are naive to HCV treatment.

Intervention: HCV testing will include point-of-care and dried blood spot modalities to diagnose chronic HCV infection and to screen for Hepatitis B and HIV infection. Community pharmacists will conduct an assessment of the patient, and if HCV treatment is warranted will prescribe HCV treatment, and will order any needed laboratory evaluations. Community pharmacies will work collaboratively with community based organizations (CBOs) to ensure patients are provided with wrap-around care to improve rates of HCV cure.

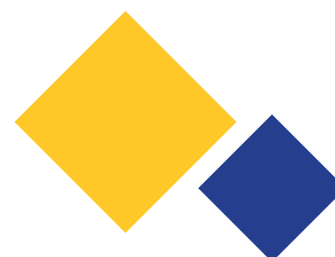
Hypothesis: Through the collaboration of community pharmacies and CBOs, the LiveRx study will demonstrate that Pharmacists are well positioned to provide curative HCV treatment to priority populations within Alberta.

Current status: The study began in June 2022 and is currently recruiting pharmacies, CBOs, and patients across the province.

IN THE WORDS OF THE INVESTIGATOR

“From the beginning, EPICORE centre has been an invaluable partner on this project; they developed and maintain the touchscreen-based data collection algorithm for our study, maintain our project website and database, and supervise multiple trainees funded through the project. EPICORE’s expertise, insight, efficiency, and professionalism have been such a pleasure to work with, and we’re grateful for their collaboration in this work.”

- Dr. Mark Swain and Alexandra Kanters



HEALTHY FOOD PRESCRIPTION INCENTIVE PROGRAM FOR ADULTS WITH TYPE 2 DIABETES WHO ARE EXPERIENCING FOOD INSECURITY (HEALTHY FOODRx)



INVESTIGATORS:

Dana Lee Olstad, Reed Beall, Eldon Spackman, David JT Campbell, Lorraine L Lipscombe, Sharlette Dunn, Kieran JD Steer, Saania Tariq

CO-INVESTIGATORS:

Kienan Williams, Richard Oster, Sara Scott, Gabrielle L Zimmermann, Kerry A McBrien, Catherine B Chan, Sheila Tyminski, Seth Berkowitz, Alun L Edwards, Terry Saunders-Smith, Naomi Popeski, Laura White, Tyler Williamson, Mary L'Abbé, Kim D Raine, Sara Nejatnamini, Aruba Naser, Carlota Basualdo-Hammond, Colleen Norris, Petra O'Connell, Judy Seidel, Richard Lewanczuk, Jason Cabaj

OVERVIEW:

Introduction: The high cost of many healthy foods poses a challenge to maintaining optimal blood glucose levels for adults with type 2 diabetes who are experiencing food insecurity, leading to diabetes complications and excess acute care usage and costs. Healthy food prescription programs may reduce food insecurity and support patients to improve their diet quality, prevent diabetes complications and avoid acute care use.

Objective: We are examining the reach, effectiveness, adoption, implementation, and maintenance (RE-AIM) of a healthy food prescription incentive program for 600 adults experiencing food insecurity and persistent hyperglycemia.

Design: A randomized controlled trial will investigate program effectiveness via impact on hemoglobin A1C (primary outcome), food insecurity, diet quality and other clinical and patient-reported outcomes. A modelling study will estimate longer-term program effectiveness in reducing diabetes-related complications, resource use and costs. An implementation study will examine all RE-AIM domains to understand determinants of effective implementation and reasons behind program successes and failures.

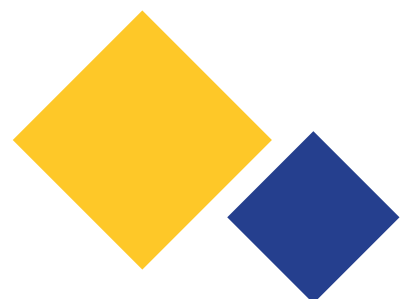
Intervention: Participants will be randomized to a healthy food prescription incentive or a healthy food prescription comparison group. Both groups will receive a healthy food prescription. The incentive group will additionally receive a weekly incentive (\$10.50/household member) to purchase healthy foods in supermarkets for 12 months.

Conclusion: We will generate comprehensive, in-depth and robust data pertaining to the short- and longer-term impacts of the program on health-related outcomes, resource use and costs, while also providing valuable implementation data to support translation of research findings into practice and policy.

IN THE WORDS OF THE INVESTIGATOR

"This project is our first collaboration with the amazing EPICORE centre team. Our project has many moving parts and Lily has worked tirelessly with us through many changes to keep our trial running efficiently. Her knowledge and subject matter expertise is unsurpassed, and we appreciate her responsiveness and insights. Yazid has also been so supportive of our research and has connected us with many helpful resources that have significantly advanced our research."

- Sharlette Dunn



AN ASSESSMENT OF THE MINIMAL CLINICALLY IMPORTANT DIFFERENCE FOR THE PAIN DISABILITY QUALITY-OF-LIFE QUESTIONNAIRE-SPINE

INVESTIGATORS:

Alycia Amatto, Ashley Smith, Bo Pan, Yazid Al Hamarneh, Taylor Burnham, Robert Burnham

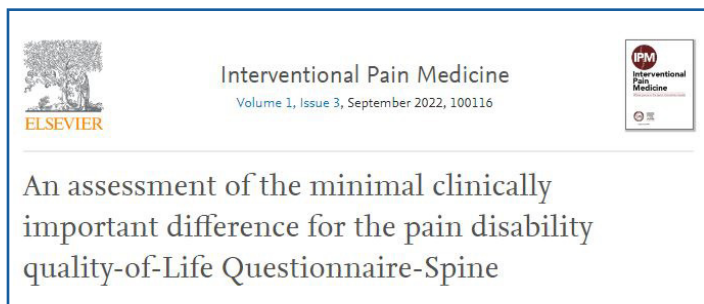
OVERVIEW:

Objective: The Pain Disability Quality-Of-Life Questionnaire-Spine (PDQQ-S) is a validated six question patient reported outcome measure designed for usage in minimally invasive spine intervention.

The purpose of this study was to determine the Minimal Clinically Important Difference (MCID) for the PDQQ-S.

Design: Retrospective single arm cohort study involving 411 patients who had undergone lumbar facet and/or sacroiliac joint RFN and had completed pre-and 3-month post RFN PDQQ-S.

Methods: The MCID using both distribution and anchor-based ("Rebook RFN"; "Analgesic Requirements") methods were



calculated.

Results: The distribution-based approach (using standard error of measurement) estimated the MCID to be -17.3 [PDQQ-S baseline mean (SD): 46.9 (7.9)]. This is supported by the anchor based approach, which calculated the MCID to be: -21.5 for rebook RFN; -11.3, -17.2 and -30.5 for mildly, moderately and dramatically decreased NSAID use respectively; and -11.7, -16.9 and -31.7 for mildly, moderately and dramatically decreased opioid use respectively. A moderate reduction in medication use was deemed to be clinically relevant.

Conclusion: The MCID value for the PDQQ-S is a score reduction of 17.

IN THE WORDS OF THE INVESTIGATOR

"As a specialist physician working in the community, my physiotherapy colleague, a medical resident I was supervising, and I were grateful for the research expertise provided through the EPICORE Centre. We had previously developed a Patient Reported Outcome Measure (PROM) designed to efficiently assess changes in pain, disability, and quality-of-life of patients undergoing minimally invasive spine pain management interventions. We had tracked outcomes using this PROM on hundreds of patients and needed assistance exploring the psychometric properties of the questionnaire, particularly the minimal clinically important difference (MCID). Although my colleagues and I had previous clinical research experience, this was a new area for us. Dr. Al Hamarneh was most generous with his time and expertise, helping us with study design and putting us in contact with statistician, Bo Pan. Data were extracted from our Electronic Medical Record, analysed, and we had several productive virtual meetings that were informative and moved the project forward. In 2021, the project was presented as a poster at a national meeting, and as an invited platform presentation at an international meeting (it was awarded the "Best Basic Science Abstract Award"). A manuscript has been written and tentatively accepted for publication pending minor revisions."

- Dr. Robert Burnham



COVID
Projects

COVID-19: BRINGING THE 'INVISIBLE LAYER' OF PHARMACISTS PROFESSIONAL IDENTITY AND ROLES TO LIGHT (IGNITE)

INVESTIGATORS:

Yazid N Al Hamarneh, Kaitlyn E Watson, Terri Schindel, Ross T Tsuyuki

OVERVIEW:

Pharmacists are essential frontline heroes who have been fighting the COVID-19 pandemic since day one. They have continually stepped up and provided the highest quality of care to their patients during extremely challenging times.

The purpose of IGNITE is to explore the subjectivity of professional identity from the pharmacists' experiences and point of view and specifically how the COVID-19 pandemic has impacted it, as it is theorized that COVID-19 is the catalyst for sustainable pharmacy practice change due to its global reach and prolonged nature

This study has the potential to uncover the 'invisible layer' of change that has occurred in pharmacists' roles and identity due to the COVID-19 pandemic and confirm the theory that the roles professionals perform influence their professional identity. This work will help to understand the development (and sustainability) of professional identity in pharmacists. We hope this will lead to new methods of practice change management to improve patient care by pharmacists. To our knowledge this is the first study to explore the impact of the COVID-19 pandemic on the evolution of pharmacists' professional roles and identity. It will be the first to identify the conceptualizations of professional roles which are espoused by practitioners during the pandemic and how they compare with the literature.

COVID-19: Bringing the 'Invisible Layer' of Pharmacists Professional Identity and Roles to Light (IGNITE)



Canadian Foundation
for Pharmacy

CELEBRATING **75** YEARS

This study aims to evaluate the impact of the COVID-19 pandemic on pharmacists' professional roles and identity and answer the following research questions, "How do pharmacists describe their professional roles and identity pre-COVID-19?"

How has the COVID-19 pandemic influenced pharmacists' roles and their professional identity (what they do and what it means to them)?

Which aspects of pharmacists' roles and professional identity changes, if any, they project to be sustained post-COVID-19

Innovative methods will be used to evaluate pharmacists' professional roles and identity as the traditional methods have yielded the same results over time. Such method will combine photo-elicitation, photo-voice, with open-ended questions about their demographics, their professional roles and identity, and if there has been any impact from the COVID-19 pandemic on their professional identity in a qualitative interview.

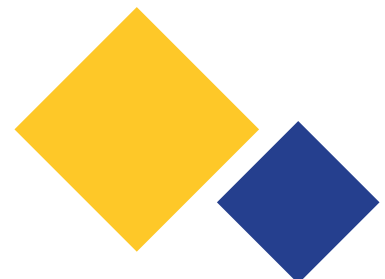
Frontline community pharmacists who are providing direct patient care in Alberta will be eligible to take part.

Individual pharmacists will be invited to participate. Those who are interested will be contacted to arrange for a virtual interview. All interested pharmacists will be asked to prepare 3-5 photos that represent what they currently do as a pharmacist and what these roles mean to them before the interview

IN THE WORDS OF THE INVESTIGATOR

"The EPICORE centre led the study in designing the study, obtaining the grant, conducting the interviews and doing the analysis"

- Dr. Yazid Al Hamarneh



IMPACT OF COVID-19 ON FRONTLINE PHARMACISTS' ROLES AND SERVICES AROUND THE WORLD: THE INSPIRE WORLDWIDE SURVEY

INVESTIGATORS:

Dillon H Lee, Kaitlyn E Watson, Mohammad B Nusair, Yazid N Al Hamarneh

OVERVIEW:

The INSPIRE World Wide Survey, aim to evaluate the impact of COVID-19 on frontline pharmacists' roles and services around the world.

This was done by using a cross-sectional online survey with pharmacists who provided direct patient care during the pandemic. Pharmacists were recruited through social media with assistance from national and international pharmacy organizations. The survey was divided into three sections 1) demographics, 2) pharmacists' roles and services during the pandemic 3) practice challenges. The data were analyzed using SPSS 28, and descriptive statistics were used to report frequencies and percentages.

A total of 505 pharmacists practicing in 25 countries provided consent to participate. The most common role that pharmacists undertook was responding to drug information

requests (90%), followed by allaying patients' fears and anxieties about COVID-19 (82.6%), then addressing misinformation about COVID-19 treatments and vaccinations (80.4%), and educating the public on strategies to reduce COVID-19 transmission (e.g., handwashing) (80.2%). Despite the demands of the pandemic, pharmacists continued to provide



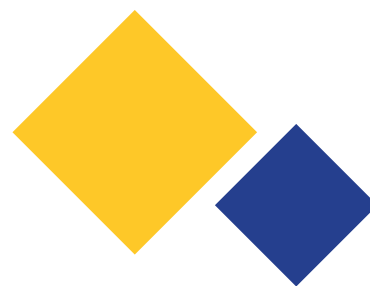
clinical services regularly. Managing and/or monitoring patients' chronic diseases was the most frequently provided service (72.6%), followed by treating ambulatory conditions (65.4%), then renewing/extending prescriptions (58%) and prescribing emergency supply refills (52.7%). Interestingly, almost half of the participants reported administering COVID-19 vaccines (45.6%). Pharmacists reported being involved in pandemic management through consultations, policy development and participating in taskforces. The most common challenge that pharmacists encountered was increased stress level (84.7%), followed by medication shortages (73.8%), general supply shortages (71.8%), inadequate staffing (69.2%), and concern for the safety of self and others (66.8%).

Despite the uncertainty, the massive pressure, and the constant need to adapt, pharmacists around the world continued to put the patient first, providing them with highest quality services and making sure that all their needs are met. Pharmacists are definitely the unsung heroes of pandemic and their actions should cement their place as an essential health service.

IN THE WORDS OF THE INVESTIGATOR

"It is always a pleasure to work with the EPICORE team, they always deliver the highest quality service with extreme professionalism, without them we would've not been able to collect and analyze the data."

- Dr. Yazid Al Hamarneh





Trainee Projects

NEUROLOGIC COMPLICATIONS IN HHT WITH PULMONARY ARTERIOVENOUS MALFORMATIONS: DATABASE STUDY

INVESTIGATORS:

Chester Lau, Joel Agarwal, Ben Vandermeer, W. Ted Allison, Thomas Jeerakathil, Dilini Vethanayagam,

OVERVIEW:

Hereditary Hemorrhagic Telangiectasia (HHT) is an autosomal dominant genetic disorder affecting vascular maturation, with prevalence of 1 in 3800 in Alberta. The Edmonton HHT Center (www.hhtedmonton.ca) based at the University of Alberta was created in 2003 to service Western Canada, with formal accreditation by the International HHT Foundation in 2006. Pulmonary arteriovenous malformations (PAVMs) affect 35-40% of individuals with HHT and can lead to recurrent embolic neurologic complications, including stroke and transient ischemic attack (TIA), and the development of brain abscess due to intrapulmonary right-to-left shunt (RLS). We conducted a retrospective review of the Edmonton HHT Registry where participants with possible or definite HHT were evaluated for PAVM-related neurologic sequelae.

Of the total 218 study subjects included in analysis, 80 had PAVMs while 138 did not. There were 10 (12.5%) stroke cases involving subjects with PAVM; however, there was no significant association between PAVM and strokes noted. TIA was twice as

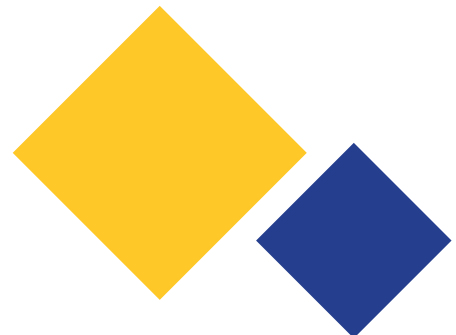
common in HHT subjects with PAVM (9/80, 11.3%) compared to those without PAVM (7/138, 5.1%). Twenty-one PAVM/HHT subjects had migraines, 5 had seizures, and 3 had brain abscess; these associations were not statistically significant ($p > 0.05$). After controlling for age and sex, HHT-PAVM subjects had 2.37 times the odds of associated TIA, compared to those who did not have PAVM (OR=2.37, 0.85-6.64, $p = 0.10$). Logistic regression analysis revealed no significant relationship between PAVMs and serious neurologic fields ($p = 0.28$).

Although our study did not show statistically significant results and was therefore inconclusive, the trend noted suggests a larger database may provide more definitive evidence. PAVMs may give rise to embolic complications. Reducing the risk of developing life-threatening complications with PAVM screening is the recommended standard of care. Future work should evaluate the effect of PAVM feeding artery size and shunt grade on neurologic complications.

IN THE WORDS OF THE INVESTIGATOR

“We are grateful for the support received from the EPICORE team, especially to Ben, who conducted the statistical analysis of the data collected by the Edmonton HHT Centre. Everyone from EPICORE was friendly, professional, easy to work with, and supportive of student-led research. EPICORE’s collaboration has greatly contributed to my plan to pursue a career in medicine. Our findings have since been submitted for publication. Thank you, Ben, Bo, and Yazid for your assistance! We look forward to working with the EPICORE team in the future.”

- Chester Lau



THE IMPACT OF AN AUD IN CIRRHOSIS EDUCATIONAL INTERVENTION ON KNOWLEDGE, ATTITUDES, AND PRACTICE HABITS OF CLINICIANS

INVESTIGATORS:

Emily C Johnson, Sumantra M Ghosh, Vijay John Daniels, T Cameron Wild, Denise Campbell-Scherer, Jessica Mellinger, Gerald S Winder, Anne Fernandez, Jessica Kirkwood, Puneeta Tandon

OVERVIEW:

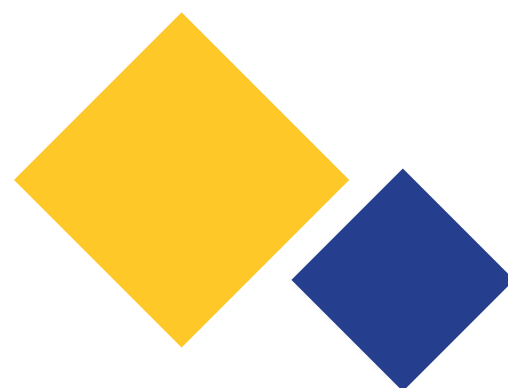
Alcohol use disorder (AUD) is a prevalent concern in cirrhosis. Insufficient clinician knowledge and comfort managing AUD impacts access to treatment. We aimed to (i) develop and evaluate the effect of an “AUD in cirrhosis” educational intervention on clinicians’ knowledge, attitudes, and comfort, preparedness, and intention (practice habits) to integrate AUD management into their practice. Pilot session feedback informed a 3-part flipped-classroom series conducted by interdisciplinary clinicians in hepatology, psychiatry, family medicine, and addiction medicine. Participants were provided with a link to a recorded video, followed by live sessions

focused on (a) withdrawal, (b) screening and brief intervention, and (c) pharmacotherapy. Questionnaires were adapted from the literature. Attitudes were evaluated using the validated Short Alcohol and Alcohol Problems Perception Questionnaire (SAAPPQ). Paired sample t-tests on pre-post questionnaires (n = 229 clinicians; 95 completed questionnaires) revealed significant improvements in preparedness and comfort in screening, providing a brief intervention, prescribing pharmacotherapy, and SAAPPQ domains. Effect size analysis showed medium to large effect across the majority of topic areas.

IN THE WORDS OF THE INVESTIGATOR

“We had a great experience working with Ben, Yazid, and Bo from the EPICORE team. Their knowledge, timeliness, and willingness to teach about statistical concepts was invaluable! We look forward to continuing our work with Ben and the EPICORE team.”

- Emily Johnson



A RANDOMIZED CONTROL TRIAL EVALUATING THE IMPACT OF A WEB-BASED MIND-BODY WELLNESS INTERVENTION FOR PATIENTS WITH PRIMARY BILIARY CHOLANGITIS

INVESTIGATORS:

Makayla Watt, Chikku Sadasivan, Ashley Hyde, Gail M. Wright, Shauna Vander Well, Emily Johnson, John C. Spence, Andrew Mason, Hin Hin Ko, Edward Tam, Puneeta Tandon

OVERVIEW:

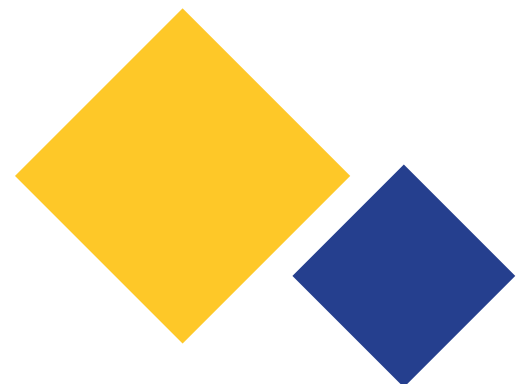
This was a sequential mixed-methods randomized control trial (RCT) that aimed to evaluate the efficacy of a 12-week online mind-body intervention in individuals with primary biliary cholangitis (PBC). The primary outcome was changes in the Hospital Anxiety and Depression Scale (HADS). Secondary outcomes evaluated fatigue, perceived stress, resilience, and health related quality of life. ANCOVA was used to determine

between group differences. A qualitative descriptive approach with semi-structured interviews was used to evaluate study experiences. Eighty-seven participants were randomized to the control (n=44) and intervention (n=43) groups. Results suggested that the intervention improved measures of mental wellness and quality of life. High satisfaction and adherence rates were observed.

IN THE WORDS OF THE INVESTIGATOR

“The EPICORE team was wonderful to work with! Their knowledge, support, and enthusiasm helped drive the success of this project. We look forward to future collaborations with the EPICORE team.”

- Makayla Watt



IMPACT OF A FARMERS' MARKET HEALTHY FOOD SUBSIDY ON THE DIET QUALITY OF LOW-INCOME ADULTS IN BRITISH COLUMBIA, CANADA: A RANDOMIZED CONTROLLED TRIAL

INVESTIGATORS:

Michelle L. Aktary, Sharlette Dunn, Tolulope Sajobi, Heather O'Hara, Peter Leblanc, Gavin R. McCormack, Stephanie Caron-Roy, Kylie Ball, Yun Yun Lee, Sara Nejatnamini, Raylene A. Reimer, Leia M. Minaker, Kim D. Raine, Jenny Godley, Bo Pan, Shauna Downs, Candace I. J. Nykiforuk, Dana Lee Olstad

OVERVIEW:

Low-income populations have lower diet quality than their higher income counterparts. In Canada, the British Columbia Farmers' Market Nutrition Coupon Program (FMNCP) provides coupons to low-income adults to purchase healthy foods from farmers' markets.

Objective: To examine the impact of the FMNCP on the diet quality of low-income adults via a randomized controlled trial.

Design: Low-income adults (≥ 18 years) were randomized to a FMNCP intervention (n=143) or a no-intervention control group (n=142). The FMNCP group received 16 coupon sheets valued at \$21/sheet over 10–15 weeks to purchase fruits, vegetables, dairy, meat, poultry, fish, eggs, nuts, and cut herbs from

farmers' markets. Diet quality was calculated using the Healthy Eating Index-2015 (HEI-2015). Linear mixed-effect regression assessed differences in HEI-2015 total scores between the FMNCP and control groups at post-intervention and 16 weeks post-intervention.

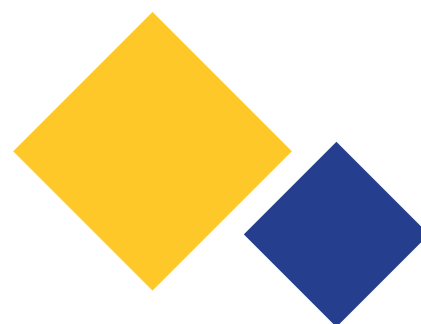
Results: There were no significant differences in HEI-2015 total scores between the FMNCP and control groups at post-intervention (-0.07; 95% CI -4.07, 3.93) or 16 weeks post-intervention (1.22; 95% CI -3.00, 5.44).

Conclusion: The FMNCP did not significantly improve diet quality among low-income adults, suggesting that the subsidy duration and/or amount may be insufficient to yield meaningful improvements.

IN THE WORDS OF THE INVESTIGATOR

"It was a great experience working with the EPICORE team! Yazid, Bo, and Ben supported us through every step of our complex analysis and provided helpful feedback to enhance our understanding of the analysis and interpretation of the results. Bo conducted the analysis and, therefore, the majority of our communications were with him. He responded to emails promptly and was professional, thorough, kind and, all around, great to work with. We are very grateful for the support provided by the EPICORE team and look forward to working with them on future projects!"

- Michelle Aktary





Meet the Team

DR. ROSS TSUYUKI

POSITIONS:

- Director, EPICORE Centre
- Professor and Chair, Department of Pharmacology, Faculty of Medicine and Dentistry
- Professor of Medicine (Cardiology), Faculty of Medicine and Dentistry, University of Alberta
- Editor-in-Chief, Canadian Pharmacists Journal
- President, Hypertension Canada

HOMETOWN: Coquitlam, BC

BACKGROUND:

- BSc(Pharm), University of British Columbia
- Residency, St. Paul's Hospital/University of British Columbia
- PharmD, State University of New York at Buffalo
- Fellowship, Division of Cardiology, McMaster University (Supervisor, Dr. S. Yusuf)
- MSc (Health Research Methods), McMaster University

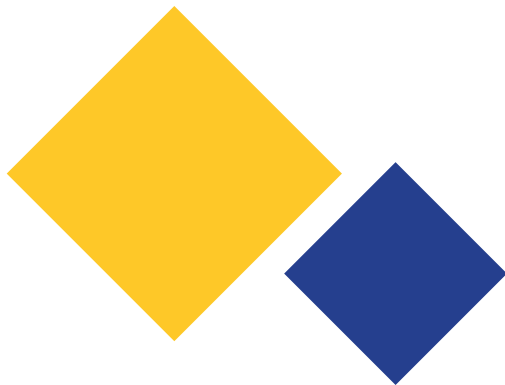


SKILLS/EXPERTISE:

- Health research methods
- Communicator
- Collaborator
- Clinical skills in heart failure care (Heart Function Clinic x 20 years)
- Clinician (Heart Function Clinic, Mazankowski Alberta Heart Institute for 25 years)

WHAT I DO:

- Provide leadership to the Department of Pharmacology
- Health services research, including pharmacy practice research (focus on evidence generation to advance patient care)
- Provision of support to researchers through EPICORE Centre
- Training the next generation of health researchers



HENRY LEE

POSITIONS:

- Associate Director, Administration, EPICORE Centre

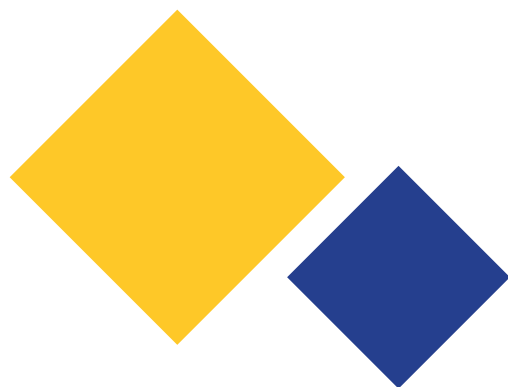
HOMETOWN: Edmonton, AB

BACKGROUND:

- Bachelor of Commerce, University of Alberta
- Chartered Professional Accountant (CPA), Chartered Accountant (CA), Certified Management Accountant (CMA)

SKILLS/EXPERTISE:

- Seasoned financial manager with Controllership experience
- Senior Management roles with public, private, and not-for-profit companies.
- Extensive background and knowledge with scientific research entities.



DR. YAZID N AL HAMARNEH

POSITIONS:

- Associate Director, Scientific, EPICORE Centre
- Scientific Officer of Alberta SPOR SUPPORT Unit

HOMETOWN: Madaba, Jordan

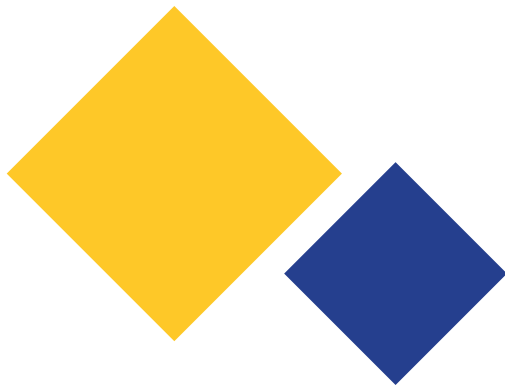
BACKGROUND:

- BSc in Pharmacy, the University of Jordan, 2005
- Professional Medical Representative at Merck Sharp and Dohme IA, 2005-2006
- PhD in Clinical Pharmacy and Pharmacy Practice, Queen's University Belfast, 2010
- Postdoctoral Fellowship in Medicine (Cardiology) from the University of Alberta, 2015



SKILLS/EXPERTISE:

- Research methodology and design (quantitative and basic qualitative)
- Grant writing and evaluation
- Basic statistics (analytical plan, sample size calculation and basic statistical analysis)
- Basic REDCap and FunctionPoint
- Conducting pharmacy practice research
- Cardiovascular risk calculation and identification and management of cardiovascular disease risk factors



LILY YUSHKO

POSITION:

- Team Lead, Clinical Research Informatics

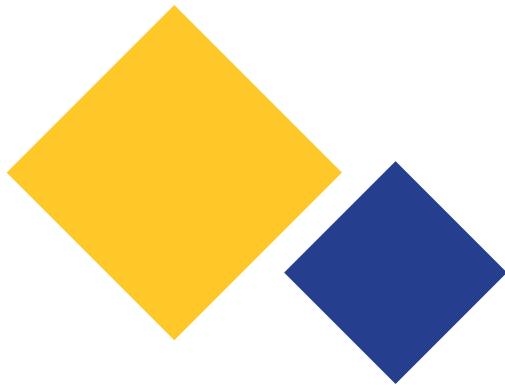
HOMETOWN: Kyiv, Ukraine

BACKGROUND:

- MEd, National Pedagogical University, Kyiv, Ukraine
- Computer Systems Technology, NAIT, Edmonton, AB

SKILLS/EXPERTISE:

- Expertise in Systems analysis and design
- Proficiency in all aspects of clinical and research databases development and support
- Fluent knowledge of cross platform data management and integration
- Years of experience in finding out exactly what needs to be done and doing it right



ARIAL XIAO QIN

POSITIONS:

- Clinical Research Informatics Analyst, EPICORE Centre

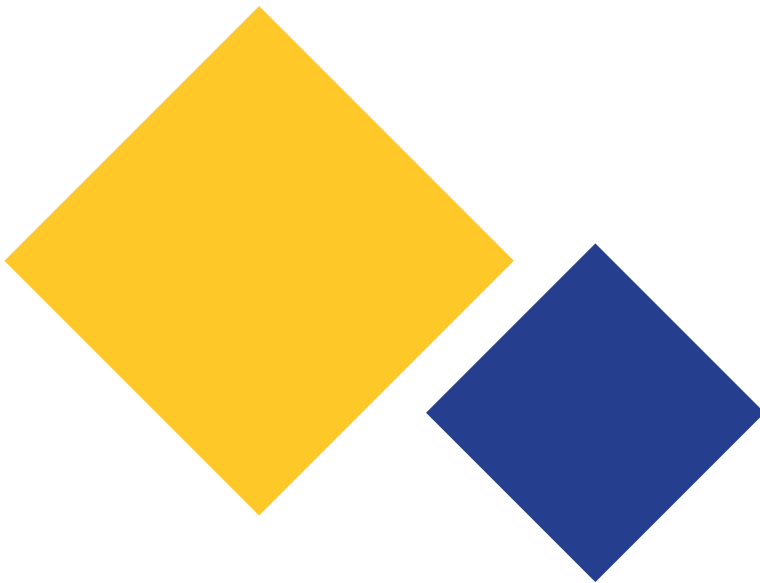
HOMETOWN: Jiangsu, China

BACKGROUND:

- Bachelor of Computer Engineering, Iowa State University, 2010 - 2014
- Master of Computer Science, University of Alberta, 2021 - 2022

SKILLS/EXPERTISE:

- Full Stack C# .NET Developer in design, analysis and implementation of web applications using Microsoft Technologies
- Skilled in database with SQL Server, Oracle SQL, PL/SQL
- Mobile App development with IOS & Android
- Skilled in Machine Learning, data analysis and visualization with Python



BEN VANDERMEER

POSITIONS:

- Senior Biostatistician, EPICORE centre
- Senior Biostatistician, Alberta Research Centre for Health Evidence (ARCHE)

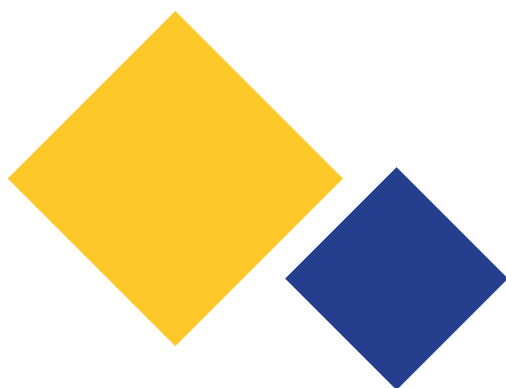
HOMETOWN: Edmonton, AB

BACKGROUND:

- Bachelor of Science (Statistics), University of Calgary
- Masters of Science (Double Major: Statistics and Pure Mathematics), University of Calgary
- Statistical Methodologist, Statistics Canada
- Star Child Health: Standards Development Group on Data Monitoring Committees and Adequate Sample Size.

SKILLS/EXPERTISE:

- Expertise with all common statistical analysis methods
- Proficiency in meta-analysis and network meta-analysis
- Bayesian Statistical Methods
- Familiarity with many statistical programming software including SAS, R, Stata, StatXact, and WinBUGS.
- Teaching and explaining statistical concepts to non-statisticians
- Interpersonal and communication skills



BO PAN

POSITION:

- Biostatistician

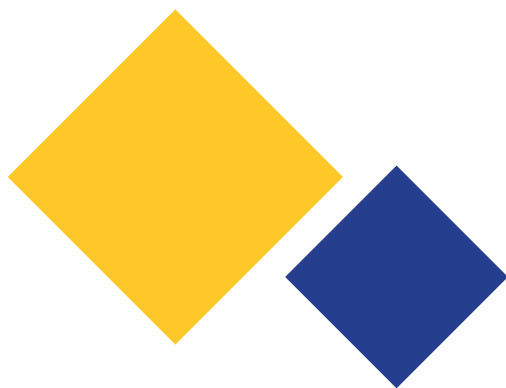
HOMETOWN: Nanjing, China

BACKGROUND:

- BSc (Spec Math), University of Alberta, 2013-2017

SKILLS/EXPERTISE:

- Statistical analysis and deep learning
- Research main in high dimensional data analysis, text image data mining and analysis
- Machine-learning developing
- Cycling and hiking



DR. KAITLYN WATSON

POSITION:

- Postdoctoral research fellow, EPICORE Centre, started January 2020

HOMETOWN: Brisbane, Australia

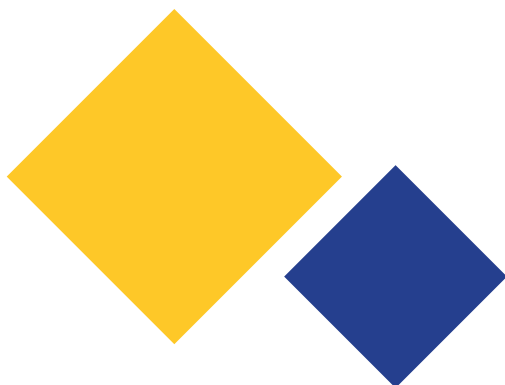
BACKGROUND:

- PhD in pharmacy practice and disaster health, Queensland University of Technology
- B.Pharm, University of Queensland with 1st Class Honours
- Graduate Certificate in Applied Pharmacy Practice (10797NAT), Pharmaceutical Society of Australia
- Fellow, Higher Education Academy
- Consultant for the World Health Organization Regional Office for Europe, 2020
- Educator, Queensland University of Technology, 2016-2019
- Clinical pharmacist, Greenslopes Private Hospital, 2015-2019



SKILLS/EXPERTISE:

- Pharmacy practice researcher
- Research methodology and design (quantitative and qualitative)
- Ethics approval processes
- Project management
- Communicator
- Educator



DR. STEPHANIE GYSEL

POSITIONS:

- Post-doctoral research fellow, EPICORE Centre, started October 2021

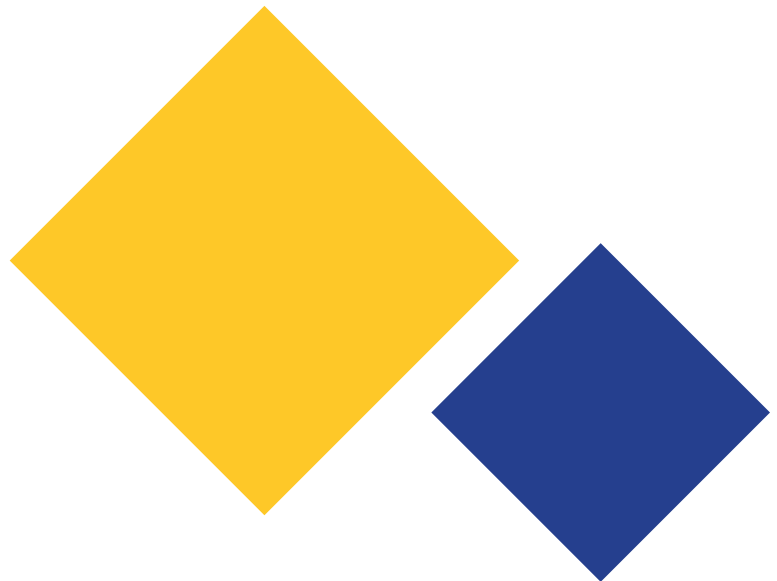
HOMETOWN: Winnipeg, MB

BACKGROUND:

- BSc in Pharmacy, University of Alberta, 2009
- PharmD, University of Alberta, 2020

SKILLS/EXPERTISE:

- Clinical pharmacy practice and patient care
- Development of novel community pharmacy-based clinical programs
- Pharmacy practice researcher
- Collaborator
- Extensive leadership experience
- Strong problem solving and critical thinking skills



JONATHAN CHAN

POSITION:

- Research Assistant, EPICORE Centre

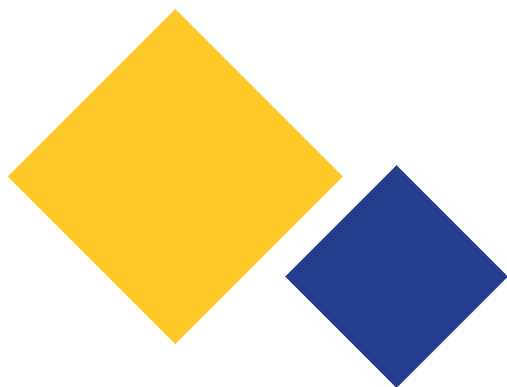
HOMETOWN: Edmonton, AB

BACKGROUND:

- Doctor of Pharmacy student, University of Alberta, 2020-2024
- Biological Sciences student, University of Alberta, 2018-2020

SKILLS/EXPERTISE:

- Keen to learn new research skills and be involved in pharmacy advocacy
- Literature research and writing
- REDCap (research database/data collection), Data Entry
- Information Technology (Website administration, Networking, Servers, Audio/Visual)



PAUL BRACONNIER

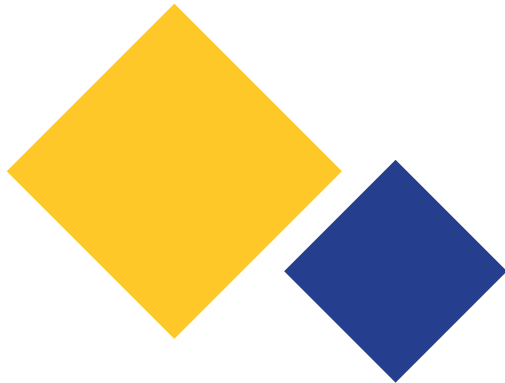
POSITIONS:

- Business Consultant

HOMETOWN: Regina, SK

BACKGROUND:

- BBA (Business), University of Regina
- Chartered Accountant (retired)
- Led a full service clinical contract research company that managed and conducted human clinical trials, with operations in Canada, Mexico & Argentina
- Life Sciences-focused TEC Edmonton Executive-In-Residence



SKILLS/EXPERTISE:

- Strong interpersonal and communications skills
- Cross functional team membership and leadership
- Sound business judgment and common sense approach to problem solving
- Customer oriented approach for both internal and external customers
- Team player and team builder, consensus builder
- Extensive financial, legal, administrative and information system management
- Interaction with the investment community including investor and analyst presentations and discussions
- Extensive negotiations of business mergers, divestitures, acquisitions and software licensing agreements

CONGRATULATIONS, GLENNORA DOWDING ON YOUR RETIREMENT

We would like to thank Glennora for her amazing work and the fantastic memories over the last 25 years and wish her all the best for her retirement



APPENDICES



CURRENT PROJECTS (139 OF 960 TOTAL)

<https://www.epicore.ualberta.ca/home/appendix-a-2022/>



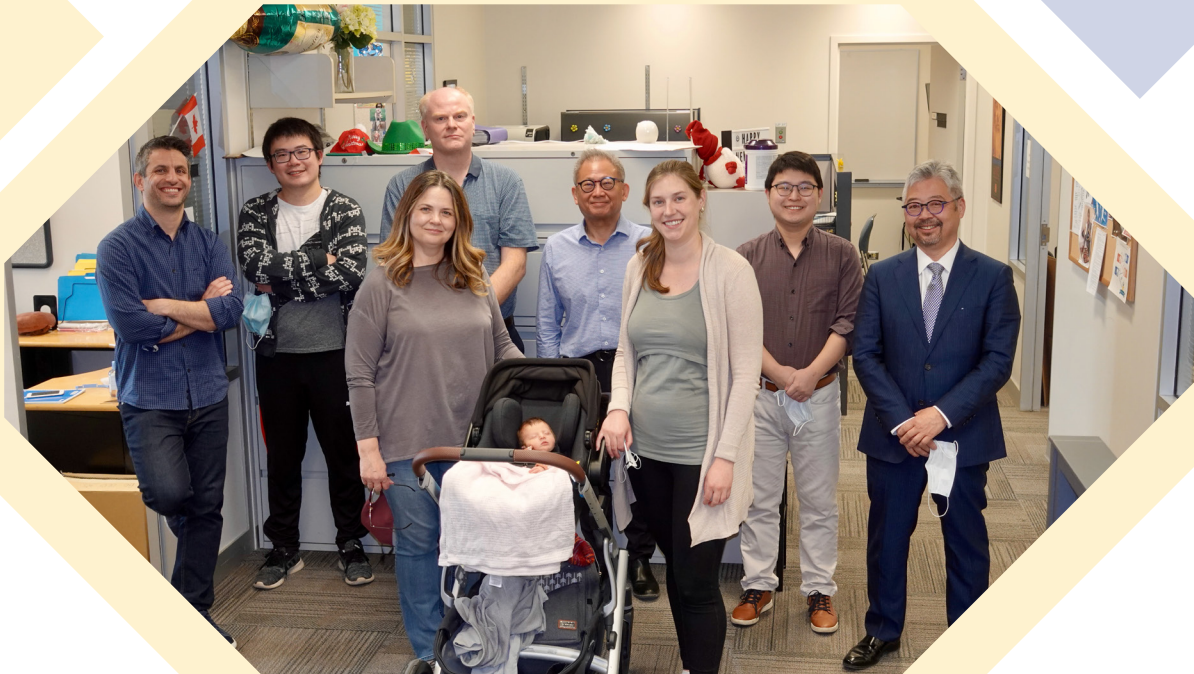
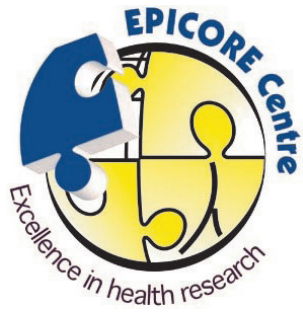
549 INVESTIGATORS SERVED

<https://www.epicore.ualberta.ca/home/appendix-b-2022/>



51 EPICORE CENTRE PUBLICATIONS

<https://www.epicore.ualberta.ca/home/appendix-c-2022/>



EPICORE CENTRE

NON-PANDEMIC ADDRESS:
362 HERITAGE MEDICAL RESEARCH CENTRE
UNIVERSITY OF ALBERTA
EDMONTON, AB
T6G 2S2
(780) 492-8525 PHONE
(780) 492-6059 FAX
WWW.EPICORE.UALBERTA.CA