



2019-2020

EPICORE CENTRE ANNUAL REPORT

(PANDEMIC EDITION)





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WELCOME TO OUR 2019/2020 ANNUAL REPORT.

It's been a productive, if not strange year. We have been working from home since mid March due to the COVID-19 pandemic, but still able to fulfil our mission by serving our community of clinical and health outcomes researchers. We meet twice a week via Zoom to keep our sense of teamwork going (that's us on the cover of this report). And regular infusions of chocolate and Dr. Deena Hinshaw t-shirts help, too.

As I have settled into my role as Chair of the Department of Pharmacology, I wish to convey my thanks to Associate Directors Mr. Henry Lee (Administration) and Dr. Yazid Al Hamarneh (Scientific), our outstanding staff and trainees for keeping our mission going.

Here's a few things I'd like to highlight:

- Some figures: A cumulative 900 projects completed, about 500 individual investigators supported, and 122 research consultations performed in the past year.
- We continue as the Consultation and Research Services Platform of the ABSPORU. In this capacity, we provide research support services to investigators across Alberta – over 430 since inception, focusing on early career researchers and trainees.
 - We provide the services that researchers need – design/methodology consultations, assistance with research grant preparation, statistical analyses, and data management services – with extremely high levels of satisfaction (see pages 10-11)
 - An 83% success rate for research grants when we have helped (I hope I haven't jinxed it by mentioning this...)

One of the really great things about doing what we do is the ability to get involved in very interesting and important projects – see our highlighted projects, which include:

- Prevention of posttraumatic contractures with ketotifen 2 (PERK 2, Dr. Kevin Hildebrand) – a multicentre randomized trial in patients with elbow fracture/dislocation
- The Alberta Vascular Risk Reduction Community Pharmacy Project (R_xEACH) – the largest-ever randomized trial of community pharmacist case-finding and care to reduce cardiovascular risk, conducted with the Cardiovascular and Stroke Strategic Clinical Network of Alberta Health Services and Alberta Health.
 - This study showed a 21% reduction in cardiovascular risk, a high degree of patient satisfaction, and could lead to \$4.4 billion in cost savings if widely adopted.
- A clinical decision support tool for diagnosing anterior cruciate ligament tears (Dr. Jackie Whittaker)
- A major collaboration with the Department of Ophthalmology and Visual Sciences (led by Dr. Karim Damji)
- A number of community-based clinicians' projects – these are important because non-university affiliated clinicians do not have access to a research infrastructure
- Support of Dr. Ameeta (Ami) Singh for a multicentre COVID-19 trial at the Royal Alexandra Hospital (we helped set up the trial and got matching funding from the Royal Alexandra Hospital Foundation to allow Dr. Singh to participate)

What to expect in the coming year? Who knows... There will be changes with regards to ABSPORU, and we'll continue to work remotely until it is safe to return. As a self-funded centre, we'll do the best we can in challenging times. What won't ever change is our commitment to support research excellence.

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

WHO WE ARE



EPICORE:

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

FACULTY OF MEDICINE AND DENTISTRY MISSION:

The Faculty of Medicine & Dentistry serves the public good through excellence in medical and health professions education, research and patient care. We build partnerships essential to a high-performing academic health sciences centre.

EPICORE CENTRE



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”

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

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 approach of only serving ourselves.

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.

EPICORE Centre: Impact on the Research Landscape





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

Alberta Strategy for Patient Oriented Research Support for People and Patient-Oriented Research and Trials Unit (ABSPORU) is a five year \$48 million federal-provincial partnership between Alberta Innovates (AI) and the Canadian Institute for Health Research (CIHR). ABSPORU was the first established unit among a network of SPOR SUPPORT Units across Canada.

The ABSPORU vision is to advance knowledge to improve patient health and healthcare with the goal to increase the quantity and quality of patient-oriented health research.

ABSPORU partners with Alberta Health, Alberta Innovates, Alberta Health Services, Athabasca University, University of Alberta, University of Calgary and University of Lethbridge.

ABSPORU is composed of seven platforms: Career Development, Consultation and Research Services, Data, Knowledge Translation, Methods, Patient Engagement and Pragmatic Clinical Trials. (Please visit www.absporu.ca for further information on each platform).

ABSPORU's approach is to offer training opportunities and services (rather than research operating grants) to support patient-oriented research from initial concept through to the dissemination of study findings.

RESEARCH WOULD BE ELIGIBLE FOR ABSPORU'S SUPPORT IF IT:

- Is conducted in Alberta/Northwest Territories or has an Alberta-based investigator
- Is patient-oriented
- Demonstrates evidence of end-user engagement
- Has a potential for end-user (patient)/system impact

ABSPORU CONSIDERS RESEARCH PATIENT-ORIENTED IF IT INCLUDES AT LEAST ONE OF THE FOLLOWING:

- Focuses on patient-identified priorities
- Meaningfully engages patients as partners
- Has the potential to improve patient outcomes

Please visit www.absporu.ca to find out how can you take advantage of all the services that ABSPORU offers.



EPICORE CENTRE ACTS AS THE SECRETARIAT OF THE CRS PLATFORM. IN RETURN, THE PLATFORM PAYS FOR THE SERVICES IT USES

Dr. Ross Tsuyuki is the Consultation and Research Services (CRS) Platform lead. Dr. Yazid Al Hamarneh is the Associate Director/Scientific Officer. Mr. Henry Lee is the Associate Director/Business Manager. The platform was launched in November 2015.

The CRS Platform provides services for projects involving primary data collection (original data which is being collected for the first time to answer research question/s) using qualitative or quantitative methods. Such services can be categorized into:

DESIGN/METHODS SERVICES:

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

DATA MANAGEMENT

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

BIostatISTICS

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



To find out more about the ABSPORU Consultation and Research Services Platform and its services, please visit <https://www.epicore.ualberta.ca/home/spor>

Researchers from a variety of disciplines, institutions and stages of careers (ranging from students to professors) have benefited from the CRS platform services. The following figures illustrate the impact of our services on the Patient-Oriented Research landscape in Alberta and the satisfaction of our clients.



Consultation and Research Services: Impact on Patient-Oriented Research

Stats are from inception of platform until June, 2020.

I Capacity Development

Increasing quantity POR by:

- a) Total of **279** ABSPORU portal applications
- b) Total of **153** pre-portal consults*
- c) Facilitating the conduct of POR for early career researchers, clinicians and those new to Alberta (**127**)
- d) Starting residents, graduate students and trainees on the right foot (**79**)
- e) Recommending and encouraging researchers to include POR in their projects (**50**)
- f) Helping researchers obtain grants (**5 out of 6 applications**)
- g) Reaching out to researchers in the community (e.g., PCNs, Edmonton Seniors Centre, Rocky View Hospital etc.) (**19** and **8** pre-portal consults)



II Increasing quality of POR

- a) Referring ABSPORU portal applications to the Patient Engagement Platform and including them in conversations (**85**)
- b) Design/Method **141**, Statistical analysis **143**, Database creation and maintenance **108**, Analytical plan **95**, QA **53**, CRF **57**, Sample size calculation **66**, Randomization **35**, Clinical event adjudication **12**, Qualitative **8**

Why use CRS?

Services offered by **CRS** were ranked among the **top 4 services** that **investigators need to succeed****



III Highly Qualified Personnel

- a) Training the new generation of researchers by involving the ABSPORU studentship awardees in consultations.
- b) Training residents, graduate students and trainees to conduct POR (**79**)



IV Collaboration

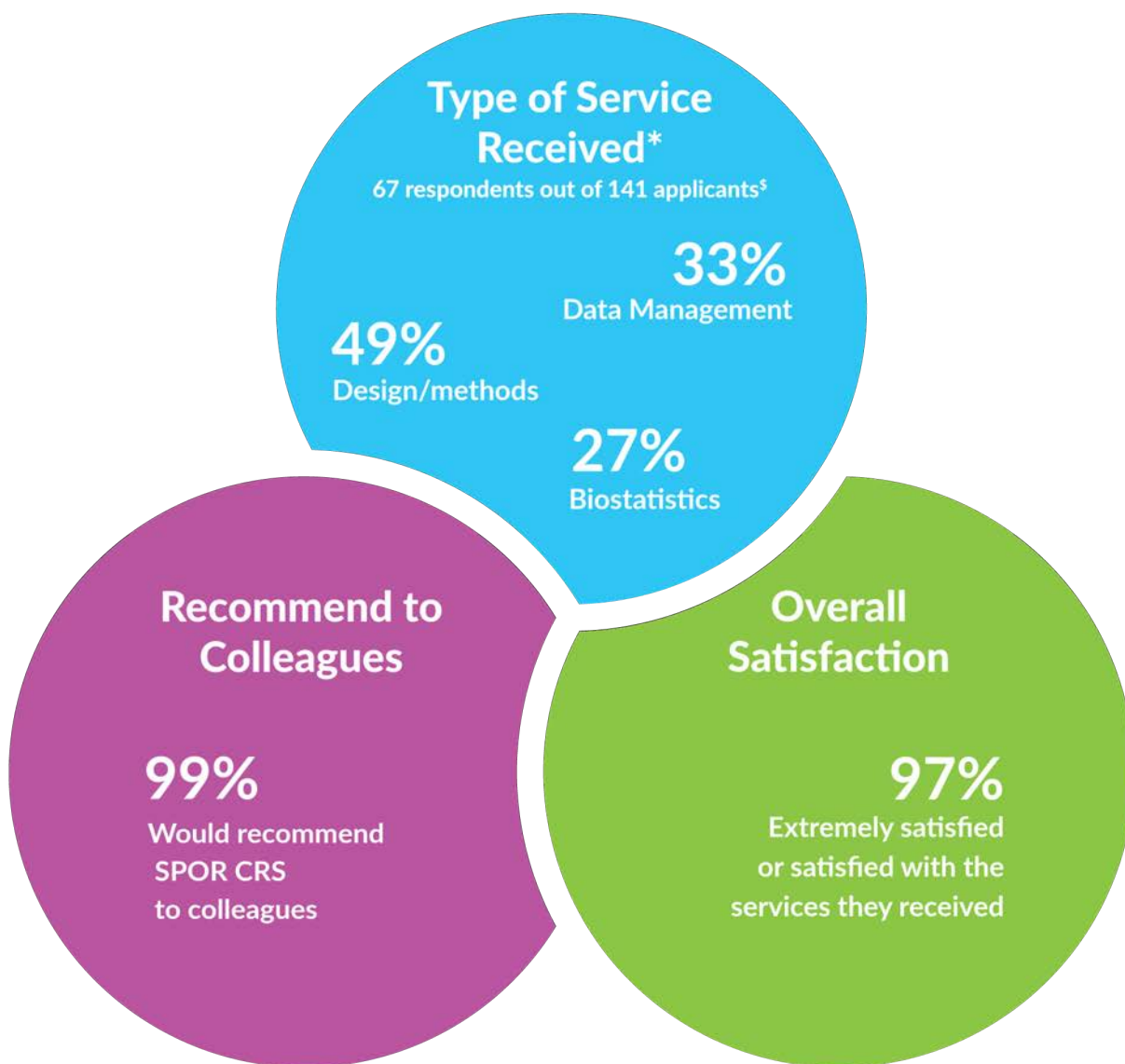
- a) Working with other platform(s) (**145**), referring applicants to other platforms (**35**), bringing other platform(s) to the conversation (**17**)
- b) Connecting applicants with patients and/or other health care professionals to create multidisciplinary teams
- c) Decision makers (**32** applications from AHS or SCNs)
- d) Institutions across the province (e.g., University of Lethbridge, Covenant Health, PCNs, etc.)
- e) Researchers from a variety of health disciplines (e.g., physicians, pharmacists, nurses, etc.)

*Pre-portal consult occurs when the investigator(s) contacts the CRS Platform staff directly, then Platform staff meet with them to assess if the suggested project is patient-oriented (how it could be patient-oriented or more patient-oriented), the type of services required and the need to bring other platforms into the conversation based on the services required by the investigator(s). All projects that proceed forward must then apply for ABSPORU support through the portal.

**According to a request for information survey that was completed by the University of Alberta Faculty of Medicine and Dentistry

Consultation and Research Services: Client Satisfaction

Performance Excellence



*Percentages not mutually exclusive
[§] Numbers as of June 2020





Dr. Miriam Berchuk, MD, FRCPC
 Dipl American Board of Obesity
 Medicine
 Assistant Clinical Professor
 Department of Anesthesia
 University of Calgary,
 Cumming School of Medicine

"As an anesthesiologist at a Calgary hospital that does a significant number of joint replacement surgeries, I see first hand the psychological and physical toll long wait times take on patients. Part of the anesthesiologist's role is to optimize the health of our patients. Surely we can make use of this time to offer patients a lifestyle intervention that improves their pain, function, and health while they're on a waitlist see a surgeon? The Osteoarthritis Optimization Study is a randomized control trial that will randomize patients to an app based lifestyle intervention or to usual care. We intend to examine how willing patients are to adopt this app based intervention and their impressions of the app based intervention. We also hope to demonstrate improvement in quality of life scores and markers of health. As a clinician with no research background, being able to access the services of the Consultation and Research Services Platform, and to work closely with Yazid Al Hamarneh, were invaluable in creating my study protocol and preparing my grant application. I'm thrilled to have received a \$35,000 grant from the University of Calgary Department of Anesthesiology, Perioperative, and Pain Medicine Tim and Linda Tang Anesthesia Research Fund"



Dr. Devon Houdek
 Endocrinology SSR PGYS
 Department of Medicine
 University of Alberta
 Project title: Local Thyroid
 Nodule Aspiration Cytopathology
 and Malignancy Incidence

I am a fifth year resident in the Division of Endocrinology & Metabolism at the University of Alberta. As a part of our residency training we are required to do a research project. My residency research project is titled "Local Thyroid Nodule Aspiration Cytopathology and Malignancy Incidence". I want to characterize our local Edmonton health regions assessment of thyroid nodules. This information will help insure that we are providing quality care and counselling to our patients and if there are discrepancies identified this will provide evidence to support quality improvement initiatives to enhance care. I need to analyze procedural results between physician groups and between those that utilize a procedural enhancing technique. Statistical analysis support is not available to me as a resident in the Department of Medicine. I reached out to the Alberta SPOR SUPPORT unit for support and they were amazing. The assistance I have received from the Alberta SPOR SUPPORT unit and Yazid Al Hamarneh has been excellent. Yazid's consulting was timely, comprehensive and professional. As a residency training physician, with limited access to statistical research support, the assistance I have received from the Alberta SPOR SUPPORT unit and Yazid Al Hamarneh has been priceless."



Dr. Naomi Popeski
 Assistant Scientific Director
 Diabetes, Obesity and Nutrition
 SCN Project title: Validation of
 AHS diabetic foot screening tool

"Our project focused on validating the AHS foot care tool that is used for screening feet of patient living with diabetes. The Consultation and Research Services Platform were wonderful to work with on data analysis for our research study. Their professional attitude and commitment to executing the research activities allowed for quick completion of the results. The DON SCN was very satisfied with the work that the Consultation and Research Services Platform provided."

HIGHLIGHTED PROJECTS

PREVENTION OF POSTTRAUMATIC CONTRACTURES WITH KETOTIFEN 2 (PERK 2)

LEAD INVESTIGATOR:

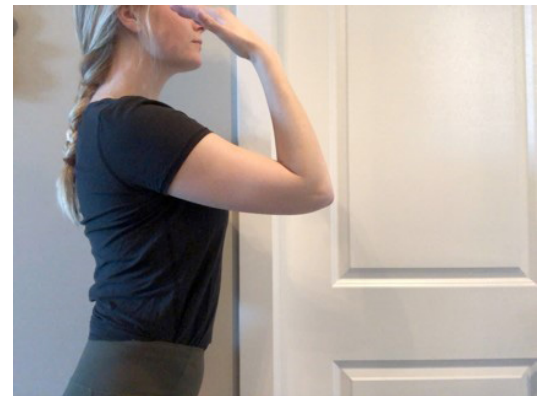
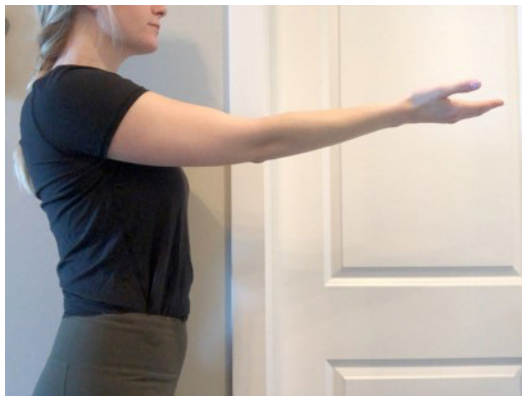
Dr. Kevin A. Hildebrand, MD, FRCSC, CCPE, Professor, Department of Surgery, Cumming School of Medicine, University of Calgary

OVERVIEW:

PrEvention of posttraumatic contractuRes with Ketotifen 2 (PERK 2) is a Phase III randomized, controlled, observer and participant blinded multicenter trial with 3 parallel groups (Ketotifen Fumarate 2 mg or 5 mg or lactose placebo twice daily orally for 6 weeks) and a primary endpoint of elbow extension-flexion range of motion (ROM) arc at 12 weeks post-randomization. The research hypothesis is that Ketotifen Fumarate is efficacious in reducing joint contracture severity in adult participants with elbow fractures and/or dislocations.

IN THE WORDS OF THE LEAD INVESTIGATOR:

"I am most grateful for the expertise, professionalism, solutions oriented, 'can do' disposition, transparent / honest approach, and understanding nature of EPICORE. Lily, Yazid, Andriani and Henry have delivered on a short-time line in a period of transition and continue to support our needs in an effective and efficient fashion. The interactions of EPICORE with other key stakeholders assisting our research activities has been exemplary. The personal touch and fun outlook are appreciated." from our program to the community."



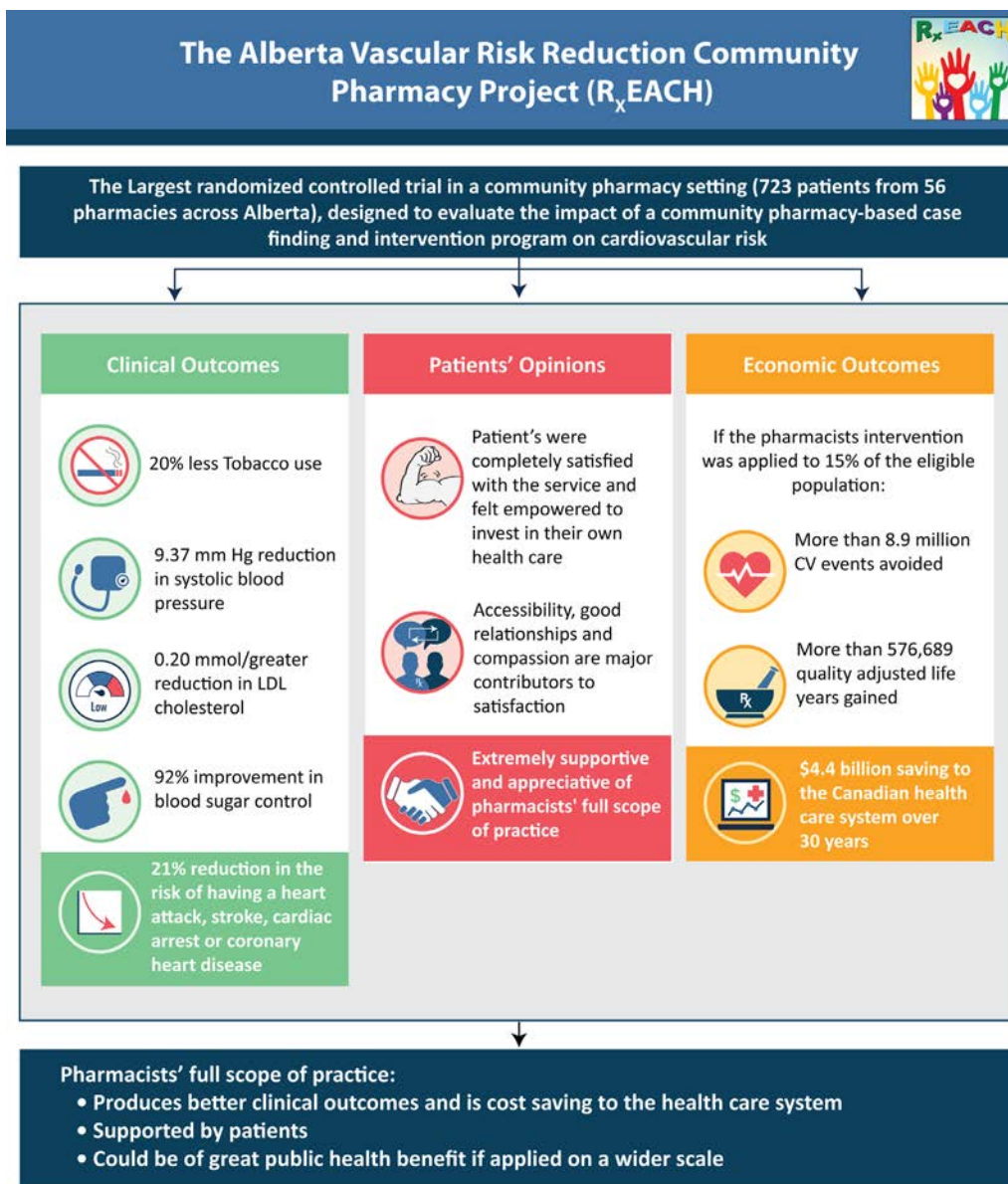
HIGHLIGHTED PROJECTS

THE ALBERTA VASCULAR RISK REDUCTION COMMUNITY PHARMACY PROJECT (R_xEACH)

LEAD INVESTIGATORS:

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

Dr. Yazid Al Hamarneh, Associate Director/Scientific Officer, Alberta SPOR Support Unit Consultation and Research Services Platform



1. Tsuyuki RT, et al. The Effectiveness of Pharmacist Interventions on Cardiovascular Risk: The Multicenter Randomized Controlled Rx EACH Trial. *JACC*. 2016; DOI: 10.1016/j.jacc.2016.03.528

2. Al Hamarneh YN, et al. Pharmacist prescribing and care improves cardiovascular risk, but what do patients think? A substudy on the Rx EACH study. *CJ/RPC* 2018; DOI: 10.1177/1715163518779092

3. Al Hamarneh YN, et al. Pharmacist prescribing and care improves cardiovascular risk, but is it cost effective? A cost-effectiveness analysis of the Rx EACH study. *CJ/RPC* 2019; DOI: 10.1177/1715163519851822



HIGHLIGHTED PROJECTS

PREDICTION RULE FOR ACL TEARS

LEAD INVESTIGATORS:

Dr. Jackie Whittaker, Assistant Professor, Department of Physical Therapy, Research Scientist of Musculoskeletal Rehabilitation, Arthritis Research Centre, University of British Columbia

OVERVIEW:

The objective of this study was to develop a preliminary clinical decision support tool for diagnosing full-thickness Anterior Cruciate Ligament tears in primary care settings based on a combination of demographic characteristics, and components of a clinical history and clinical examination. This study is an important first step in developing a clinical decision to accurately predict those patients with an acute knee-injury that have a full-thickness ACL tear and those that do not, which will ensure early and appropriate treatment. This research was conducted in conjunction with the physiotherapists, sport and exercise medicine physicians and orthopedic surgeons at the University of Alberta Glen Sather Sports Medicine Clinic..

BMC Musculoskeletal Disorders

RESEARCH ARTICLE *Orthopedics*

Towards Improving the Identification of Anterior Cruciate Ligament Tears in Primary Point-of-Care Settings

› Jackie L Whittaker, Michelle Chan, Bo Pan, Imran Hassan, Terry Defreitas, Catherine Hui, Luciana Macedo, David Otto

IN THE WORDS OF THE LEAD INVESTIGATOR:

“Members of the Alberta SPOR SUPPORT UNIT Consultation and Research Services Platform (data management and statistical services) were essential members of the investigative team collaborating on the creation of a comprehensive data analysis plan, and the development and assessment of the statistical models presented in the paper.”

COLLABORATION

DEPARTMENT OF OPHTHALMOLOGY & VISUAL SCIENCES



Rita Whitford
Research & Development Coordinator
Faculty of Medicine & Dentistry
Department of Ophthalmology & Visual Sciences

Since our first meeting with Dr. Ross Tsuyuki and Dr. Yazid Al Hamarneh in February of 2019, the Department of Ophthalmology and Visual Sciences has been working closely with the EPICORE / SPOR unit on a number of exciting projects.

Yazid graciously came out to speak to our Residents at the Royal Alexandra Hospital about the services the unit offers and how best to access these services. A number of our residents have consulted with Yazid on study procedures and now have greater confidence and knowledge in tackling complex research study design and data analysis.

The OVS Department has also been collaborating on a number of exciting projects with SPOR / EPICORE:

THE EYE INSTITUTE OF ALBERTA PATIENT DATABASE

Lily Yushko and Andriani Yunita have been instrumental in designing a patient survey in RedCap for the Eye Institute to be able to capture patients that are interested in research. This database will function as a search tool for Ophthalmologists and Department study personnel to find potential study participants. It will also serve as a communication tool to keep our patients up to date and informed on current research projects and potential new therapies for eye conditions.

VALIDATION OF VIRTUAL REALITY AS AN EDUCATIONAL TOOL

In 2019 the Department of Ophthalmology & Visual Sciences partnered with KOVR Group to create "Through the Looking Glass", a VR experience developed out of a desire to simulate accurate depictions of what it is like to live with vision loss related to eye disease. This proof of concept was designated as a pilot project to determine the value of this tool for teaching and creation of empathy. A small pilot research study was conducted that assessed change in empathy and value of the VR experience as a teaching tool. Yazid helped to mentor a group of medical students to design and analyze this study.

The overwhelmingly positive results of the empathy in VR study, and the successful partnerships that were gained, enabled the group to be successful in an Alberta Innovates xR HEAD grant application to further develop the VR as an educational tool for patients:

VIRTUAL REALITY AS A TEACHING TOOL FOR DIABETIC PATIENTS – H.E.L.P.

The Stratos Diabetic Retinopathy Module will be a VR experience that realistically demonstrates up to three patterns of vision loss associated with diabetic retinopathy. The experience will start by having the user select from the available eye patterns as well as an environment related to activities of daily living. Each environment will simulate common tasks to perform at varying levels of impairment that will demonstrate the specific challenges posed by a given pattern of vision loss. A large percentage of diabetic patients do not attend recommended eye exams to screen for potential sight threatening disease. We hypothesize that VR Technology will enhance the knowledge and emotional connectedness in patients and that this awareness will motivate participants to attend regular eye screening visits. This in turn will lead to early detection and management of eye disease with better patient outcomes and significant cost savings to our health care system.

Yazid will be instrumental in study design refinement and hypothesis for validation of this exciting collaboration as an educational tool in health care.

"The EPICORE/SPOR team has been instrumental in assisting our Department achieve success in our patients to further eye research. Our requests for collaboration have always been greeted with a positive, knowledgeable attitude and we are greatly looking forward to our future projects."



Colter Young,
Community pharmacist, Edmonton
Project Title: CHOICE Study

"As pharmacists, we know the difference we can make. But gathering evidence of our positive impact on the health and wellness of our patients is essential to support and advance the profession. However, implementing primary research in practice can be a challenging task. The EPICORE Centre helped me to overcome these challenges. They provided excellent support throughout the process, were easy to work with and delivered the expertise I needed to incorporate research into my community practice."



Dr. Dan Burton,
Community pharmacist, Calgary
Project Title: Mental Health
Assessment and Prescribing by
Alberta Pharmacists (MAP-AP)

"The support from the EPICORE Centre has made it possible for our group of front-line full-time clinicians with limited knowledge and experience in research to begin carrying out a RCT assessing pharmacy practice in the community. They have helped us demonstrate that you don't need to be doing a Master's or working at a University in order to do proper research - with the EPICORE Centre support it is possible to do research from the front-lines."



Dr. Dilini Vethanayagam
Associate Professor, Edmonton
Project title: Asthma
Overdiagnosis in Individuals
Who Vape

"Dear Ross, Thanks for linking me to Yazid on this grant - it was really helpful having a named epidemiologist, and his insightful input along the way. You are a really good mentor and networker - and an example for everyone"."



Katelynn Crick
Project Coordinator,
Physician Learning Program
Project Title: Beta Lactam Allergy

"I came to EPICORE for help in my first "real", out of graduate school job. As a Project Coordinator at the Physician Learning Program I was tasked with setting up a quality improvement project to measure surgical prophylaxis practices in both patients with and without a beta-lactam allergy compared to guidelines in the Edmonton Zone. As a part of this role, I was tasked with creating a chart review form and analyzing the resulting data. I had limited previous experience in creating chart review forms in RedCap and had never designed a data collection form before to capture things like medications (including dosing, administration times, and route of administration) and complex surgical procedure descriptions. We were under an immense time pressure for this project and the chart review form was implemented with little testing. Once data collection was complete, I quickly realized the difficulty I was going to have in analyzing the data because of the structure of the data and problems with some of the variables. I had problems with date-time fields (upon requests of the clinical team I had allowed free-text entry of times which ended up being problematic) and the data was all in wide format (I had over 700 columns of variables). I knew that I wanted to restructure the data frame into some sort of a hierarchical or long format, and I knew that I needed to fix several data fields (especially the date-time problem), but wasn't sure where to start. To be honest, I wasn't even sure what I was aiming for! I just knew that my data was not structured in the way I had thought it was going to come out and that it was not ideal for analyzing. I met with Lily Yushko on several occasions and she was exceptional to work with. I really liked that she took a teaching approach with me. She respected my existing knowledge and skills, never made me feel dumb, and coached me into our solutions rather than just going ahead and doing it all herself. It was what I learned from Lily that was so valuable to me. Rather than having someone just fix my problem, I actually learned how I could fix my problems myself. I also learned what to do differently in the future. I gained so much more from EPICORE than I had ever imagined I would. They are a truly lovely group of people. It was a real honor to work with them and I would love to work with them again in the future. They are experts in what they do and they really boosted my self-confidence and skills in my work."



COVID-19



EPICORE Centre contributes to the COVID-19 fight. EPICORE Centre has provided support to the COVID-19 research effort by in-kind support for the CATCO study in conjunction with the global SOLIDARITY trial. This is a trial of lopinavir/ritonavir vs. remdesivir vs. supportive care in patients hospitalized with COVID-19. We are supporting infectious disease physician, Dr. Ameeta (Ami) Singh at the Royal Alexandra Hospital. Together, we were able to support Dr. Singh to receive matching funds from the Royal Alexandra Hospital Foundation and Sunnybrook Hospital (Toronto). We are also helping manage the administration of this trial.

Give to support global research into COVID-19 treatments happening now at the Royal Alex Hospital



 **Royal Alexandra**
HOSPITAL FOUNDATION

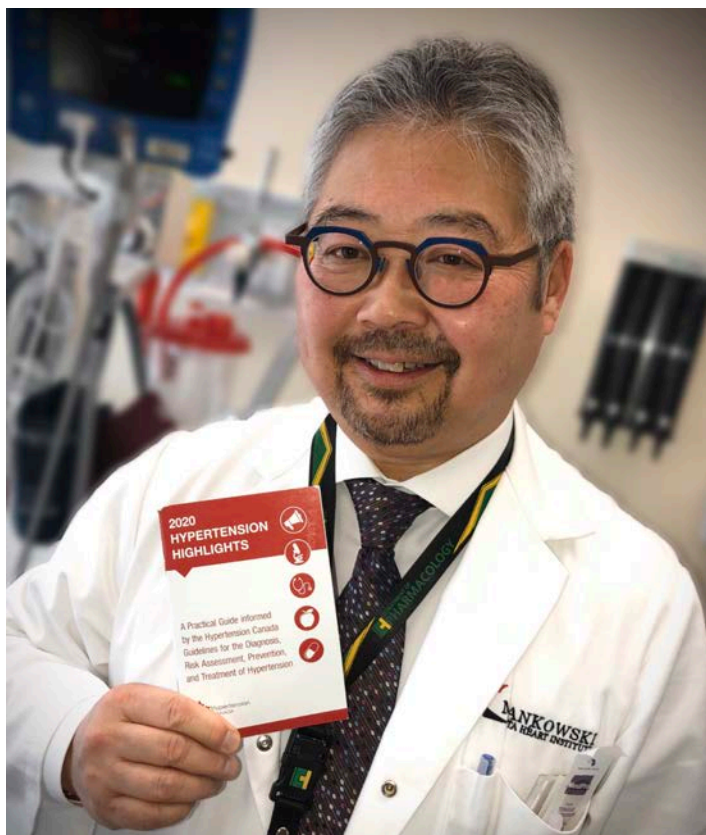
To make a donation or for more information, please visit: [ROYALEX.ORG](https://royalalex.org) 780 735 4723

From Edmonton Journal. May 27, 2020

FUN AND REWARDS



OUR 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
- Platform Lead, Consultation and Research Services, Alberta SPOR (Strategy for Patient-Oriented Research) Support Unit
- 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)
- Educator

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 and SPOR CRS Platform
- Training the next generation of health researchers



And here's the home team



OUR TEAM



HENRY LEE

POSITION:

- Associate Director, Administration, EPICORE Centre

HOMETOWN: Edmonton, AB

BACKGROUND:

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

Cycling at Central Park in New York City

SKILLS/EXPERTISE:

- Seasoned financial manager with Controllershship experience
- Senior Management roles with public, private, and not-for-profit companies.

OUR TEAM



DR. YAZID N AL HAMARNEH

POSITIONS:

- Associate Director, Scientific, EPICORE Centre
- Alberta SPOR Support Unit Consultation and Research Services Platform

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



One step closer to happily ever after

OUR TEAM



LILY YUSHKO

POSITION:

- Team Lead, Clinical Research Informatics

HOMETOWN: Kyiv, Ukraine

BACKGROUND:

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

BFFS

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

OUR TEAM



DEBBIE BOYKO

POSITION:

- Research Project Coordinator

HOMETOWN: Edmonton, AB

BACKGROUND:

- Registered Nurse x 45 years this year!
- Diverse background in specialty areas including ICU, Day Surgery and Emergency Nursing
- Part of the Data Management team for an International Pediatric Oncology Study
- Provides study recruitment training to pharmacists across the province in several studies
- Plays a key role in leadership to Research Teams

SKILLS/EXPERTISE:

- Coordinating the start of a study and providing guidance maintaining the study's daily operation
- Sustaining strong relationships with research teams
- Providing and maintaining high standards required for Good Clinical Practice



Living it up in Las Vegas!

OUR TEAM

GLENNORA DOWDING

POSITION:

- Administrative Assistant

HOMETOWN: Lumsden, NL

BACKGROUND:

- Management Development Program Certificate, University of Alberta Extension, 1996
- Worked at EPICORE Centre since 1996

SKILLS/EXPERTISE:

- Organization
- Administration
- Communication
- Handling multiple priorities
- Meeting and event coordination
- Records management
- Office procedures
- Supplies management
- Maintaining office equipment Transcribing dictation
- MS Office – Word, Excel, Visio and PowerPoint



Christmas Day 2019. Beautiful sunny day...perfect for skating!



OUR TEAM



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
- Graduate Certificate in Applied Pharmacy Practice (10797NAT), Pharmaceutical Society of Australia
- Fellow, Higher Education Academy
- Consultant for the World Health Organization, 2020
- Educator, Queensland University of Technology, 2016-2019
- Clinical pharmacist, Greenslopes Private Hospital, 2015-2019

SKILLS/EXPERTISE:

- Conducting pharmacy practice research
- Research methodology and design (quantitative and qualitative)
- Ethics approval processes
- Project management
- Consultant for disaster pharmacy research and management



Exploring Edmonton's ice castles with my husband Chris



OUR TEAM

ANDRIANI YUNITA

POSITION:

- Software Developer

HOMETOWN: Bogor, Indonesia

BACKGROUND:

- Diploma in Computer Programming, Humber College, 2011 - 2013
- Bachelor in Computing Science Specialization in Software Practice , University of Alberta, 2013 - 2018

SKILLS/EXPERTISE:

- Database and web application development
- Badminton and swimming
- Traveling on budget



Lost in Taiwan...



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. Meow chika meow meow



OUR TEAM

MEAGAN DUNN

POSITION:

- Research Nurse/Study Coordinator

HOMETOWN: Edmonton, AB

BACKGROUND:

- BSc Nursing University of Alberta: practicing RN in Cardiac Sciences
- MSc Experimental Medicine University of Alberta: Study Coordinator and Co-investigator EPICORE

SKILLS/EXPERTISE:

Registered Nurse with Alberta Health Services:

- Cardiac Intensive Care
- Cardiac Device Implant
- Cardiac Catheterization Lab
- Clinical Nurse Educator Experience
- Emergency Department

Research Experience

- Therapeutic Hypothermia
- Hypertension
- COVID-19



My husband Kyle captured this picture while we were exploring the cobble streets of Old Montreal on our 15th wedding anniversary.



OUR TEAM

RANDY SO

POSITION:

- Graduate Research Assistant, EPICORE Centre
- MSc Pharmacology Student, University of Alberta

HOMETOWN: Calgary, AB

BACKGROUND:

- BSc (Spec) Pharmacology, University of Alberta, 2014 - 2019

SKILLS/EXPERTISE:

- Literature research (Compile information gathered into a written analysis).
- Highly adaptable and eager to learn.
- Refined written and interpersonal skills.
- Travelling, exploring, and finding great food.



Shabu Shabu feast in Japan!

OUR TEAM

PAUL BRACONNIER

POSITION:

- Business Consultant

HOMETOWN: Regina, SK

BACKGROUND:

- BBA (Business), University of Regina
- Chartered Accountant
- 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



Cable Beach in Broome, Australia, our starting point for a tour of the Kimberley region - one of the world's last wilderness frontiers



APPENDIX-A

APPENDIX A: CURRENT PROJECTS (94 OF 844 TOTAL)

[HTTPS://WWW.EPICORE.UALBERTA.CA/HOME/APPENDIX-A-/1920](https://www.epicore.ualberta.ca/home/appendix-a-/1920)

PROJECT

1. Catching the Wind: A Colouring Book Discovery Course
2. Tele-Rehab 2.0
3. Telemonitoring for improved kidney outcomes (TIKO)
4. Osteoarthritis Optimization Program: a Dietary Counselling Program to Improve Patient Health, Experience, and Outcomes While Awaiting Surgical Consultation
5. Evaluation of a Tri-compartment Unloader Knee Brace in Individuals with Knee Osteoarthritis
6. Uterine preservation versus hysterectomy for pelvic organ prolapse surgery: Differences in health care utilization and patient outcomes.
7. A Prairie Province Institutional Based Practices for VTE Prophylaxis in Medical Patients
8. VTE Audit 2014-2017
9. VTE Audit 2015/2016
10. Warfarin requirements in mechanical valve patients
11. Pharmacists Prescribing and Managing and Mental Health
12. C-PASS
13. ICH ADAPT II
14. Validation of the AHS Diabetic Foot Screening Tool
15. Patient perspectives regarding barriers to accessing care through the Northern Peripheral Nerve Clinic
16. Mental Health Assessment and Prescribing by Alberta Pharmacists (MAP-AP) Study
17. NPY Meeting 2019 Website Development
18. ABLE - cGVHD Study
19. Ophthalmology patient research registration database
20. Implications of Multiple Complications and Bariatric Surgery
21. Known alcoholic fatty liver disease registry
22. Prebiotics for Prevention of Ulcerative Colitis
23. Promoting safer sex in the context of heterosexual anal intercourse
24. The "power" of food marketing: Examining the grey zones of child-targeted food packaging
25. Quality of care in a novel Alberta Refugee Health Care Centre
26. Improving Emergency Mental Healthcare for Kids and Youth – Phase 1
27. Improving Emergency Mental Healthcare for Kids and Youth – Phase 2
28. Northern Alberta Cirrhosis Cohort
29. Characterizing the Role of Home Care Pharmacists in Alberta
30. RAPPORT DMARDS

PRINCIPAL INVESTIGATORS/ CO-INVESTIGATORS/PROJECT MANAGERS

Anderson, E
 Armstrong, E
 Bello, A
 Berchuck, M
 Bishop, E
 Brennand, E
 Bungard, T
 Bungard, T
 Bungard, T
 Bungard, T
 Burton, D
 Butcher, K
 Butcher, K
 Chan, C / Popeski, N
 Chan, Ming/Beveridge, J
 Chow, M
 Colmers, W
 Cuvelier, G
 Damji, K / Stewart, D
 Dang, J
 Davyduke, T
 Dieleman, L
 Douglas, G / Stewart, J / Gammel, C
 Elliott, C
 Fabreau, G
 Freedman, S
 Freedman, S
 Garcia, L/Tandon, P
 Gill, J
 Hall, J / Keeling, S



APPENDIX-A

PROJECT

31. Predominance of Biologic Use in Rheumatoid Arthritis and Psoriatic Arthritis Patients Cared for at the University of Alberta Rheumatology Clinic
32. A pragmatic patient preference randomized trial of drug tapering in rheumatoid arthritis
33. PERK II
34. The STRIKE Trial: Sustaining Total Knee Arthroplasty ROM by Introducing KEtotifen
35. Rheum4U Expansion
36. Spinal cord injury registry
37. Longitudinal follow-up for spinal cord injury
38. Retrospective review of cases of surgically-identified aortitis at 3 Canadian centres
39. Impact of Prenatal Exposure to Gestational Diabetes on the Cardiovascular Health of the Child
40. Local Thyroid Nodule Aspiration Cytopathology and Malignancy Incidence
41. HIV Registry
42. Sexual and Reproductive Health International Survey
43. Biologic DMARD pharmacosurveillance program for rheumatoid arthritis
44. Identifying biologic refractory disease in rheumatoid arthritis
45. Biologic DMARD Prescribing
46. The Alberta Back Care (ABC) pathway for low back pain
47. Derm Rheum Educational Tool for Autoimmune Manifestations (DREAM)
48. Rheumatoid Arthritis Biologic/Non Biologic
49. ON TRAAC
50. Hypertension Clinic Registry
51. SWI – Vancomycin Sternal Wound
52. KYMITT
53. CHANGE CANCER ALBERTA
54. Hemiarch vs extended arch in aortic dissection – a systematic analysis by randomized trial (HEADSTART)
55. Beta Lactam Allergy
56. Contemporary practice in renal replacement therapy
57. Noise Reduction and Non-pharmacological Strategies in the ICU as a Quality Initiative for Delirium Prevention

PRINCIPAL INVESTIGATORS/ CO- INVESTIGATORS/PROJECT MANAGERS

Hamidi, S / Keeling S

Hazelwood, G

Hildebrand, K

Hildebrand, K

Hirota, C

Ho, C

Ho, C / McKenzie, N

Hong, J

Hornberger, L

Houdek, D

Houston, S

Hughes, C

Jones, B

Jones, B

Jones, B / Yacyshyn, E

Kawchuk, G

Keeling, S

Keeling, S

Keeling, S / Katz, S

Khan, N

Khani-Hanjani, A / Mullen J

King-Shier, K

Klein, D/ Humphries, S

Kotha, V

Krick, C

Kutsogiannis, J

LaPierre, L

PROJECT

58. Addressing Treatment Gaps in COPD: A Pilot Study of Community Pharmacist Case-Finding and Evaluation of Evidence-Based Pharmacotherapy
59. Human Donor Islet Procurement for Research Purposes
60. Islet Core Database Human
61. Urban-Rural Difference in Clinical Outcomes for Patients with Bullous Pemphigoid in North-Central Alberta
62. COPD treatment and management in the community
63. FORCAST
64. BETTER Institute
65. BETTER WISE
66. BMS Apixiban Biomarkers
67. Rheum4U
68. A Gendered Framework for Understanding [Canadian] African Immigrant Resilience in Transnational [Canadian] Contexts
69. Empowering food insecure Albertans to manage their diabetes through a subsidized healthy food prescription program
70. Technomed
71. Improving Post Discharge Care after AKI
72. REPOSE
73. ACE Team (HIV project)
74. ABLE - Cisplatin and Hearing loss
75. Risk of venous thromboembolism in hospitalized cystic fibrosis patients
76. PIAAF
77. Peripartum Risk Factors for Cardiovascular Disease
78. RAFT
79. Nurse Practitioner Management of AF
80. Nurse Practitioner Management of MS
81. Breast reconstruction surgery
82. A Population Approach to Improving Hypertension Management in the Community Using Pharmacists' Advanced Scope of Practice in Alberta – A Cluster Randomized Trial of the Hypertension Canada Certification Program
83. EPI-RxISK Mobile Application
84. RxIALTA Study
85. RxING Registry
86. RxPATH (Hypertension Registry)
87. BPAP in patients with cystic fibrosis and hypercapnic respiratory failure
88. Prediction Rule for ACL Tears
89. WCCHN Family Satisfaction

PRINCIPAL INVESTIGATORS/ CO-INVESTIGATORS/PROJECT MANAGERS

Lee, S-Y

MacDonald, P

MacDonald, P

MacGillivray, M

Makhinova, T

Maksymowych, W

Manca, D

Manca, D

Mitchell, L

Mosher, D/ Emrick, A/Barber, C

Okeke-Iheririka, P

Olstad, D

Padwal, R

Pannu, N

Papathanassoglou, E

Poon, K

Rassekh, R

Regan, S

Sandhu, R / McAlister, F

Sia, W

Sivakumaran, S

Smigorowsky, M / Tsuyuki, RT

Smyth, P

Temple, C

Tsuyuki, R / Al Hamarneh Y / Watson K

Tsuyuki, R / Al Hamarneh, Y

Tsuyuki, R / Morgan, A

Tsuyuki, R / Okada, H

Tsuyuki, R / Watson, K

Walton, S

Whittaker, J

Williams, E



APPENDIX-A

PROJECT

- 90. Oat Boost in head and neck cancer
- 91. Association of daily physician activity and aortic distensibility across the heart failure continuum
- 92. CHOICE Study (hepatitis C in opioid users)
- 93. Practice tool for hormonal contraception for pharmacists
- 94. ABLE - Cisplatin and Kidney Disease

PRINCIPAL INVESTIGATORS/ CO- INVESTIGATORS/PROJECT MANAGERS

- Wismer, W
- Yavari, M

- Young, C
- Yuksel, N
- Zappitelli, M

APPENDIX-B

APPENDIX B: INVESTIGATORS SERVED

[HTTPS://WWW.EPICORE.UALBERTA.CA/HOME/APPENDIX-B-1920/](https://www.epicore.ualberta.ca/home/appendix-b-1920/)

| | | | |
|----------------------|-------------------------|----------------------|-----------------------|
| 1. Abbasi, M | 39. Beveridge, J | 77. Chan, Michael | 115. Douglas, J |
| 2. Abdelhay, N | 40. Bichel, A | 78. Chan, Ming | 116. Drummond, J |
| 3. ABBOTT/Abbie | 41. Billington, E | 79. Chao, J | 117. Drummond, N |
| 4. Abdul, A | 42. Bishop, E | 80. Chari, R | 118. Dukolow, S |
| 5. Ackman, M | 43. Bolduc, F | 81. Chow, M | 119. Dumper, J |
| 6. Addison, O | 44. Bomhof | 82. Chowdhury, R | 120. Duong, E |
| 7. Agyapong, V | 45. Bosonea, AM | 83. Chowdhury, T | 121. Duttchen, K |
| 8. Alagiakrishnan, K | 46. Boule, N | 84. Choy, J | 122. Dziwenka, M |
| 9. Al Hamarneh, Y | 47. Bowering, C | 85. Chubaty, A | 123. Dyck, J |
| 10. Allen, M | 48. Braam, B | 86. Collins-Nakai, R | 124. Dytoc, M |
| 11. Alotaibi, G | 49. Brandwein, J | 87. Colmers, W | 125. Dziegielewski, P |
| 12. Anand, V | 50. Bratu, I | 88. Cooper, E | 126. El Bialek, T |
| 13. Anderson, C | 51. Brennand, E | 89. Copeland, J | 127. Elliott, C |
| 14. Anderson, E | 52. Brisbois, T | 90. Coulden, R | 128. Emery, D |
| 15. Anderson, S | 53. Brockway, M | 91. Couplan, N | 129. Emrick, A |
| 16. Anzarut, A | 54. Broderick, G | 92. Craig, S | 130. Escudar, J |
| 17. Armstrong, P | 55. Broule, N | 93. Culos-Reed, N | 131. Estabrooks, C |
| 18. Ashton, T | 56. Brown, N | 94. Cummings | 132. Eurich, D |
| 19. Awosoga | 57. Buldoc, F | 95. Cuvelier, G | 133. Evaschesen, C |
| 20. Badri, P | 58. Bullard, M | 96. Dafoe, W | 134. Everaert, D |
| 21. Bagshaw, S | 59. Bungard, T | 97. Dahlan, R | 135. Ezekowitz, J |
| 22. Bailey, D | 60. Burt | 98. Damji, K | 136. Fabreau, G |
| 23. Bakal, J | 61. Burton, D | 99. Dang, J | 137. Fairgrieve-Park |
| 24. Baqays, A | 62. Burton, J | 100. Davenport, M | 138. Fedorak, R |
| 25. Barber, C | 63. Butalia, S | 101. Davidson, S | 139. Fedorak/Alistair |
| 26. Beahm, N | 64. Butcher, K | 102. Davis, P | 140. Ferguson, C |
| 27. Beard, K | 65. Butler, C | 103. Davyduke, T | 141. Fernandes, C |
| 28. Beaulieu, C | 66. Cadili, A | 104. Deane | 142. Fodor, G |
| 29. Beaupre, L | 67. Cameron, J | 105. Dersch-Mills, D | 143. Fox, R |
| 30. Becher, H | 68. Campbell, D | 106. Devoe, D | 144. Francis, G |
| 31. Bedard, E | 69. Campbell-Scherer, D | 107. Dewart, K | 145. Frank, C |
| 32. Bell, N | 70. Carbonneau, M | 108. Dhaliwal, R | 146. Freedman, S |
| 33. Bell, R | 71. Carr, F | 109. Diamant, M | 147. Fujiwara |
| 34. Bellerose, D | 72. Carrie, A | 110. Dieleman, L | 148. Fuller, M |
| 35. Bello, A | 73. Casey, L | 111. Dillane, D | 149. Fung, C |
| 36. Benzies, K | 74. Cervera, C | 112. Dolatabadi, S | 150. Galvin, D |
| 37. Belmurugiah, N | 75. Chan, C | 113. Dong, K | 151. Gammel, C |
| 38. Berchuck, M | 76. Chan, K | 114. Douglas, G | 152. Garcia, L |

APPENDIX-B

| | | | |
|-----------------------|------------------------------------|----------------------|---------------------|
| 153. Garneau Lung Lab | 193. Houston, S | 233. Kopolovic, I | 273. Makhinova, T |
| 154. Garros, D | 194. Hudson, A | 234. Koshman, S | 274. Makowsky, M |
| 155. Ghamdi, M | 195. Hughes, C | 235. Kotha, V | 275. Maksymowych, W |
| 156. Gibb, R | 196. Humphries, S | 236. Krick, C | 276. Malcolm, A |
| 157. Giese-Davis, J | 197. Hunt, I | 237. Kroeker, K | 277. Man, P/Sin, D |
| 158. Gilfoyle, E | 198. Huntsman, R | 238. Kumar, A | 278. Manca, D |
| 159. Gill, J | 199. Huynh, H | 239. Kutsogiannis, J | 279. Manhas, K |
| 160. Gillespie, W | 200. Hwang, P | 240. Lai, F | 280. Mann, U |
| 161. Gilmour, L | 201. Ickert, C | 241. Lai, T | 281. Manns, B |
| 162. Ginn, C | 202. Institute of Health Economics | 242. Lamb, C | 282. Marin, A |
| 163. Gniadecki, R | 203. Isaac, DM | 243. Lamb, T | 283. Marra, C |
| 164. Godziuk, K | 204. Jacka, M | 244. LaPierre, L | 284. Marrie, T |
| 165. Goez, H | 205. Jackson, M | 245. Lazaurescu, A | 285. Marsh, R |
| 166. Gonzales | 206. Janzen, W | 246. Lee, A | 286. Marshall, D |
| 167. Gragasin, F | 207. Jean-Anne | 247. Lee, K | 287. Martin, L |
| 168. Graham, M | 208. Jeerakathil, T | 248. Lee, M | 288. Mason, A |
| 169. Graham, T | 209. Joffe, M | 249. Lee, N | 289. Masterson, T |
| 170. Gramlich, L | 210. Johnson, JA | 250. Lee, S-Y | 290. May, L |
| 171. Green, T | 211. Johnston, B | 251. Lee, T | 291. Mayers, I |
| 172. Grinman, M | 212. Jones, A | 252. Lehr, E | 292. McAlister, F |
| 173. Gross, D | 213. Jones, B | 253. Leon, H | 293. McBrien, K |
| 174. Guenther, C | 214. Kaba, A | 254. Leung, B | 294. McEwan, M |
| 175. Guerra, G | 215. Kalra, S | 255. Lewanczuk, R | 295. McFarlane, A |
| 176. Guirguis, M | 216. Kanji, H | 256. Li, Suqing | 296. McGhan, S |
| 177. Gyenes, G | 217. Kao, D | 257. Lin, A | 297. McIntosh, C |
| 178. Hall, J, | 218. Kaplan, G | 258. Lindberg, M | 298. McIntosh, K |
| 179. Hall, K | 219. Katz, S | 259. Logsetty, S | 299. McKenzie, N |
| 180. Hamidi, S | 220. Kassiri, J | 260. Long, R | 300. McKinnon, G |
| 181. Hanna, J | 221. Kaufman, J | 261. Lu, C | 301. McLean, D |
| 182. Haubrich, S | 222. Kawchuk, G | 262. Lunney | 302. McMurtry, S |
| 183. Haykowsky, M | 223. Keeling, S | 263. Ma, M | 303. McNeely, M |
| 184. Hazelwood, G | 224. Kendle, D | 264. MacDonald, G | 304. McNeil, J |
| 185. Hazenbiller, O | 225. Keshteli, A | 265. MacDonald, K | 305. Meherali, S |
| 186. Hildebrand, K | 226. Keys, E | 266. MacDonald, P | 306. Metz |
| 187. Hirji, A | 227. Khan, N | 267. MacGillivray, M | 307. Michail, K |
| 188. Hirota, C | 228. Khani-Hanjani, A | 268. Mackie, A | 308. Michelakis, E |
| 189. Ho, C | 229. Kimber, S | 269. Madsen, K | 309. Miciak, G |
| 190. Hong, J | 230. King-Shier, K | 270. Maier, E | 310. Minhas, R |
| 191. Hossini, F | 231. Kleib, M | 271. Majumdar, S | 311. Mitchell, L |
| 192. Houle, S | 232. Klein, D | 272. Makaroff, C | |

APPENDIX-B

| | | | |
|------------------------|--------------------|--------------------------|-----------------------|
| 312. Modi | 351. Patel | 390. Sandhu, R | 429. Tandon, P |
| 313. Mohydeen, S | 352. Paterson, I | 391. Sarban, V | 430. Taylor, J |
| 314. Molzahn, A | 353. Pauly, R | 392. Scantlebury, M | 431. Thejeel, B |
| 315. Monument, M | 354. Pearson, G | 393. Schindel, T | 432. Temple, C |
| 316. Morgan, A | 355. Pehowich, M | 394. Schultz, K | 433. Temple-Oberle, C |
| 317. Morgan, C | 356. Pendharkar, S | 395. Schulze, C | 434. Teo, K |
| 318. Morison, N | 357. Persad, S | 396. Shanks, M | 435. Thompson, A |
| 319. Morrissey, A | 358. Pharis | 397. Shapiro, A | 436. Thomson, A |
| 320. Mosher, D | 359. Plint, P | 398. Sharma, A | 437. Tomczak, C |
| 321. Mosli, M | 360. Poon, K | 399. Sharpe, H | 438. Tonelli, M |
| 322. Mullen, J | 361. Popeski, N | 400. Sheldon, S | 439. Torrible, S |
| 323. Murray, A | 362. Power, C | 401. Shiau, G | 440. Toth, E |
| 324. Mushahwar, V | 363. Pretorius, V | 402. Shibata, M | 441. Townsend, D |
| 325. Nanda, A | 364. Quan, H | 403. Sharifzadeh-Amin, M | 442. Toy, J |
| 326. Narine, K | 365. Rajesky, A | 404. Shiau, G | 443. Tredget, T |
| 327. Nee, ANewman, S | 366. Rashiq, S | 405. Sia, W | 444. Triska, O |
| 328. Noel, M | 367. Rassekh, R | 406. Siddiqi, Z | 445. Tsui, B |
| 329. Norris, C | 368. Ravid, N | 407. Siffeldeen, J | 446. Tsuyuki, R |
| 330. Norris, J | 369. Regan, S | 408. Silva, M | 447. Turgeon, R |
| 331. Norton, L | 370. Reid, S | 409. Simpson, S | 448. Tworek, K |
| 332. Nwoke | 371. Rieger, J | 410. Sinclair, D | 449. Tymchak, W |
| 333. O'Connell, D | 372. Riley, N | 411. Singh, G | 450. Tyrrell, B |
| 334. Ohinmaa, A | 373. Robinson, A | 412. Sivakumar, L | 451. Tyrrell, G |
| 335. Okada, H | 374. Robinson, J | 413. Sivakumaran, S | 452. Tyrrell, L |
| 336. Olmstead, D | 375. Rolfson, D | 414. Slaughter, S | 453. Urquhart, G |
| 337. Olson, D | 376. Rolfson, D | 415. Smigorowsky, M | 454. Valtuille, L |
| 338. Olstad, D | 377. Romney, J | 416. Smyth, P | 455. Van Diepen, S |
| 339. Oster, R | 378. Rosenthal, M | 417. Solimani, M | 456. Van Haaften, D |
| 340. Oudit, G | 379. Ross, D | 418. Somily, A | 457. Van Zanten, S |
| 341. PACU-RAH | 380. Rowe, B | 419. Soo, I | 458. Venturato, L |
| 342. Padwal, R | 381. Rudolf, F | 420. Spoor, M | 459. Vethanayagam, D |
| 343. Pannu, N | 382. Ruiz, M | 421. Spencer, T | 460. Vliagoftis, H |
| 344. Pantano, A | 383. Russell, A | 422. Steiner, I | 461. Vohra, S |
| 345. Papathansoglou, E | 384. Ryan, E | 423. Stewart, D | 462. Wagg, A |
| 346. Parent, E | 385. Ryan, L | 424. Stewart, J | 463. Walters, B |
| 347. Park, E | 386. Saad, E | 425. Sun, L | 464. Walters, S |
| 348. Parsons, L | 387. Sadowski, C | 426. Sutton, R | 465. Walton, S |
| 349. Pasiorowski, A | 388. Sadowski, D | 427. Svenson, L | 466. Wang, S |
| 350. Pate | 389. Samuel, S | 428. Svystun, O | 467. Warneke, L |



APPENDIX-B

- | | | |
|--------------------|------------------|--------------------|
| 468. Watson, J | 481. Williams, E | 494. Yuksel, N |
| 469. Watson, K | 482. Wilson, K | 495. Zappitelli, M |
| 470. Weatherald, J | 483. Wilson, M | 496. Zhu, J |
| 471. Webb, C | 484. Wismer, W | 497. Zimmermann, G |
| 472. Webber | 485. Wong, J | 498. Zuk, D |
| 473. Weis, E | 486. Wright | 499. Zygun, D |
| 474. Wells, H | 487. Wu, C | |
| 475. Welsh, R | 488. Wurz, A | |
| 476. Whiting, J | 489. Yacyshyn, E | |
| 477. Whittaker, J | 490. Yanicki | |
| 478. Wiebe, S | 491. Yavari, M | |
| 479. Wilke, M | 492. Yeung, R | |
| 480. Wilkinson, G | 493. Young, C | |

APPENDIX-C

APPENDIX C: EPICORE CENTRE PUBLICATIONS – APRIL, 2019 TO JUNE, 2020

[HTTPS://WWW.EPICORE.UALBERTA.CA/HOME/APPENDIX-C-1920/](https://www.epicore.ualberta.ca/home/appendix-c-1920/)

1. Szabo S, Tsuyuki R, Lloyd A. Truly, Broadly, and Deeply: How Dynamic Visualizations Are Changing the Way We Understand and Communicate HEOR Findings. *Value & Outcomes Spotlight* 2019;5(2):27-30.
2. Al Hamarneh YN, Johnston K, Marra CA, Tsuyuki RT. Pharmacist prescribing and care improves cardiovascular risk, but is it cost-effective? A cost-effectiveness analysis of the Rx EACH study. *Can Pharm J* 2019;152(4):257-266. DOI: 10.1177/1715163519851822.
3. Duong E, Al Hamarneh YN, Tsuyuki RT, Wagg A, Hunter KF, Schulz J, Spencer M, Sadowski CA. Case finding for urinary incontinence and falls in older adults at community pharmacies. *Can Pharm J* 2019;152(4):228-233. DOI: 10.1177/1715163519852378.
4. Sanyal C, Husereau DR, Beahm NP, Smyth D, Tsuyuki RT. Cost-effectiveness and budget impact of the management of uncomplicated urinary tract infection by community pharmacists. *BMC Health Services Research* 2019;19:499. <https://doi.org/10.1186/s12913-4303-y>.
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