



## **EPICORE 2014 Annual Report**

**EPICORE SCORes! – Supporting Clinical and Outcomes Research**



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# DIRECTOR'S MESSAGE

## Director's Message

Thanks for reading our 2014 annual report. Once again, you'll see references to hockey in our report. Indeed, members of our team continue to excel as we stickhandled our way through our second year after restructuring.

2014 was a productive year which saw 54 publications supported by EPICORE. Looking at these publications, you can see the breadth of science that we support. Please have a closer look at our highlighted research and publication list.

I am especially proud of 4 of our PhD students who have graduated (and got jobs!) since late 2013.

Much of the credit for our success goes to the EPICORE team. This year we have highlighted some of our MVPs: Dr. Yazid Al Hamarneh (trainee MVP), Debbie Boyko (Staff MVP), Dr. Tammy Bungard (faculty MVP), and Dr. Kathryn King-Shier (alumni MVP). But really, the whole team deserves awards for upholding the principles of EPICORE: excellence in support of clinical and health services research.

We are very excited about the upcoming year. Read on to find out about many exciting new projects and our role as a SPOR SUPPORT Unit Platform, which brings in infrastructure funding.

I would like to thank the administrative team at the Department of Medicine for their support, with special mention to Tim ("Cyclone") Bulger, Amy ("Numbers") Gong, Len ("Kicks") Wong, and Margo ("GoRiders") Desmarais. I would also like to thank Paul (No Red Ink) Braconier for his help with our financial reporting.

As they say, "to play the game is good, to win is better, but to love the game is best of all". Thanks for your support, you bring our game to the next level.



Dr. Ross Tsuyuki  
Professor of Medicine  
Director, EPICOXRE  
Department of Medicine  
Faculty of Medicine and Dentistry  
University of Alberta



# WHO WE ARE

## Who We Are

EPICORE is an operating unit within the Department of Medicine, which itself is a department of the 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.

### Department of Medicine

**Mission:** To improve the health and health care of current and future generations through excellence and innovation in education, research and clinical care.

## 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 supports the mission of the Faculty of Medicine and Dentistry and the Department of Medicine through:**

- Conducting innovative research that makes a difference in health and health care
- Furthers this excellence through service to other health researchers
- Education of the next generation of health researchers through graduate student programs and courses
- Partnerships with like-minded individuals and organizations



# WHAT WE DO

## What We Do

Our Goal: As noted on the cover, EPICORE SCORes (Supporting Clinical and Outcomes Research). We **assist** by ensuring that our clients achieve their clinical/outcomes research objectives.

EPICORE is involved in the full range of activities necessary for the conduct of clinical trials and outcomes/health services research, including protocol/research design consultations, case report forms design, database creation, study management, implementation, site coordination (for multicentre trials), data management, biostatistical consultation and analyses and assistance with grant preparation.

EPICORE has completed over 541 projects (Appendix A) for over 255 different investigators (Appendix B).

In 2014, we:

- worked on 49 projects, ranging from consultations to multicentre trials (Appendix C)
- were recognized on 54 publications (Appendix D)
- received 5 awards (4 from trainees)



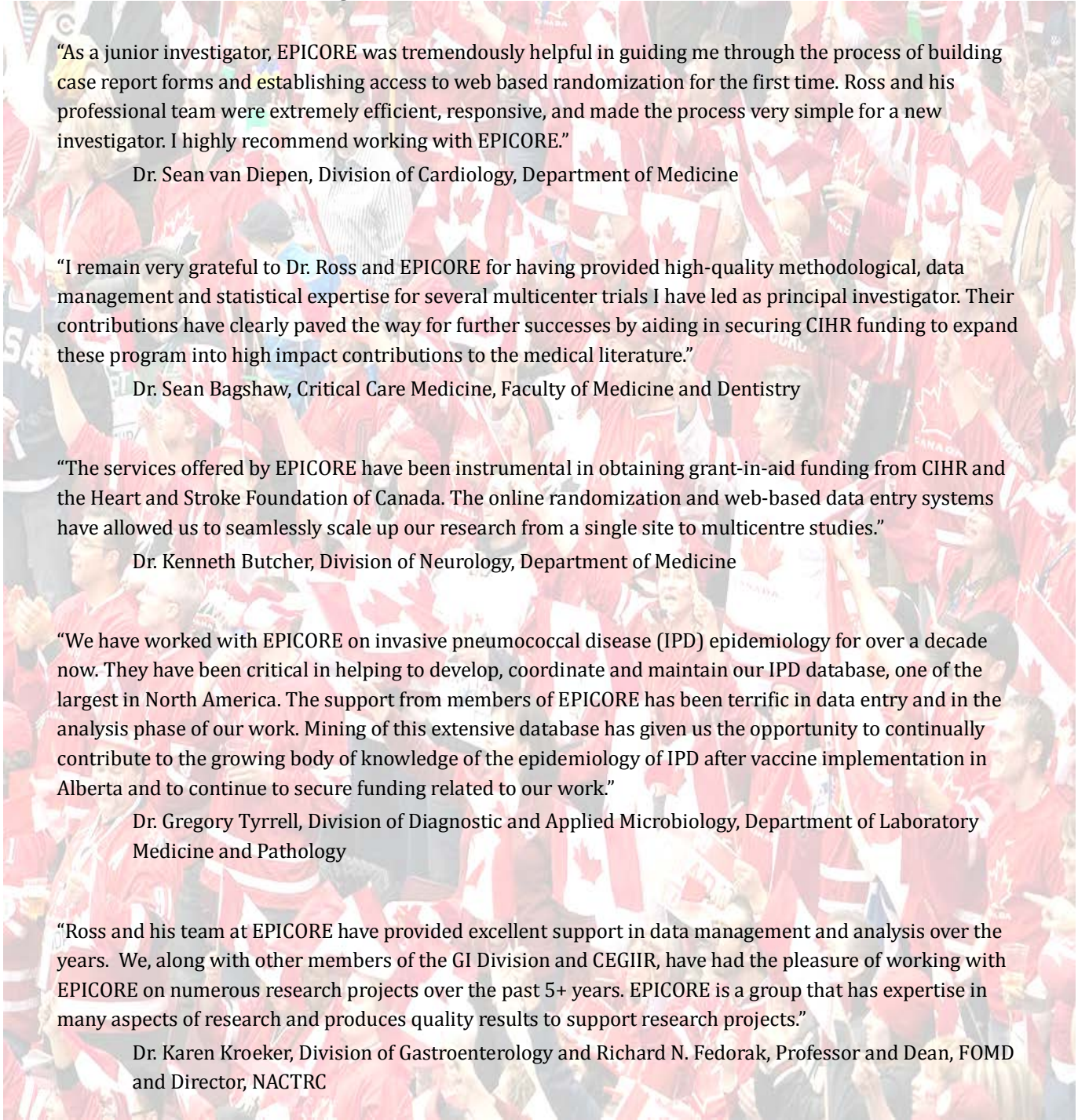
# WHAT WE DO

## EPICORE Numbers: Some Team Stats



## OUR FANS

### What Our Fans Say



“As a junior investigator, EPICORE was tremendously helpful in guiding me through the process of building case report forms and establishing access to web based randomization for the first time. Ross and his professional team were extremely efficient, responsive, and made the process very simple for a new investigator. I highly recommend working with EPICORE.”

Dr. Sean van Diepen, Division of Cardiology, Department of Medicine

“I remain very grateful to Dr. Ross and EPICORE for having provided high-quality methodological, data management and statistical expertise for several multicenter trials I have led as principal investigator. Their contributions have clearly paved the way for further successes by aiding in securing CIHR funding to expand these program into high impact contributions to the medical literature.”

Dr. Sean Bagshaw, Critical Care Medicine, Faculty of Medicine and Dentistry

“The services offered by EPICORE have been instrumental in obtaining grant-in-aid funding from CIHR and the Heart and Stroke Foundation of Canada. The online randomization and web-based data entry systems have allowed us to seamlessly scale up our research from a single site to multicentre studies.”

Dr. Kenneth Butcher, Division of Neurology, Department of Medicine

“We have worked with EPICORE on invasive pneumococcal disease (IPD) epidemiology for over a decade now. They have been critical in helping to develop, coordinate and maintain our IPD database, one of the largest in North America. The support from members of EPICORE has been terrific in data entry and in the analysis phase of our work. Mining of this extensive database has given us the opportunity to continually contribute to the growing body of knowledge of the epidemiology of IPD after vaccine implementation in Alberta and to continue to secure funding related to our work.”

Dr. Gregory Tyrrell, Division of Diagnostic and Applied Microbiology, Department of Laboratory Medicine and Pathology

“Ross and his team at EPICORE have provided excellent support in data management and analysis over the years. We, along with other members of the GI Division and CEGIIR, have had the pleasure of working with EPICORE on numerous research projects over the past 5+ years. EPICORE is a group that has expertise in many aspects of research and produces quality results to support research projects.”

Dr. Karen Kroeker, Division of Gastroenterology and Richard N. Fedorak, Professor and Dean, FOMD and Director, NACTRC



### Our Best Games: A 'hat trick' of innovation

EPICORE was acknowledged in 54 publications in 2014 (Appendix D). Here are 3 examples of our work.

#### THE FIRST GOAL:

**Title:** McAlister FA, Majumdar SR, Padwal RS, *et al.* Case management for blood pressure and lipid level control after minor stroke: PREVENTION randomized controlled trial. CMAJ 2014; 186(8): 577-584. DOI:10.1503/cmaj.140053.

**Highlighted Researcher:** Dr. Finlay McAlister. Professor of Medicine, Division of General Internal Medicine, Faculty of Medicine and Dentistry, University of Alberta.

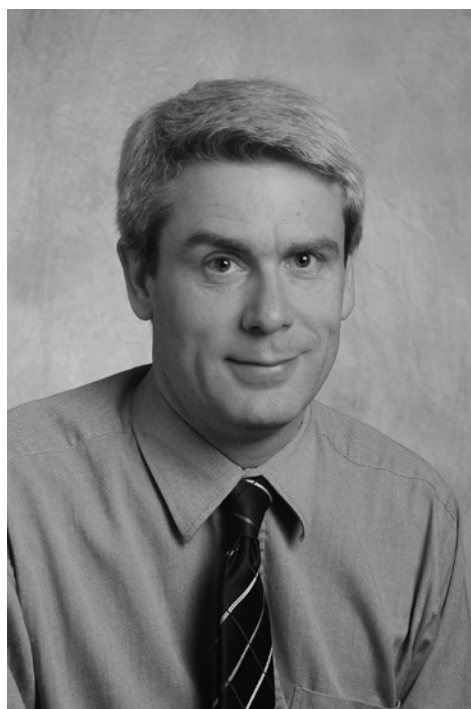
**Methods:** In this randomized controlled trial, patients with recent stroke or transient ischemic attack were allocated to pharmacist-led vs. nurse led case management. Nurses measured cardiovascular risk factors, counseled patients, and faxed results to primary care physicians. Pharmacists did the same, but also prescribed medications. Patients were followed for 6 months.

**Main Findings:** A total of 279 patients were enrolled, 43.4% of patients in the pharmacist case management group reached systolic blood pressure and LDL cholesterol targets, while 30.9% reached target in the nurse-led group (a 12.5% absolute difference and number needed to treat of 8,  $p = 0.03$ ).

**Impact:** This study challenges the usual paradigm of chronic disease management (which is usually done by nurses). While nurse-led case management in the usual fashion did improve management of risk factors, a greater improvement was observed in patients managed by pharmacists with prescriptive authority.

**Funding:** Heart and Stroke Foundation, Alberta Heritage Foundation for Medical Research, and Knowledge Translation Canada.

**EPICORE's Role:** We developed the case report forms and database for the study. EPICORE staff member Debbie Boyko, RN was one of the nurses in the study and our own Miriam Fradette was the study coordinator.



## Case management for blood pressure and lipid level control after minor stroke: PREVENTION randomized controlled trial

Finlay A. McAlister MD MSc, Sumit R. Majumdar MD MPH, Raj S. Padwal MD MSc, Miriam Fradette BScPharm, Ann Thompson BScPharm PharmD, Brian Buck MD, Naeem Dean MD, Jeffrey A. Bakal PhD, Ross Tsuyuki PharmD MSc, Steven Grover MD MPA, Ashfaq Shuaib MD

### ABSTRACT

**Background:** Optimization of systolic blood pressure and lipid levels are essential for secondary prevention after ischemic stroke, but there are substantial gaps in care, which could be addressed by nurse- or pharmacist-led care. We compared 2 types of case management (active prescribing by pharmacists or nurse-led screening and feedback to primary care physicians) in addition to usual care.

**Methods:** We performed a prospective randomized controlled trial involving adults with recent minor ischemic stroke or transient ischemic attack whose systolic blood pressure or lipid levels were above guideline targets. Participants in both groups had a monthly visit for 6 months with either a nurse or pharmacist. Nurses measured cardiovascular risk factors, counselled patients and faxed results to primary care physicians (active control). Pharmacists did all of the above as well as prescribed according to treatment algorithms (intervention).

**Results:** Most of the 279 study participants (mean age 67.6 yr, mean systolic blood pressure 134 mm Hg, mean low-density lipoprotein [LDL] cholesterol 3.23 mmol/L) were already receiving treatment at baseline (antihypertensives: 78.1%; statins: 84.6%), but none met guideline targets (systolic blood pressure  $\leq$  140 mm Hg, fasting LDL cholesterol  $\leq$  2.0 mmol/L). Substantial improvements were observed in both groups after 6 months: 43.4% of participants in the pharmacist case manager group met both systolic blood pressure and LDL guideline targets compared with 30.9% in the nurse-led group (12.5% absolute difference; number needed to treat = 8,  $p = 0.03$ ).

**Interpretation:** Compared with nurse-led case management (risk factor evaluation, counselling and feedback to primary care providers), active case management by pharmacists substantially improved risk factor control at 6 months among patients who had experienced a stroke. Trial registration: ClinicalTrials.gov, no. NCT00931788

**Competing interests:** Raj Padwal is a site investigator for clinical trials for NovoNordisk and CVRx, and has received grant funding for a blood pressure cuff study. He has received personal fees for hypertension talks from Merck, Abbott and Servier and for advisory board service from Medtronic and Forest. Ashfaq Shuaib has received speaker bureau fees from CoAxia, Pfizer, BI, Sanofi, Bayer, AstraZeneca, Lundbeck, D-Pharm, BrainsGate, Tribute and Bristol Myers Squibb. He has received grant funding from Lundbeck, D-Pharm, GlaxoSmithKline, Asubio, PhotoThera, BrainsGate, WL Gore and Aga Medical. Ross Tsuyuki has received consultancy fees from Bristol Myers Squibb, AstraZeneca, PharmaSmart International, Merck and Abbott. He has received grant funding from Sanofi and AstraZeneca and serves on the data monitoring board for Boehringer Ingelheim. No other competing interests declared.

This article has been peer reviewed.

**Correspondence to:** Finlay McAlister, finlay.mcalister@ualberta.ca

CMAJ 2014, DOI:10.1503/cmaj.140053

The risk of cardiovascular events is high for patients who survive a stroke or transient ischemic attack.<sup>1,2</sup> Treatment of hypertension and dyslipidemia can substantially reduce this risk.<sup>3-7</sup> However, vascular risk factors are often suboptimally managed after stroke or transient ischemic attack, even among patients admitted to hospital or seen in specialized stroke prevention clinics.<sup>8-10</sup>

Multiple barriers are responsible for the suboptimal control of risk factors, and traditional means of educating practitioners and patients have limited effectiveness.<sup>11</sup> Although it has been suggested that “case managers” may be able to improve the management of risk factors, evidence is sparse and inconsistent between stud-

ies.<sup>12-16</sup> The most recent Cochrane review on this topic concluded that “nurse- or pharmacist-led care may be a promising way forward ... but these interventions require further evaluation.”<sup>16</sup> Thus, we designed this trial to evaluate whether a pharmacist case manager could improve risk factors among survivors of stroke or transient ischemic attack.<sup>17</sup> Because we have previously shown that hypertension control can be improved by monthly evaluation by nurses (with patient counselling and faxing of blood pressure measurements with guideline recommendations to primary care physicians),<sup>18</sup> and this is an alternate method of case management implemented in many health organizations, we used this approach as the active control group for this study. Thus,

## OUR BEST GAMES

### THE SECOND GOAL:

**Title:** Bainey KR, Ferguson C, Ibrahim QI, Tyrrell, B, Welsh RC, for the Vital Heart Response Registry Investigators. Impact of Reperfusion Strategy on Aborted Myocardial Infarction: Insights From a Large Canadian ST-Elevation Myocardial Infarction Clinical Registry. Can J Cardiol 2014; 30: 1570-1575. DOI:10.1016/j.cjca.2014.08.021

**Highlighted Researcher:** Dr. Kevin R. Bainey. Assistant Professor of Medicine, Division of Cardiology/Mazankowski Alberta Heart Institute, Department of Medicine, Faculty of Medicine and Dentistry, University of Alberta.

**Methods:** In this registry of consecutive patients admitted with heart attack (ST-segment myocardial infarction), Dr. Bainey and colleagues investigated the phenomenon of aborted myocardial infarction.

**Main Findings:** A total of 2235 patients were included and 16% were found to have aborted myocardial infarction. Aborted myocardial infarction rates were higher in those receiving fibrinolysis (clot-dissolving drugs) treated early (within 4 hours) compared to those receiving percutaneous coronary intervention (angioplasty).

Improved hospital outcomes were seen in those with aborted myocardial infarction compared with those having a complete myocardial infarction (5.6% vs. 13.6%, respectively).

**Impact:** This study showed that aborted myocardial infarction occurs frequently, particularly with early fibrinolytic treatment, and is associated with better in-hospital outcomes. In large geographic areas like Canada, where access to heart centres is sometimes limited, aborted myocardial infarction could be a realistic goal.

**Funding:** Alberta Health Services, AstraZeneca Canada.

**EPICORE's Role:** We developed the case report forms, built the database, entered the data, and performed the statistical analyses.





Canadian Journal of Cardiology 30 (2014) 1570–1575

## Clinical Research

# Impact of Reperfusion Strategy on Aborted Myocardial Infarction: Insights From a Large Canadian ST-Elevation Myocardial Infarction Clinical Registry

Kevin R. Bainey, MD, MSc, Craig Ferguson, BSc, Quazi I. Ibrahim, MSc, Ben Tyrrell, MD, and Robert C. Welsh, MD; for the Vital Heart Response Registry Investigators

*Mazankowski Alberta Heart Institute, University of Alberta, Edmonton, Alberta, Canada*

### ABSTRACT

**Background:** Reperfusion in ST-elevation myocardial infarction (STEMI) improves survival. Moreover, early reperfusion can abort the infarct and avoid significant myocardial necrosis. Yet, limited real world data exist and comparison between reperfusion strategies has not been established.

**Methods:** Using a comprehensive Canadian registry of consecutive STEMI patients, we prospectively collected serial electrocardiograms (ECGs) and clinical data from August 2006 to March 2011. Aborted myocardial infarction (AbMI) was defined as a maximal creatine kinase  $\leq 2$  times the upper limit of normal with evolutionary ECG changes of STEMI. ECG confounders and subjects with incomplete data were excluded.

**Results:** Of the 2235 STEMI patients reperfused within 12 hours, 16.0% were considered to have an AbMI. Numerically, higher rates of AbMI with fibrinolysis vs primary percutaneous coronary intervention were reported (17.0% vs 14.7%;  $P = 0.15$ ) with a temporal pattern seen up to 4 hours from symptom onset in favour of fibrinolysis ( $P$  trend  $< 0.001$ ). Most notably, the highest frequency of AbMI was observed within the first hour with fibrinolysis (31.1%). Improved in-hospital outcomes (death/shock/congestive heart failure) were seen with AbMI (5.6% vs 13.6%;  $P < 0.001$ ; adjusted odds ratio, 0.22; 95% confidence interval, 0.08–0.57).

**Conclusions:** In a large contemporary Canadian STEMI registry, AbMI appears to be common and associated with improved clinical outcome. Early reperfusion seems to enhance AbMI particularly when fibrinolysis is administered within 1 hour of symptom onset.

### RÉSUMÉ

**Introduction :** La reperfusion lors d'un infarctus du myocarde (IM) avec sus-décalage du segment ST améliore la survie. En outre, une reperfusion précoce peut abolir l'infarctus et éviter une nécrose significative. Jusqu'à présent, des données limitées issues du monde réel sont disponibles, et la comparaison des stratégies de reperfusion n'a pas été établie.

**Méthodes :** Via l'utilisation d'un registre canadien complet des patients ayant éprouvé un IM avec sus-décalage du segment ST, nous avons recueillis de façon prospective des séries d'électrocardiogrammes (ECG) et de données cliniques d'août 2006 à mars 2011. L'infarctus du myocarde aboli (AbMI) a été catégorisé par une créatine kinase maximale  $\leq 2$  fois la limite supérieure à la normale avec des changements dans l'évolution de l'ECG d'IM avec sus-décalage du segment ST. Les ECG prêtant à confusion et les sujets ayant des informations incomplètes ont été exclus.

**Résultats :** Sur les 2235 patients d'IM avec sus-décalage du segment ST reperfusés dans les 12 heures, 16,0 % étaient considérés comme ayant un AbMI. Numériquement, des taux plus élevés d'AbMI avec fibrinolyse vs une intervention coronarienne percutanée primaire ont été rapportés (17,0 % vs 14,7 %,  $P = 0,15$ ) avec un schéma temporel remarqué jusqu'à 4 heures après l'apparition des symptômes en faveur de la fibrinolyse (tendance de  $P < 0,001$ ). Plus particulièrement, la fréquence la plus élevée d'AbMI a été observée dans la première heure de fibrinolyse (31,1 %). Une amélioration des résultats intra-hospitaliers (décès/AVC/insuffisance cardiaque congestive) a été observée avec AbMI (5,6 % vs 13,6 %,  $P < 0,001$ ; risque relatif ajusté de 0,22; intervalle de confiance à 95 %, 0,08 à 0,57).

**Conclusions :** Dans un registre élargi d'IM avec sus-décalage du segment ST canadien contemporain, l'AbMI semble être commune et associée à une amélioration des résultats cliniques. Une reperfusion précoce semble accroître la probabilité d'AbMI en particulier lorsque la fibrinolyse est administrée 1 heure après l'apparition des symptômes.

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See page 1574 for disclosure information.

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Acute reperfusion therapy enhances survival in ST-elevation myocardial infarction (STEMI). Moreover, early initiation incrementally enhances clinical outcome.<sup>1,2</sup> Rapid restoration of epicardial patency using either a mechanical or pharmacologic approach provides myocardial stability and reduces infarct size. When prompt reperfusion therapy is initiated, myocardial

## OUR BEST GAMES

### THE THIRD GOAL:

**Title:** Punja S, Shamseer L, Olson K, Vohra S. *Rhodiola Rosea* for Mental and Physical Fatigue in Nursing Students: A Randomized Controlled Trial. PLOS ONE 2014; 9(0):e108416. DOI: 10.1371/journal.pone.0108416

**Highlighted Researcher:** Salima Punja, PhD student, CARE Program, Departments of Pediatrics and Medicine, Faculty of Medicine and Dentistry, University of Alberta.

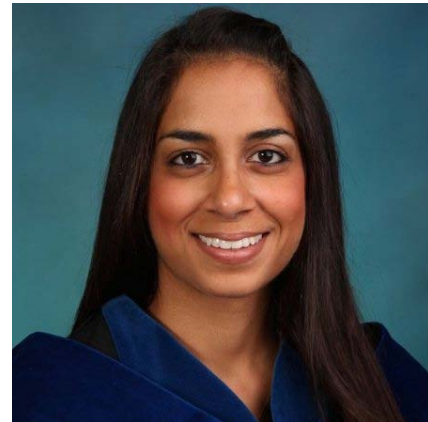
**Methods:** This was a randomized, double-blinded trial of *Rhodiola rosea* compared to placebo for reducing fatigue in nursing students on shift work. Subjects took one 364mg capsule at the start of their wakeful period, and another after four hours if needed for a total of 42 days.

**Main Findings:** A total of 48 subjects participated. Fatigue, as measured by the Vitality –subscale, was significantly improved in the placebo group compared to *Rhodiola rosea*. In addition, the visual analogue scale for fatigue (VAS-F) was also improved in favour of the placebo group.

**Impact:** Many individuals who work at nights, like nurses, experience fatigue and some take herbal remedies such as *Rhodiola rosea*. This well-designed trial suggests no benefit from this product and in fact, a worsening of fatigue.

**Funding:** Alberta Agriculture and Rural Development.

**EPICORE's Role:** We developed the case report forms and built the database. Drs. Tsuyuki and Kolber were members of the Data Monitoring Committee.





## Rhodiola Rosea for Mental and Physical Fatigue in Nursing Students: A Randomized Controlled Trial

Salima Punja<sup>1</sup>, Larissa Shamseer<sup>2,3</sup>, Karin Olson<sup>4</sup>, Sunita Vohra<sup>5\*</sup>

**1** Department of Medicine, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Alberta, Canada, **2** Clinical Epidemiology Program, Ottawa Hospital Research Institute, Ottawa, Ontario, Canada, **3** Department of Epidemiology and Community Medicine, Faculty of Medicine, University of Ottawa, Ottawa, Ontario, Canada, **4** Faculty of Nursing, University of Alberta, Edmonton, Alberta, Canada, **5** Complementary and Alternative Research and Education (CARE) Program, Department of Pediatrics and School of Public Health, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Alberta, Canada

### Abstract

**Background:** Fatigue is one of many unintended consequences of shift work in the nursing profession. Natural health products (NHPs) for fatigue are becoming an increasingly popular topic of clinical study; one such NHP is *Rhodiola rosea*. A well-designed, rigorously conducted randomized controlled trial is required before therapeutic claims for this product can be made.

**Objective:** To compare the efficacy of *R. rosea* with placebo for reducing fatigue in nursing students on shift work.

**Design:** A parallel-group randomized, double-blinded, placebo-controlled trial of 18–55 year old students from the Faculty of Nursing from the University of Alberta, participating in clinical rotations between January 2011 and September 2011.

**Interventions:** Participants were randomized to take 364 mg of either *R. rosea* or identical placebo at the start of their wakeful period and up to one additional capsule within the following four hours on a daily basis over a 42-day period.

**Outcomes:** The primary outcome was reduction in fatigue over the 42-day trial period measured using the Vitality-subscale of the RAND-36, cross-validated by the visual analogue scale for fatigue (VAS-F). Secondary outcomes included health-related quality of life, individualized outcomes assessment, and adverse events.

**Results:** A total of 48 participants were randomized to *R. rosea* (n = 24) or placebo (n = 24). The mean change in scores on the Vitality-subscale was significantly different between the study groups at day 42 in favour of placebo (−17.3 (95% CI −30.6, −3.9), p = 0.011). The mean change in scores on the VAS-F was also significantly different between study groups at day 42 in favour of placebo (1.9 (95% CI 0.4, 3.5), p = 0.015). Total number of adverse events did not differ between *R. rosea* and placebo groups.

**Conclusion:** This study indicates that among nursing students on shift work, a 42-day course of *R. Rosea* compared with placebo worsened fatigue; however, the results should be interpreted with caution.

**Trial Registration:** Clinicaltrials.gov NCT01278992

**Citation:** Punja S, Shamseer L, Olson K, Vohra S (2014) Rhodiola Rosea for Mental and Physical Fatigue in Nursing Students: A Randomized Controlled Trial. PLoS ONE 9(9): e108416. doi:10.1371/journal.pone.0108416

**Editor:** Natalie Walker, The National Institute for Health Innovation, New Zealand

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**Copyright:** © 2014 Punja et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Funding:** This project was funded by the Alberta Agriculture and Rural Development, Government of Alberta, through AVAC Ltd. The funder developed and prepared the trial intervention, but had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; and preparation, review, or approval of the manuscript.

**Competing Interests:** This trial was funded by the Alberta Agriculture and Rural Development, Government of Alberta through AVAC Ltd. This does not alter the authors' adherence to PLOS ONE policies on sharing data and materials.

\* Email: svohra@ualberta.ca

### Introduction

Current evidence does not delineate a single-source of fatigue in the workplace; however, it has been hypothesized that long work hours, long hours of physical or mental activity, insufficient break time between shifts, inadequate rest, excessive stress, or a combination of these factors may be associated with fatigue. Disrupted circadian rhythms have been found to be associated with changes in mental and physical performance [1,2]. This is of particular importance for those involved in shift work since some

physiological functions are optimally regulated according to circadian rhythms, suggesting that the body may not be well suited for shift work.

In 2011, the Government of Alberta employed approximately 33,000 registered nurses [3], of which almost one-third participate in shift work [4]. Fatigue is experienced by 19–29% of shift workers [5]. It has been suggested that fatigue may contribute to medical errors thereby causing negative health outcomes [6]. A study conducted in 2008 identified 205 clinical errors and adverse

# OUR TEAM

## Our Team: Some of our MVPS

### TRAINEE MVP – YAZID AL HAMARNEH

**Birthplace:** Madaba, Jordan

**Playing History:**

- BSc(Pharm), University of Jordan, Amman, Jordan
- Professional Medical Representative, Merck Sharp and Dohme I.A., Amman, Jordan
- PhD, Clinical Pharmacy, Queen's University, Belfast, UK

**Position:** Postdoctoral Research Fellow

**Length of Time with the Team:** 4 years

**Contributions:**

Dr. Al Hamarneh has been training in the area of community practice research, utilizing pharmacies to improve the detection and management of chronic diseases such as diabetes and cardiovascular disease.

He was the Project Officer for the RxING study, the first ever trial of independent pharmacist prescribing in patients with diabetes, published in BMJ Open in 2013.

He is currently the Project Officer for the Alberta Vascular Risk Reduction study (Rx EACH), a unique collaboration of the University of Calgary, Alberta Health Services, Alberta Health, and Merck Canada. This is a large scale randomized trial of community pharmacist case finding and intervention in patients at high risk of cardiovascular events. This is the largest trial of cardiovascular prevention by pharmacists and is scheduled to complete enrollment in 2015.

He has 9 published or in-press papers, 3 papers under review, and 21 research abstracts. Dr. Al Hamarneh has also been involved in 2 successful peer-reviewed grants (one from CIHR). He received the Best Pharmacy Practice Research Oral Presentation Award at the Canadian Pharmacists Association Conference in 2013.

He has taken leadership roles with the Postdoctoral Fellows Association of the University of Alberta and was Co-Founder and member of the Executive for Alberta Collaboration of Entrepreneurial Students (ACES) (August 2012 – February 2013).



# OUR TEAM

## STAFF MVP – **DEBBIE BOYKO**

**Birthplace:** Myrnam, AB

**Playing History:**

- RN, graduated in 1975 from the University of Alberta Hospital Nursing Diploma Program
- Numerous nursing positions including Workload Measurement Analyst for Capital Health
- Emergency Medicine Research with Dr. Brian Rowe, 2004-2009
- National Asthma and COPD Educator
- Weiser Research Inc. Coordinator Training Program

**Position:** Research Project Coordinator

**Length of Time with the Team:** 5 years

**Contributions:**

Debbie has worked on a number of studies, including the MedImmune Asthma Study (new treatment for asthma); COPE (heart failure education); PREVENTION (case management in stroke patients); PROACT; Atrial Fibrillation; Procedural Sedation; Strategy to Reduce Overcrowding in the Emergency Department; and PROACTIVE.

She has been a coauthor on six publications.

Currently main focus is the ABLE Study, in which she coordinates 28 sites throughout North America. This study (for which EPICORE is the data coordinating and analytical centre). It features 3 projects that are evaluating a number of biomarkers that may predict ototoxicity, nephrotoxicity, bone marrow toxicity and thrombosis in pediatric cancer patients.

Debbie is especially valuable in multicentre trials. She creates real relationships with participating sites – they all love Debbie!

Debbie is a positive force in the office. Always enthusiastic and upbeat, it is impossible to have a bad day when she's around.





## OUR TEAM

### FACULTY MVP – TAMMY BUNGARD

**Birthplace:** Calgary, AB

**Playing History:**

- BSP, University of Saskatchewan
- General Practice Hospital Pharmacy Residency, Red Deer Regional Hospital Centre
- PharmD, Wayne State University, Detroit, Michigan, USA
- Postdoctoral Research Fellowship, EPICORE, University of Alberta

**Position:** Associate Professor of Medicine, Division of Cardiology, Faculty of Medicine and Dentistry, University of Alberta

**Length of Time with the Team:** 14 years

**Contributions:**

Dr. Bungard is probably best known for leading the implementation of the University of Alberta Anticoagulation Management Service, which started in 2001, and she continues to lead. She has provided training opportunities for undergraduate, graduate, and postgraduate trainees in anticoagulation management.

Her leadership activities include: Director, Anticoagulation Management Service; Councilor, Alberta College of Pharmacists; Chair, Expert Panel for Prescribing by Pharmacists.

Other professional affiliations include membership with Thrombosis Canada, the Canadian Cardiovascular Pharmacist's Network (CCPN) and the Collaborative Learning On Thrombosis (CLOT) group.

Her many awards include the Alberta College of Pharmacists Award of Excellence (2006); Commonwealth of learning Award of Excellence for Distance Education (2006); REACH Award for Excellence and Achievement in Capital Health (2007); Recognition for Enhancing Patient Care Through Pharmacist Prescribing, Canadian Society of Hospital Pharmacists, Alberta Branch (2009); Alberta Pharmacy Centennial Award of Distinction (2011).

Dr. Bungard's passion is to perform research and publish in her practice area, and to explore and adopt new therapies and treatment strategies to optimize patient care.



## OUR TEAM

### ALUMNI MVP – KATHRYN KING-SHIER:

**Birthplace:** Brantford, Ontario

**Playing History:**

- BScNursing, McMaster University
- MN, University of Alberta
- PhD (Nursing), University of Alberta
- Postdoctoral Research Fellowship, EPICORE (Supervisor Dr. KK Teo)

**Position:** Professor, Faculty of Nursing and Department of Community Health Sciences, University of Calgary

**Contributions:**

Dr. King-Shier leads a multi-methods program of research which includes expertise in clinical trials, cohort studies and qualitative studies. The primary focus of her research is to identify and address potential influences of ethnicity and sex/gender in the management of cardiovascular disease. She has many productive local, national and international research collaborations. Dr. King-Shier has been consistently funded from CIHR and the Heart and Stroke Foundation. She has published over 80 papers and given about 100 presentations at national and international conferences (including in Europe, China, Australia, and India). She serves on the editorial board of two major international CV nursing journals (Euro J Cardiovasc Nurs, J Cardiovasc Nurs).

Dr. King-Shier has supervised 30 undergraduate students, 6 masters, 4 PhD, and 2 postdoctoral research fellows. Her PhD graduates have been some of the most highly funded in the Faculty of Nursing. She currently supervises 4 Masters and 4 PhD students (2 in Nursing and 2 in Community Health Sciences).

Dr. King-Shier has received numerous prestigious awards, including personnel awards from the Alberta Foundation for Medical Research and Alberta Innovates-Health Solutions. Other awards include: Excellence in Nursing Research Award from Canadian Association of Schools of Nursing in 2012, Excellence in Research from the Canadian Association for Nursing Research in 2008, The Woman of Vision Award from Global Television/HWCA in 2005 and the Cardiovascular Nursing Research Excellence Award from the Canadian Council of Cardiovascular Nurses in 2003. Recently, in recognition of her longstanding research and connection to the South Asian Community, Dr. King-Shier has been named the Guru Nanak Dev Ji DIL (Heart) Research Chair.



# OUR TEAM

## Our Team: The Players



# OUR TEAM

## Our Team: Future Superstars

### Our Trainees:



**Yadd Al Hamarneh**, BSc (Pharm), PhD  
Postdoctoral Research Fellow  
(Supervisor: Dr. Ross Tsuyuki)



**Marle Smignorowsky**, RN, NP,  
PhD (Medicine) student  
(Supervisors: Dr. Ross Tsuyuki  
and Dr. Colleen Norris)



**Saurabh Vashistha**, MSc, PhD student  
(Supervisors: Dr. Gordon Broderick and Dr.  
Ross Tsuyuki)



**Meagen Dunn**, BSc/N  
MSc student (Supervisor: Dr. Ross Tsuyuki)

**Congratulations** to Meghan Sebastianski and Meagen Rosenthal, who successfully completed their PhDs in 2014. Dr. Sebastianski is currently doing contract work with Alberta Health Services. Dr. Rosenthal has accepted a tenure track Assistant Professor position with the School of Pharmacy at the University of Mississippi.

PhD graduate from 2013, Dr. Monica Zolezzi has now taken a position as an Assistant Professor in the College of Pharmacy at Qatar University.

## OUR TEAM

### Training Camp:

**MED 600: Introduction to Clinical Trials** (Co-coordinators Dr. Ross Tsuyuki, Ms. Lesley Mitchell): This graduate-level course has been run by EPICORE since 2001. MED 600 covers aspects of clinical trial design, including justifying the research question, patient population, randomization, dealing with confounding and bias, case report form design, sample size, analytical plan, research ethics and consent, grantsmanship, and budgeting in a practical small group setting. It remains a popular course, frequently over subscribed and highly rated.

*“Overall, great course. One of the best courses I’ve ever taken.” Excerpt from MED 600 student evaluation.*



## AROUND THE LEAGUE

### In the Dressing Room: Significant Events

**The year after the rebuilding year:** 2013 saw major changes in EPICORE's business model, staffing, and policies and procedures. In 2014, we continued to build upon these changes, building our client base, and refining our quoting, contracts and invoicing processes. We are now a well-oiled machine!



**Office Odours:** We continued to have challenges with our physical space. When we were abruptly displaced to the Brain and Aging Research Building in July of 2013, we noticed unusual smells. These became worse as the weather got colder, to the point where as of early in 2014 we had over 170 person-days of sick time – mostly respiratory, dysguesia, nausea and mucus membrane irritation. These odours were traced to the Prion Centre below us. After many months of awaiting a solution, we had to leave in July of 2014. Our new home, on the 4<sup>th</sup> floor of the Research Transition Facility is less than ideal for our type of work, but we are trying to make it work. And at least we can breathe!



**SPOR Opportunity:** The Strategy for Patient-Oriented Research (SPOR) is an initiative from the Canadian Institutes of Health Research. The objective of SPOR is to foster evidence-informed health care by bringing innovative diagnostic and therapeutic approaches to the point of care, so as to ensure greater quality, accountability, and accessibility of care (see <http://www.cihr-irsc.gc.ca/e/41204.html>). SPOR SUPPORT (Support for People and Patient-Oriented Research and Trials) Units are locally accessible, multidisciplinary clusters of specialized research resources, policy knowledge, and patient perspective. The Alberta's SPOR SUPPORT Unit (co-funded and hosted by Alberta Innovates – Health Solutions) has received \$48 million over 5 years. Alberta's SPOR SUPPORT Unit includes the following platforms: Health Systems Research, Implementation Research and Knowledge Translation; Data Platforms and Service; Methods Support and Development; Pragmatic Clinical Trials; Patient Engagement; Career Development in Methods and Health Services Research; Consultation and Research Services. Dr. Tsuyuki has been appointed as the platform lead for the Consultation and Research Services Platform. This is a major opportunity for EPICORE and partners which will begin in May 2015. We have already received \$333,000 in start-up funding.



## AROUND THE LEAGUE

### Around the League: Awards



Dr. Kathryn King-Shier

Guru Nanak Dev Ji DIL (Heart) Research Chair, in recognition of her longstanding research and connection to the South Asian Community

Meagen Rosenthal

Pharmacy Practice Research Competition: Canadian Pharmacists Conference – Best Poster, May 2014

Meagen Rosenthal

Queen Elizabeth II Graduate Scholarship – Doctoral Level, University of Alberta (\$7500), February, 2014

Sherilyn Houle

Canadian Association for Health Services and Policy Research Student Travel Bursary. May 2014

Sherilyn Houle

Travel Award – Institute Community Support. Institute of Health Services and Policy Research – Canadian Institutes of Health Research, August 2014.



### Draft Picks: Future Prospects

In addition to our many consultations, we are particularly excited about our major new projects, some of which are highlighted below:

**Smart-e-Pants (Dr. Vivian Mushahwar):** This study is a stepped wedge randomized trial of an intermittent electrical stimulation garment designed to stimulate the buttocks to prevent pressure ulcers in patients admitted to the intensive care unit. Four ICUs will participate in this trial which will enroll 460 patients. In this study, we have provided study design consultations, sample size and developed the analytical plan. We will set up the randomization, design the case report forms, develop the database, perform data quality assurance measures, liaise with the data and safety monitoring committee and conduct the biostatistical analyses. The study will begin in fall 2015.

**Apixaban Biomarkers (Prof. Lesley Mitchell):** This project is a substudy of the Apixaban prEventionS of thrOombosis in Pediatrics (AESOP) trial, a randomized study of the blood thinner apixaban to prevent blood clots in children undergoing cancer treatment. The substudy will provide insight into mechanisms of asparaginase-associated blood clots and to develop and test a predictive model for blood clot complications in children. Our role includes design of case report forms, database development and merging, data quality assurance procedures, and conduct of extensive modeling and other biostatistical analyses. This study will start in mid 2015.

**ICH-ADAPT II (Dr. Ken Butcher):** The Intracerebral Hemorrhage Acutely Decreasing Arterial Pressure Trial II is a multicentre randomized trial of 2 different blood pressure management strategies (blood pressure <140mmHg vs <180mmHg) in patients with acute intracerebral hemorrhage. A total of 270 patients will be enrolled over 3 years and the primary outcome is diffusion-weighted imaging for ischemic brain lesions. Our role includes design of the case report forms, randomization setup, development of a REDCap database, liaison with the data and safety monitoring committee and data quality assurance procedures. This study will start in March, 2015.

**C-PASS (Dr. Ken Butcher):** The Canadian Pradaxa Acute Stroke/TIA Safety study is a registry of 500 patients receiving dabigatran after minor acute stroke or transient ischemic attack and atrial fibrillation. Fifteen 15 Canadian centres will participate. The primary outcome will be safety (hemorrhage) at 30 days. Our role is to design the case



## DRAFT PICKS

report forms, develop the database, train study coordinators in REDCap, perform data quality assurance procedures, and liaise with the data and safety monitoring committee. The study will start in mid 2015.

**SWI Trial (Dr. Abbas Khani-Hanjani):** The Sternal Wound Infection Trial is a randomized trial of topical application of vancomycin vs. placebo in patients undergoing sternotomy for cardiac surgery on sternal wound infections. In this trial, we consulted on the research design, sample size, analytical plan, and funding application. We will set up the randomization, liaise with the pharmacy, design the case report forms, develop the database, provided the sample size and analytical plan. We will also coordinate the serious adverse event reporting, liaise with the data and safety monitoring committee, perform quality assurance procedures, and complete the statistical analyses. This study will start in March 2015.



## OUR STATS

### Our Stats: Financial Highlights

Total revenue for calendar year 2014 was \$626,536, compared with \$1,015,064 in 2013. This was due to reduced project income of \$348,440, compared with \$473,532 and accrued income of \$28,096 for 2014 versus \$291,532 for 2013.

Actual project revenue invoiced in 2014 was \$639,972, of which \$291,532 was reported as accrued revenue as noted above. The large reduction in contract revenue is chiefly due to contract and work activity delays in 2 large projects, ABLE and RxEACH. A large portion of the revenue had been accrued in 2013. The contract for ABLE has now been signed, and the RxEACH contracts are in the final stages of signatures. Subsequent review of these contracts determined that a portion of the revenue accrued in 2013 was completed in 2014. The one-time over-accrual of revenue in 2013 had a corresponding reduction on the 2014 revenue. Current year accrued revenues are based on hours worked on contracts that were unbilled at December 31, 2014.

Our expenses have been reduced from \$838,652 in 2013 to \$398,116 in 2014. This is chiefly due to the stabilization of our personnel costs.

Our net income for 2014 was \$228,420, a 29% increase over 2013. The summary financial statement is shown in Appendix E.

This is the final year of our grant of \$250,000 from the Faculty of Medicine and Dentistry. A number of new projects and SPOR startup and ongoing funding will more than replace this grant and allow EPICORE to provide a positive financial contribution to the Department and the Faculty.



# APPENDIX A

## Appendix A: Cumulative List of All EPICORE Projects

|    | <b>Name</b>  | <b>PI</b> | <b>Status</b> |
|----|--|-----------|---------------|
| 1  | A.C.S.Database                                     |           | Complete      |
| 2  | Ace Inhibitor                                      |           | Complete      |
| 3  | ACES and Appendicitis                              |           | Complete      |
| 4  | Advanced Cancer Staging                            |           | Complete      |
| 5  | AFib cohort  |           | Complete      |
| 6  | Agitation & Tobacco Withdrawal                     |           | Complete      |
| 7  | Anesthesia techniques for cardiac cath - Dr. F. Ru |           | Complete      |
| 8  | Antimicrobial Catheter Study                       |           | Complete      |
| 9  | Antiretrovirals in Pregnancy                       |           | Complete      |
| 10 | ASCEND Mapping                                     |           | Complete      |
| 11 | Bleed Risk   |           | Complete      |
| 12 | Bowering Diabetes Project                          |           | Complete      |
| 13 | Brain Cancer                                       |           | Complete      |
| 14 | Breast Implant                                     |           | Complete      |
| 15 | Bronchiolitis                                      |           | Complete      |
| 16 | Bronchoscopy                                       |           | Complete      |
| 17 | C.V. Awareness                                     |           | Complete      |
| 18 | Cadaver Study - Dept. of Anesthesiology            |           | Complete      |
| 19 | Capital Health Chart Review                        |           | Complete      |
| 20 | Cardiac Access                                     |           | Complete      |
| 21 | Cardiovascular Risk                                |           | Complete      |
| 22 | Cardioversion Wait List Study                      |           | Complete      |
| 23 | Cefazolin  |           | Complete      |
| 24 | CH Chart Review                                    |           | Complete      |
| 25 | CHIH - Discharge Database                          |           | Complete      |
| 26 | Clopidogrel following Coronary Stenting            |           | Complete      |
| 27 | Contrast   |           | Complete      |
| 28 | Creating Supports for Change and Transition        |           | Complete      |
| 29 | CRP  |           | Complete      |
| 30 | CSF – Meningitis, Encephalitis                     |           | Complete      |
| 31 | CV ICU - Readmissions                              |           | Complete      |
| 32 | Dept. of Medicine Database                         |           | Complete      |
| 33 | Device Database                                    |           | Complete      |

# APPENDIX A

|    |  |  |          |
|----|--|--|----------|
| 34 | DOPPLER Study                                      |  | Complete |
| 35 | Dumper ENT   |  | Complete |
| 36 | Early Fibrinogen transfusions in Trauma Patients - |  | Complete |
| 37 | ECHO - AF  |  | Complete |
| 38 | Echo Clinical Database                             |  | Complete |
| 39 | ECLS   |  | Complete |
| 40 | Edmonton Flu Study                                 |  | Complete |
| 41 | EPIC - Enhancing Practice to Improve Care          |  | Complete |
| 42 | Esophageal Cancer Study                            |  | Complete |
| 43 | Exacerbation of Heart Failure                      |  | Complete |
| 44 | EXACT  |  | Complete |
| 45 | Facial Trauma                                      |  | Complete |
| 46 | Firefighter Lung Project - Medicine                |  | Complete |
| 47 | FLAP - Surgery                                     |  | Complete |
| 48 | Fragrance Study                                    |  | Complete |
| 49 | FRESH  |  | Complete |
| 50 | Geriatric Assessment                               |  | Complete |
| 51 | Glaucoma and Robot Prostatectomy - Anesthesiology  |  | Complete |
| 52 | Globus Pharyngis                                   |  | Complete |
| 53 | GRIST  |  | Complete |
| 54 | HEALD- PCN   |  | Complete |
| 55 | Heart Health Project                               |  | Complete |
| 56 | Hip & Knee Fracture                                |  | Complete |
| 57 | HIV/HCV Coinfection neurological diseases          |  | Complete |
| 58 | HIV-Disease incidence/prevalence vs. neurologi     |  | Complete |
| 59 | Hyperglycemia & Oncology                           |  | Complete |
| 60 | IBD Clinics Chart Review                           |  | Complete |
| 61 | ICD-10   |  | Complete |
| 62 | Immunotherapy in Cat Allergy Subjects              |  | Complete |
| 63 | IMR  |  | Complete |
| 64 | Inhaled Milrinone and the R. Ventricle - Dept. of  |  | Complete |
| 65 | Insulin Protocol                                   |  | Complete |
| 66 | Dr. Kunimoto consultation                          |  | Complete |
| 67 | LipSplitScar Study                                 |  | Complete |
| 68 | Mandibulotomy - Friend or Foe                      |  | Complete |
| 69 | MAp Study  |  | Complete |

# APPENDIX A

|     |  |  |          |
|-----|--|--|----------|
| 70  | MESH   |  | Complete |
| 71  | MONO   |  | Complete |
| 72  | NARG Dialysis Study                                |  | Complete |
| 73  | Neonatal HSV                                       |  | Complete |
| 74  | NeuroSugery - Matnaj                               |  | Complete |
| 75  | NHP and Potential Adverse Events Survey            |  | Complete |
| 76  | Niemann-Pick Type C                                |  | Complete |
| 77  | NIMV   |  | Complete |
| 78  | Nursing Project - James                            |  | Complete |
| 79  | Osteoporosis (2003)                                |  | Complete |
| 80  | Osteoporosis (Andrea)                              |  | Complete |
| 81  | Osteoporosis Study                                 |  | Complete |
| 82  | Patient Safety in CHA                              |  | Complete |
| 83  | Peds Oncology Study                                |  | Complete |
| 84  | Peds/Fever/Surgery                                 |  | Complete |
| 85  | PET Database                                       |  | Complete |
| 86  | Pharmacist Hypertension Project                    |  | Complete |
| 87  | Pharmacy Student Surveys                           |  | Complete |
| 88  | PICU - Fever Study                                 |  | Complete |
| 89  | PPS Diabetes                                       |  | Complete |
| 90  | PRECEPT  |  | Complete |
| 91  | Pregnancy Risks                                    |  | Complete |
| 92  | Prevention of Delirium                             |  | Complete |
| 93  | PTSD   |  | Complete |
| 94  | Pulmonary involvement of Chrohns Ps on IFX - Dr. R |  | Complete |
| 95  | Rats IVS   |  | Complete |
| 96  | REASSESS   |  | Complete |
| 97  | Reducing Restraints                                |  | Complete |
| 98  | Risk Reduction Live Database                       |  | Complete |
| 99  | Risk Reduction Study                               |  | Complete |
| 100 | RURAL AMI  |  | Complete |
| 101 | S.V.G.   |  | Complete |
| 102 | Sample size claulation Oct 01/08 - Andrea Trai     |  | Complete |
| 103 | Scarring   |  | Complete |
| 104 | Smile Sonica                                       |  | Complete |
| 105 | Statin Utilization                                 |  | Complete |
| 106 | Stroke and First Nations                           |  | Complete |

## APPENDIX A

|     |  |              |          |
|-----|--|--------------|----------|
| 107 | Supporting Vulnerable Children - AI-HS, Sharon And |              | Complete |
| 108 | Surgery - Toy                                      |              | Complete |
| 109 | Surgery Practice - Seema                           |              | Complete |
| 110 | Surgery/Mrad                                       |              | Complete |
| 111 | T-Echo Study                                       |              | Complete |
| 112 | TEE Emboli   |              | Complete |
| 113 | Telehealth   |              | Complete |
| 114 | The Optics of Transdisciplinary Behaviours in      |              | Complete |
| 115 | Thyroid Orbithopathy                               |              | Complete |
| 116 | Tobeornottobe - Peter D.                           |              | Complete |
| 117 | Tooth Root Resorption                              |              | Complete |
| 118 | Treatment & Control of hypertension in the Eld     |              | Complete |
| 119 | Trends in Nosocomial Blood Stream Infections       |              | Complete |
| 120 | Use of Pain Pumps after Abdominoplasty             |              | Complete |
| 121 | VAC  |              | Complete |
| 122 | Validation of a Risk Model for Mode of Death       |              | Complete |
| 123 | VHR-ESSC   |              | Complete |
| 124 | ABBOTT - ASPROSE Survey                            | ABBOTT       | Complete |
| 125 | ABBOTT - ASPROSEUAH                                | ABBOTT       | Complete |
| 126 | ABBOTT - ASPROSEUK                                 | ABBOTT       | Complete |
| 127 | ABBOTT - ASPROSEUSA                                | ABBOTT       | Complete |
| 128 | ABBOTT - RAPROSE survey                            | ABBOTT       | Complete |
| 129 | ABBOTT - RAPROSENL                                 | ABBOTT       | Complete |
| 130 | ABBOTT - RAPROSEUAH                                | ABBOTT       | Complete |
| 131 | ABBOTT - RAPROSEUSA                                | ABBOTT       | Complete |
| 132 | HESA Study - Abbott Labs                           | ABBOTT       | Complete |
| 133 | HESA Study - Abbott Labs                           | ABBOTT       | Complete |
| 134 | Parent Burden RSV - ABBOTT                         | ABBOTT       | Complete |
| 135 | Comparison of Scan Methods                         | Abdul, A     | Complete |
| 136 | Pharmacy/Cardiologist Focus Groups                 | Ackman, M    | Complete |
| 137 | Epilepsy Clinical Database                         | Ahmed        | Complete |
| 138 | T.V. Comparison                                    | Allen, M     | Complete |
| 139 | CAPTORS  | Armstrong, P | Complete |
| 140 | WEST   | Armstrong, P | Complete |
| 141 | Liver Transplantation                              | Bagshaw, S   | Complete |
| 142 | HepC   | Bailey       | Complete |
| 143 | PhotoGraph   | Beard, K     | Complete |

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|     |   |                     |          |
|-----|---|---------------------|----------|
| 144 | REGAIN  | Beaupre, L          | Complete |
| 145 | LV Strain   | Becher, H           | Complete |
| 146 | VAT Surgery   | Bedard, E           | Complete |
| 147 | Peas and Beans  | Bell, R             | Complete |
| 148 | Metformin and Exercise                                  | Boule, N            | Complete |
| 149 | CAMERA  | Braam, B            | Complete |
| 150 | Paralysis in Gastroschisis                              | Bratu, I            | Complete |
| 151 | Gulf War Vets and CFS Databases                         | Broderick, G        | Complete |
| 152 | Propensity Analysis                                     | Brown, N            | Complete |
| 153 | AMS - Patient Opinion Survey                            | Bungard, T          | Complete |
| 154 | AMS Point of Care                                       | Bungard, T          | Complete |
| 155 | AMS Anticoagulant Control                               | Bungard, T          | Complete |
| 156 | AMS Benchmarking for Clot                               | Bungard, T          | Complete |
| 157 | AMS Eval. of Main.Dosing vs Loading                     | Bungard, T          | Complete |
| 158 | AMS HAS-BLED  | Bungard, T          | Complete |
| 159 | AMS On the way to practice change                       | Bungard, T          | Complete |
| 160 | AMS Physician Survey                                    | Bungard, T          | Complete |
| 161 | AMS Satellite Clinics                                   | Bungard, T          | Complete |
| 162 | Assessment of Atrial Fibrillation management            | Bungard, T          | Complete |
| 163 | Blood Pressure Assessment in the Anticoagulated Patient | Bungard, T          | Complete |
| 164 | EASE Analysis   | Bungard, T          | Complete |
| 165 | LMWH in pregnancy                                       | Bungard, T          | Complete |
| 166 | Patient Self-Mangement of Warfarin                      | Bungard, T          | Complete |
| 167 | Warfarin Knowledge Survey                               | Bungard, T          | Complete |
| 168 | Diagnosis of Accuracy of Cardiac MRI                    | Butler, C           | Complete |
| 169 | ROC Curve   | Butler, C           | Complete |
| 170 | Angioembolization/Spleen                                | Cadili, A           | Complete |
| 171 | Endo Aneurysm Repair - Surgery                          | Cadili, A           | Complete |
| 172 | Melanoma Study  | Cadili, A           | Complete |
| 173 | Nasogastric   | Cadili, A           | Complete |
| 174 | Pancreatic cyst   | Cadili, A           | Complete |
| 175 | SLNB  | Cadili, A           | Complete |
| 176 | Spleen Study  | Cadili, A           | Complete |
| 177 | Paravertebral Blocks/Breast Cancer                      | Cameron, J          | Complete |
| 178 | Supraclavicular Brachial Plexus                         | Cameron, J          | Complete |
| 179 | GP Practice   | Campbell-Scherer, D | Complete |

## APPENDIX A

|     |  |                  |          |
|-----|--|------------------|----------|
| 180 | CHIRP Clinical Database                | Casey, L         | Complete |
| 181 | Scalpel and Cautery                    | Chao, J          | Complete |
| 182 | MSS - Dr. Chari                        | Chari, R         | Complete |
| 183 | Evidence trend                         | Chowdhury, R     | Complete |
| 184 | Contrast Stress Echo                   | Choy, J          | Complete |
| 185 | Echo Contract Study                    | Choy, J          | Complete |
| 186 | Echo Stats                             | Choy, J          | Complete |
| 187 | ENDOCARDITIS                           | Choy, J          | Complete |
| 188 | Surg. Meno                             | Chubaty, A       | Complete |
| 189 | Head and Neck Database                 | COMPRU           | Complete |
| 190 | Suppression of Myocardial F-FDG uptake | Coulden, R       | Complete |
| 191 | VRR Worksite                           | CV-SCN/Padwal, R | Complete |
| 192 | Heart Function ClinicProject           | Dewart, K        | Complete |
| 193 | Ulcerative Colitis and Prebiotics      | Dieleman, L      | Complete |
| 194 | Regional Anesthesia Database           | Dillane, D       | Complete |
| 195 | Dementia                               | Drummond, J      | Complete |
| 196 | Families First Edmonton                | Drummond, J      | Complete |
| 197 | Control of PPH                         | Dryden, A        | Complete |
| 198 | Alberta Heart                          | Dyck, J          | Complete |
| 199 | Mositurizers Study                     | Dytoc, M         | Complete |
| 200 | Total Glossectomy                      | Dziegielewski, P | Complete |
| 201 | Degner Project                         | Estabrooks, C    | Complete |
| 202 | PHANTOM                                | Eurich, D        | Complete |
| 203 | Infliximab Adherence                   | Evaschesen, C    | Complete |
| 204 | WalkAid                                | Everaert, D      | Complete |
| 205 | AHF-em                                 | Ezekowitz, J     | Complete |
| 206 | ARCTIC-D                               | Ezekowitz, J     | Complete |
| 207 | CAM-CV                                 | Ezekowitz, J     | Complete |
| 208 | Canadian Heart Failure Registry        | Ezekowitz, J     | Complete |
| 209 | Heart Failure Clinic Data merging      | Ezekowitz, J     | Complete |
| 210 | HFC - Device Implant                   | Ezekowitz, J     | Complete |
| 211 | HFC Abstract                           | Ezekowitz, J     | Complete |
| 212 | HFC Core Data Collection               | Ezekowitz, J     | Complete |
| 213 | Resveratrol Study                      | Ezekowitz, J     | Complete |
| 214 | Sodium H.F.                            | Ezekowitz, J     | Complete |
| 215 | Vertebral Fractures in Heart Failure   | Ezekowitz, J     | Complete |
| 216 | VITA-H.F.                              | Ezekowitz, J     | Complete |



# APPENDIX A

|     |   |                        |          |
|-----|---|------------------------|----------|
| 217 | Dose Escalation   | Fedorak, R             | Complete |
| 218 | Pulmonary Crohns  | Fedorak, R             | Complete |
| 219 | VSL #3  | Fedorak, R             | Complete |
| 220 | TNF Alpha   | Fedoruk/Alistair       | Complete |
| 221 | Pedicle Screw Insertion   | Fox, R                 | Complete |
| 222 | Creating Bone & Joint Health                                    | Frank, C               | Complete |
| 223 | Creating Bone and Joint Health                                  | Frank, C               | Complete |
| 224 | CHAMP   | Galvin, D/Jones, C     | Complete |
| 225 | COPD Analyses   | Garneau Lung Lab       | Complete |
| 226 | How many are too many?  | Garros, D              | Complete |
| 227 | Propofol increases vascular relaxation - Dept of Anesthesiology | Gragasin, F            | Complete |
| 228 | APPROACH Audit and Feedback Project                             | Graham, M              | Complete |
| 229 | esSTROKE  | Green, T               | Complete |
| 230 | Marijuana and Epilepsy  | Gross, D               | Complete |
| 231 | PRP Breast Study  | Guenther, C/Anzarut, A | Complete |
| 232 | How many are too many   | Guerra, G              | Complete |
| 233 | Big Five Inventory - hosp. pharm.                               | Hall, J                | Complete |
| 234 | Costco Pharmacists Intervention                                 | Hanna, J               | Complete |
| 235 | Breast Cancer vs Heart Failure                                  | Haykowsky, M           | Complete |
| 236 | KITE  | Haykowsky, M           | Complete |
| 237 | Aliskiren   | Hossini, F             | Complete |
| 238 | B.P. Reduction Sample Size                                      | Houle, S               | Complete |
| 239 | Catheter  | Hunt, I                | Complete |
| 240 | CAREERS   | IHE                    | Complete |
| 241 | IHE Survey (Arto)   | IHE                    | Complete |
| 242 | IHE Survey (Ollie)  | IHE                    | Complete |
| 243 | VASTVALUS   | Jacka, M               | Complete |
| 244 | SPSS Syntax Development   | Janzen, W              | Complete |
| 245 | STRIP Type2   | Johnson, J             | Complete |
| 246 | IPAD Survey   | Johnston, B            | Complete |
| 247 | Co Morbidities  | Jones, A               | Complete |
| 248 | PREP Study  | Jones, A               | Complete |
| 249 | Memantine/ALS   | Kalra, S and Chan, M   | Complete |
| 250 | Acute Kidney Injury   | Kanji, H               | Complete |
| 251 | Colonoscopy   | Kao, D                 | Complete |
| 252 | Fecal Transplant  | Kao, D/Madsen, K.      | Complete |

## APPENDIX A

|     |                                    |                      |          |
|-----|------------------------------------|----------------------|----------|
| 253 | Vaccination of RA patients         | Keeling, S           | Complete |
| 254 | IDEAL                              | Kimber, S            | Complete |
| 255 | SATTURN Study                      | Kimber, S            | Complete |
| 256 | STICK                              | King, K              | Complete |
| 257 | VTE and Thrombocytopenia           | Kopolovic, I         | Complete |
| 258 | STATIN                             | Koshman, S           | Complete |
| 259 | Statin Utilization 2               | Koshman, S           | Complete |
| 260 | TIC TAC                            | Koshman, S           | Complete |
| 261 | Beck Study                         | Kroeker, K           | Complete |
| 262 | Childhood IBD                      | Kroeker, K           | Complete |
| 263 | Fatigue in IBD                     | Kroeker, K           | Complete |
| 264 | PIVOT Trial                        | Kumar, D             | Complete |
| 265 | Anorectal Manometry                | Lazaurescu, A        | Complete |
| 266 | Banding Study                      | Lazaurescu, A        | Complete |
| 267 | Infliximab Infusion                | Lee, T/Fedorak, R    | Complete |
| 268 | Iron IV vs. Oral                   | Lee, T/Fedorak, R    | Complete |
| 269 | BNA Questionnaire                  | Long, R              | Complete |
| 270 | T.B. Study                         | Long, R              | Complete |
| 271 | TB Transmission - Medicine         | Long, R              | Complete |
| 272 | Dr. Gavin Low                      | Low, G               | Complete |
| 273 | Genetic Mutation                   | Lu, C                | Complete |
| 274 | Sample size calculation Oct. 01/08 | Ma, M                | Complete |
| 275 | AVOID                              | Majumdar, S          | Complete |
| 276 | Opinion Leader Study               | Majumdar, S          | Complete |
| 277 | STOP #                             | Majumdar, S          | Complete |
| 278 | WREST                              | Majumdar, S          | Complete |
| 279 | Wrist Fracture                     | Majumdar, S          | Complete |
| 280 | WRIST Fracture SubStudy            | Majumdar, S          | Complete |
| 281 | Impact of Pharmacists              | Makowsky, M          | Complete |
| 282 | E-Triage                           | Maksymowych, W       | Complete |
| 283 | OARSI-OMERACT                      | Maksymowych, W       | Complete |
| 284 | Seniors' Clinic Chart Review       | Marin, A/Sadowski, C | Complete |
| 285 | Allergy Labeling                   | Marra, C             | Complete |
| 286 | DMARD                              | Marra, C             | Complete |
| 287 | Pharmacy AdaptaionServices in B.C. | Marra, C             | Complete |
| 288 | PHIND-OA                           | Marra, C             | Complete |
| 289 | PHIT OA                            | Marra, C             | Complete |

## APPENDIX A

|     |  |                  |          |
|-----|--|------------------|----------|
| 290 | CAP - Antibiotic Failure                     | Marrie, T        | Complete |
| 291 | CAP - Bacteremia                             | Marrie, T        | Complete |
| 292 | CAP - COPD                                   | Marrie, T        | Complete |
| 293 | CAP - Etiology - Extended Diagnostic Testing | Marrie, T        | Complete |
| 294 | CAP - Etiology - Non-pneumonia Patients      | Marrie, T        | Complete |
| 295 | CAP - Etiology - Urine Normals Substudy      | Marrie, T        | Complete |
| 296 | CAP - Etiology & Cytokine Profile            | Marrie, T        | Complete |
| 297 | CAP - Etiology & TB NMR                      | Marrie, T        | Complete |
| 298 | CAP - Etiology of Staph Aureus               | Marrie, T        | Complete |
| 299 | CAP - ICU                                    | Marrie, T        | Complete |
| 300 | CAP - Low Risk admissions                    | Marrie, T        | Complete |
| 301 | CAP - Pregnancy                              | Marrie, T        | Complete |
| 302 | CAP - QFever                                 | Marrie, T        | Complete |
| 303 | CAP – Serial Metabolomics                    | Marrie, T        | Complete |
| 304 | CAP - Urine Normals                          | Marrie, T        | Complete |
| 305 | CAP - Wetaskiwin                             | Marrie, T        | Complete |
| 306 | CAP Study ( Main)                            | Marrie, T        | Complete |
| 307 | CAPS - Patterns of Antibiotic Use            | Marrie, T        | Complete |
| 308 | CAP-Telehealth                               | Marrie, T        | Complete |
| 309 | Med Student Clinical Skills                  | Marrie, T        | Complete |
| 310 | UACAPS                                       | Marrie, T        | Complete |
| 311 | Early Inflammatoxy Arthritis                 | Martin, L        | Complete |
| 312 | Lupus HealthNet                              | Martin, L        | Complete |
| 313 | ASTHMA - Bridging the Gap                    | Mayers, I        | Complete |
| 314 | ASTHMA - Phase 2                             | Mayers, I        | Complete |
| 315 | ASTHMA - Phase 3                             | Mayers, I        | Complete |
| 316 | ASTHMA - Physician Survey                    | Mayers, I        | Complete |
| 317 | ASTHMA Phase 1                               | Mayers, I        | Complete |
| 318 | ASTHMA School Questionnaire                  | Mayers, I        | Complete |
| 319 | COPD Education Initiative                    | Mayers, I        | Complete |
| 320 | MedImmune                                    | Mayers, I        | Complete |
| 321 | ASTHMA - All Phases                          | Mayers, I/Man, P | Complete |
| 322 | DAAFI -2                                     | McAlister, F     | Complete |
| 323 | ESP-CAD                                      | McAlister, F     | Complete |
| 324 | Heart Failure Database                       | McAlister, F     | Complete |
| 325 | PREVENTION                                   | McAlister, F     | Complete |
| 326 | DCA in PHT Grant                             | Michelakis, E    | Complete |

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|     |   |                      |          |
|-----|---|----------------------|----------|
| 327 | Data Transfer                                     | Miciak, G            | Complete |
| 328 | Thrombosis  | Mitchell, L          | Complete |
| 329 | Quality of Life in Kidney Disease                 | Molzahn, A           | Complete |
| 330 | Acute Kidney Injury in Children                   | Morgan, C            | Complete |
| 331 | RFFF vs ALTF                                      | Morrissey            | Complete |
| 332 | Nose Bleed Study                                  | Morrissey, A         | Complete |
| 333 | GN Registry                                       | Murray, A            | Complete |
| 334 | Myocarditis                                       | Nee/Paterson         | Complete |
| 335 | Relationship btween OT and Trust                  | Norris, C            | Complete |
| 336 | Treatment for depression /CAD                     | Norris, C            | Complete |
| 337 | Oropharyngeal Cancer Survival                     | O'Connell            | Complete |
| 338 | OPSCC   | O'Connell, D         | Complete |
| 339 | Fingerprinting in patients with CAD               | Oudit, G             | Complete |
| 340 | HELP  | Oudit, G             | Complete |
| 341 | HELP  | Oudit, G             | Complete |
| 342 | Novel Study                                       | Oudit, G             | Complete |
| 343 | Bairhugger Study                                  | PACU-RAH             | Complete |
| 344 | APPLES Study                                      | Padwal, R            | Complete |
| 345 | Sample size estimation Equivalence design         | Padwal, R            | Complete |
| 346 | WELCOME   | Padwal, R            | Complete |
| 347 | EP Ablation                                       | Pantano, A           | Complete |
| 348 | LV Function Recovery in Myocarditis               | Pate                 | Complete |
| 349 | Breast Cancer                                     | Patel                | Complete |
| 350 | Proximal RCA                                      | Paterson, I          | Complete |
| 351 | Kidney Disease and Q of L                         | Pauly, R             | Complete |
| 352 | NHD Interviews                                    | Pauly, R             | Complete |
| 353 | Niacin Pilot Study                                | Pearson, G           | Complete |
| 354 | ABI Study   | Pehowich, M          | Complete |
| 355 | SBE Prophylaxis                                   | Pharis               | Complete |
| 356 | HIV-Antiepileptic Drug Study                      | Power, C             | Complete |
| 357 | Neuropsychological Testing Study                  | Power, C             | Complete |
| 358 | TB Rsch   | Rennert-May, E       | Complete |
| 359 | Endocarditis in Pediatric Patients                | Robinson, J          | Complete |
| 360 | IVCRB in Children - Pediatric                     | Robinson, J          | Complete |
| 361 | Initial Access Prescribing by Pharmacists in Albe | Rosenthal, M         | Complete |
| 362 | SUPPORT CDM II                                    | Rosenthal, M         | Complete |
| 363 | BelMR   | Ross, D/Pretorius, V | Complete |

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| 364 | ACE                                 | Rowe, B               | Complete |
| 365 | AIR                                 | Rowe, B               | Complete |
| 366 | ED-Directed Interventions           | Rowe, B               | Complete |
| 367 | Educate Asthma                      | Rowe, B               | Complete |
| 368 | Emergency Depart. Projects          | Rowe, B               | Complete |
| 369 | The Lung Attack Alert Study         | Rowe, B               | Complete |
| 370 | WHIPLASH                            | Russell, A            | Complete |
| 371 | Whiplash Survey                     | Russell, A            | Complete |
| 372 | GDM                                 | Ryan, E               | Complete |
| 373 | GDM Registry                        | Ryan, E               | Complete |
| 374 | GDN Screening                       | Ryan, E               | Complete |
| 375 | Hypoglycemic Agent                  | Ryan, E               | Complete |
| 376 | Fecal Incontinence in men           | Sadowski, D           | Complete |
| 377 | SCOPE Pilot Project                 | Sadowski, D           | Complete |
| 378 | EP Ablation Substudy - ICD          | Sandhu, R             | Complete |
| 379 | Graduating Students Survey          | Schindel, T           | Complete |
| 380 | DOXCABG                             | Schulze, C            | Complete |
| 381 | Benefit from Anticoagulation        | Shanks, M             | Complete |
| 382 | Dell Obesity Trial                  | Sharma, A/Tsuyuki, R  | Complete |
| 383 | ASTHMA Professional Practice Survey | Sharpe, H             | Complete |
| 384 | ASTHMA WAP                          | Sheldon S.            | Complete |
| 385 | Preclampsia                         | Sia, W                | Complete |
| 386 | Urine P/C Ratio Study               | Sia, W                | Complete |
| 387 | GBS                                 | Siddiqi, Z            | Complete |
| 388 | MMF withdrawal Study                | Siddiqi, Z            | Complete |
| 389 | Vascular Intervention Program       | Simpson, S/Johnson, J | Complete |
| 390 | CV ICU - Glycemic Control           | Singh, G              | Complete |
| 391 | Compression AF                      | Sivakumaran, S        | Complete |
| 392 | Factor X                            | Sivakumaran, S        | Complete |
| 393 | START Study                         | Slaughter, S          | Complete |
| 394 | Sample Size                         | Smigorowsky, M        | Complete |
| 395 | Risedronate + CA and Vit. D         | Soo, I                | Complete |
| 396 | Smoking                             | Spencer, T            | Complete |
| 397 | Sample size J. Stewart              | Stewart, J            | Complete |
| 398 | Fort Chip Project                   | Svenson, L            | Complete |
| 399 | Refractory ascites                  | Tandon, P             | Complete |
| 400 | TOSCA                               | Teo, K                | Complete |

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| 401 | Digoxin Levels                                       | Thompson, A | Complete |
| 402 | Need and Method Training                             | Thomson, A  | Complete |
| 403 | exSALT   | Tredget, T  | Complete |
| 404 | Thermal Injury Study                                 | Tredget, T  | Complete |
| 405 | Difficult Airway ( Anesthesiology)                   | Tsui, B     | Complete |
| 406 | Edm ARA Acute Pain Service                           | Tsui, B     | Complete |
| 407 | Electrical Impedance                                 | Tsui, B     | Complete |
| 408 | ACHIEVA  | Tsuyuki, R  | Complete |
| 409 | BREATHE  | Tsuyuki, R  | Complete |
| 410 | Characterizing Pharmacy's Professional Culture - D   | Tsuyuki, R  | Complete |
| 411 | COLLABORATE Survey                                   | Tsuyuki, R  | Complete |
| 412 | Compensation for Pharmacists                         | Tsuyuki, R  | Complete |
| 413 | CONCORDANCE  | Tsuyuki, R  | Complete |
| 414 | COPE Study   | Tsuyuki, R  | Complete |
| 415 | Determining Glycemic Control- Pilot                  | Tsuyuki, R  | Complete |
| 416 | Effect of mixed messages on pharmacy practice change | Tsuyuki, R  | Complete |
| 417 | EPI SOB  | Tsuyuki, R  | Complete |
| 418 | epiPAD   | Tsuyuki, R  | Complete |
| 419 | EpiSOB - Saskatchewan                                | Tsuyuki, R  | Complete |
| 420 | HEARTT   | Tsuyuki, R  | Complete |
| 421 | HF Medication Burden                                 | Tsuyuki, R  | Complete |
| 422 | Hypertension Care in PCN                             | Tsuyuki, R  | Complete |
| 423 | Improving the Pharmaceutical Care of Canadians - D   | Tsuyuki, R  | Complete |
| 424 | Knowledge Translation Canada                         | Tsuyuki, R  | Complete |
| 425 | Management of CHF in Long-Term Care                  | Tsuyuki, R  | Complete |
| 426 | Misaligned Culture and Mindset                       | Tsuyuki, R  | Complete |
| 427 | MORE SCRIP   | Tsuyuki, R  | Complete |
| 428 | PaKSAC   | Tsuyuki, R  | Complete |
| 429 | Parmalat   | Tsuyuki, R  | Complete |
| 430 | Pharmacy Culture                                     | Tsuyuki, R  | Complete |
| 431 | Pharmacy Survey                                      | Tsuyuki, R  | Complete |
| 432 | PSAP7  | Tsuyuki, R  | Complete |
| 433 | REACT  | Tsuyuki, R  | Complete |
| 434 | REACT - Ex   | Tsuyuki, R  | Complete |
| 435 | Relationship between personality traits and pharma   | Tsuyuki, R  | Complete |
| 436 | RxACT  | Tsuyuki, R  | Complete |

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|-----|---|-------------------------|----------|
| 437 | RxACTION                                | Tsuyuki, R              | Complete |
| 438 | RxING                                   | Tsuyuki, R              | Complete |
| 439 | SCRIP - HTN                             | Tsuyuki, R              | Complete |
| 440 | SCRIP Plus                              | Tsuyuki, R              | Complete |
| 441 | SCRIP Plus Extension                    | Tsuyuki, R              | Complete |
| 442 | Statin Survey                           | Tsuyuki, R              | Complete |
| 443 | COLLABORATE                             | Tsuyuki, R/AHS          | Complete |
| 444 | SDM Optimum Study                       | Tsuyuki, R/Tonelli, M   | Complete |
| 445 | Red Yeast                               | Tyrrell, B              | Complete |
| 446 | SPAT 2005                               | Tyrrell, G              | Complete |
| 447 | Vaccine paper - Temp                    | Tyrrell, L              | Complete |
| 448 | Conduction Block in Atrial Fibrillation | Valtuille, L            | Complete |
| 449 | EP ABLATION - Pilot study               | Valtuille, L            | Complete |
| 450 | Colonoscopy                             | Van Zantem, S           | Complete |
| 451 | ReadToMe                                | Van Zantem, S           | Complete |
| 452 | Support for Clinical Practice Change    | Van, D                  | Complete |
| 453 | Epistaxis                               | Vethanayagam, D         | Complete |
| 454 | HHT                                     | Vethanayagam, D         | Complete |
| 455 | CARE - CAM                              | Vohra, S                | Complete |
| 456 | CARE - CHEO                             | Vohra, S                | Complete |
| 457 | CARE - HC-AWR                           | Vohra, S                | Complete |
| 458 | CARE - Maternal hypothyroidism          | Vohra, S                | Complete |
| 459 | Cold FX                                 | Vohra, S                | Complete |
| 460 | DELPHI                                  | Vohra, S                | Complete |
| 461 | Melatonin RCT                           | Vohra, S                | Complete |
| 462 | MY NAP                                  | Vohra, S                | Complete |
| 463 | Pediatric Integrative Medicine          | Vohra, S                | Complete |
| 464 | Rhodiola Rosea                          | Vohra, S                | Complete |
| 465 | SONAR                                   | Vohra, S                | Complete |
| 466 | ASRLS/SafetyNET                         | Vohra, S and Pohlman, K | Complete |
| 467 | Urinary Tract Infections                | Wagg, A                 | Complete |
| 468 | Mini-Metrxics                           | Wang, S                 | Complete |
| 469 | Mini-METRXICS - Validation              | Wang, S                 | Complete |
| 470 | AIM 3                                   | Webber                  | Complete |
| 471 | Cardiopulmonary Exercise Testing        | Welsh, R                | Complete |
| 472 | MetaAnalysis                            | Welsh, R                | Complete |
| 473 | PCI Registry                            | Welsh, R                | Complete |

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|     |                                    |                          |          |
|-----|------------------------------------|--------------------------|----------|
| 474 | PHAST Care Survey                  | Welsh, R                 | Complete |
| 475 | PROACT Biomarkers Study            | Welsh, R                 | Complete |
| 476 | PURGE                              | Welsh, R                 | Complete |
| 477 | Radial Artery Occlusion            | Welsh, R                 | Complete |
| 478 | REMCN - STEMI                      | Welsh, R                 | Complete |
| 479 | Rural STEMI Database               | Welsh, R                 | Complete |
| 480 | STREAM                             | Welsh, R                 | Complete |
| 481 | STREAM                             | Welsh, R                 | Complete |
| 482 | VHR - MVD                          | Welsh, R                 | Complete |
| 483 | VHR - RADAR                        | Welsh, R                 | Complete |
| 484 | Vital Heart Response               | Welsh, R                 | Complete |
| 485 | Z-PROACT                           | Welsh, R                 | Complete |
| 486 | Imuran Study                       | Wong, J                  | Complete |
| 487 | Frontal Sinus                      | Wright                   | Complete |
| 488 | Botox                              | Yuksel, N                | Complete |
| 489 | Chronic Pelvic Pain                | Yuksel, N                | Complete |
| 490 | Osteopharm                         | Yuksel, N                | Complete |
| 491 | Testosterone therapy               | Yuksel, N                | Complete |
| 492 | VRR Worksite                       | AHS CV-SCN               | Ongoing  |
| 493 | CVICU Frailty Study                | Bagshaw, S               | Ongoing  |
| 494 | ICU Frailty Study                  | Bagshaw, S               | Ongoing  |
| 495 | SPARK                              | Bagshaw, S               | Ongoing  |
| 496 | GLADIATOR                          | Bagshaw, S & Singh, G    | Ongoing  |
| 497 | GLS from Biplane Contrast Echo     | Becher, H                | Ongoing  |
| 498 | IMAGE -CAD Study                   | Becher, H                | Ongoing  |
| 499 | AMS Database                       | Bungard, T               | Ongoing  |
| 500 | C-PASS                             | Butcher, K               | Ongoing  |
| 501 | ICH ADAPT II                       | Butcher, K               | Ongoing  |
| 502 | Brain Cooling                      | Chan, Michael            | Ongoing  |
| 503 | Ultrasound test for Pressure Ulcer | Chan, Ming               | Ongoing  |
| 504 | ABLE - cGVHD Study                 | Cuvelier, G              | Ongoing  |
| 505 | Rheumatology Database              | Devoe, D. and Mosher, D  | Ongoing  |
| 506 | Diet in Ulcerative Colitis         | Dieleman, L & Madesen, K | Ongoing  |
| 507 | Prebiotics for Prevention of UC    | Dieleman, L              | Ongoing  |
| 508 | Pearlium/Effectical                | Fedorak, R /Sinoveda     | Ongoing  |
| 509 | Cirrhosis Registry                 | Gonzales                 | Ongoing  |



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| 510 | Diabetes Care Optimization                                    | Gyenes, G                | Ongoing |
| 511 | Perceptions of Pharmacist's Role and Professional Development | Hughes, C                | Ongoing |
| 512 | RAPPORT - Biologics - IHE                                     | IHE                      | Ongoing |
| 513 | RA Risk Reduction   | Keeling, S               | Ongoing |
| 514 | esACS Substudy  | Khan, N                  | Ongoing |
| 515 | SWI - Vancomycin Sternal Wound                                | Khani-Hanjani            | Ongoing |
| 516 | esACS   | King-Shier, K            | Ongoing |
| 517 | C-STOP  | Majumdar, S              | Ongoing |
| 518 | Medication Risk Assessment Survey                             | Makowsky, M              | Ongoing |
| 519 | FORCAST   | Maksymowych, W           | Ongoing |
| 520 | RAPPORT   | Maksymowych, W           | Ongoing |
| 521 | RAPPORT - Newfoundland  | Maksymowych, W           | Ongoing |
| 522 | Early Inflammatory Arthritis                                  | Martin, L                | Ongoing |
| 523 | RAPPORT - Calgary   | Martin, L                | Ongoing |
| 524 | HAART Study   | Mason, A                 | Ongoing |
| 525 | PROACTIVE   | McAlister, F             | Ongoing |
| 526 | ABLE - Thrombosis   | Mitchell, L              | Ongoing |
| 527 | Long Term Renal Outcomes                                      | Morgan, C                | Ongoing |
| 528 | Renal Oxygenation as Predictors of AKI                        | Morgan, C                | Ongoing |
| 529 | EVOLUTION   | Padwal, R                | Ongoing |
| 530 | SETS  | Parent, E                | Ongoing |
| 531 | Manticore Study   | Paterson, I              | Ongoing |
| 532 | ABLE - Cisplatin and Hearing loss                             | Rassekh, R               | Ongoing |
| 533 | ABLE – Clinical Trial – Prevention of Hearing Loss            | Rassekh, R               | Ongoing |
| 534 | Antibiotics in Cystic Fibrosis                                | Saad, E and Brown, N     | Ongoing |
| 535 | ABLE  | Schultz, K               | Ongoing |
| 536 | RxEACH  | Tsuyuki, R               | Ongoing |
| 537 | SPAT  | Tyrrell, G and Marrie, T | Ongoing |
| 538 | SPAT 4  | Tyrrell, G and Marrie, T | Ongoing |
| 539 | CV ICU Readmission  | Van Diepen, S            | Ongoing |
| 540 | COMPACT   | Van Diepen, S,           | Ongoing |
| 541 | ABLE - Cisplatin and Kidney Disease                           | Zappitelli, M            | Ongoing |

## APPENDIX B

### Appendix B: Partial List of Investigators Served

|    |                     |
|----|---------------------|
| 1  | ABBOTT/Abbvie       |
| 2  | Abdul, A            |
| 3  | Ackman, M           |
| 4  | Allen, M            |
| 5  | Armstrong, P        |
| 6  | Bagshaw, S          |
| 7  | Bailey              |
| 8  | Beard, K            |
| 9  | Beaupre, L          |
| 10 | Becher, H           |
| 11 | Bedard, E           |
| 12 | Bell, N             |
| 13 | Bell, R             |
| 14 | Boule, N            |
| 15 | Braam, B            |
| 16 | Bratu, I            |
| 17 | Broderick, G        |
| 18 | Brown, N            |
| 19 | Bungard, T          |
| 20 | Burton, J           |
| 21 | Butcher, K          |
| 22 | Butler, C           |
| 23 | Cadili, A           |
| 24 | Cameron, J          |
| 25 | Campbell-Scherer, D |
| 26 | Casey, L            |
| 27 | Chan, Michael       |
| 28 | Chan, Ming          |
| 29 | Chao, J             |
| 30 | Chari               |
| 31 | Chowdhury, R        |
| 32 | Choy, J             |
| 33 | Chubaty, A          |
| 34 | Coulden, R          |

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| 35 | Cuvelier, G            |
| 36 | CV-SCN (AHS)           |
| 37 | Dewart, K              |
| 38 | Devoe, D               |
| 39 | Dieleman, L            |
| 40 | Dillane, D             |
| 41 | Dong, K                |
| 42 | Drummond, J            |
| 43 | Dyck, J                |
| 44 | Dytoc, M               |
| 45 | Dziegielewski, P       |
| 46 | El Bialey, T           |
| 47 | Estabrooks, C          |
| 48 | Eurich, D              |
| 49 | Evaschesen, C          |
| 50 | Everaert, D            |
| 51 | Ezekowitz, J           |
| 52 | Fedorak, R             |
| 53 | Fedorak/Alistair       |
| 54 | Fox, R                 |
| 55 | Frank, C               |
| 56 | Galvin, D              |
| 57 | Garneau Lung Lab       |
| 58 | Garros, D              |
| 59 | Gonzales               |
| 60 | Gragasin, F            |
| 61 | Graham, M              |
| 62 | Green, T               |
| 63 | Gross, D               |
| 64 | Guenther, C/Anzarut, A |
| 65 | Guerra, G              |
| 66 | Gyenes, G              |
| 67 | Hall, J, Hall, K       |
| 68 | Hanna, J               |
| 69 | Haykowsky, M           |
| 70 | Hossini, F             |
| 71 | Houle, S               |

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| 72  | Hughes, C                     |
| 73  | Hunt, I                       |
| 74  | Institute of Health Economics |
| 75  | Jacka, M                      |
| 76  | Janzen, W                     |
| 77  | Johnson, JA                   |
| 78  | Johnston, B                   |
| 79  | Jones, A                      |
| 80  | Kalra, S                      |
| 81  | Kanji, H                      |
| 82  | Kao, D                        |
| 83  | Keeling, S                    |
| 84  | Khan, N                       |
| 85  | Khani-Hanjani, A              |
| 86  | Kimber, S                     |
| 87  | King-Shier, K                 |
| 88  | Kopolovic, I                  |
| 89  | Koshman, S                    |
| 90  | Kroeker, K                    |
| 91  | Kumar, A                      |
| 92  | Lai, F                        |
| 93  | Lazaurescu, A                 |
| 94  | Lee, T/Fedorak, R             |
| 95  | Lehr, E                       |
| 96  | Long, R                       |
| 97  | Lu, C                         |
| 98  | Ma, M                         |
| 99  | Madsen, K                     |
| 100 | Majumdar, S                   |
| 101 | Makaroff, C                   |
| 102 | Makowsky, M                   |
| 103 | Makskmowych, W                |
| 104 | Manns, B                      |
| 105 | Marin, A                      |
| 106 | Marra, C                      |
| 107 | Marrie, T                     |

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| 108 | Martin, L     |
| 109 | Mason, A      |
| 110 | Mayers, I     |
| 111 | McAlister, F  |
| 112 | McNeely, M    |
| 113 | Michelakis, E |
| 114 | Miciak, G     |
| 115 | Mitchell, L   |
| 116 | Molzahn, A    |
| 117 | Morgan, C     |
| 118 | Morrissey, A  |
| 119 | Mosher, D     |
| 120 | Murray, A     |
| 121 | Nee/Paterson  |
| 122 | Norris, C     |
| 123 | O'Connell, D  |
| 124 | Oudit, G      |
| 125 | Padwal, R     |
| 126 | Pantano, A    |
| 127 | Parent, E     |
| 128 | Pate          |
| 129 | Patel         |
| 130 | Paterson, I   |
| 131 | Pauly, R      |
| 132 | Pearson, G    |
| 133 | Pehowich, M   |
| 134 | Pharis        |
| 135 | Power, C      |
| 136 | Pretorius, V  |
| 137 | Rassekh, R    |
| 138 | Ravid, N      |
| 139 | Reid, S       |
| 140 | Robinson, J   |
| 141 | Rolfson, D    |
| 142 | Rosenthal, M  |
| 143 | Ross, D       |
| 144 | Rowe, B       |

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| 145 | Russell, A     |
| 146 | Ryan, E        |
| 147 | Saad, E        |
| 148 | Sadowski, D    |
| 149 | Sandhu, R      |
| 150 | Schindel, T    |
| 151 | Schultz, K     |
| 152 | Schulze, C     |
| 153 | Shanks, M      |
| 154 | Sharma, A      |
| 155 | Sharpe, H      |
| 156 | Sheldon, S     |
| 157 | Shibata, M     |
| 158 | Sia, W         |
| 159 | Siddiqi, Z     |
| 160 | Siffeldeen, J  |
| 161 | Simpson, S     |
| 162 | Sinclair, D    |
| 163 | Singh, G       |
| 164 | Sivakumaran, S |
| 165 | Slaughter, S   |
| 166 | Smigorowsky, M |
| 167 | Soo, I         |
| 168 | Spencer, T     |
| 169 | Svenson, L     |
| 170 | Tandon, P      |
| 171 | Teo, K         |
| 172 | Thompson, A    |
| 173 | Thomson, A     |
| 174 | Tonelli, M     |
| 175 | Tredget, T     |
| 176 | Tsui, B        |
| 177 | Tsuyuki, R     |
| 178 | Tyrrell, B     |
| 179 | Tyrrell, G     |
| 180 | Tyrrell, L     |
| 181 | Valtuille, L   |

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|     |                 |
|-----|-----------------|
| 182 | Van Diepen, S   |
| 183 | Van Zanten, S   |
| 184 | Vethanayagam, D |
| 185 | Vohra, S        |
| 186 | Wagg, A         |
| 187 | Wang, S         |
| 188 | Webber          |
| 189 | Welsh, R        |
| 190 | Wong, J         |
| 191 | Wright          |
| 192 | Yuksel, N       |
| 193 | Zappitelli, M   |

## APPENDIX C:

### Appendix C: Current Projects

|    | <b>Project</b>  | <b>Principal Investigator</b> |
|----|---|-------------------------------|
| 1  | CVICU Frailty Study   | Bagshaw, S                    |
| 2  | ICU Frailty Study   | Bagshaw, S                    |
| 3  | SPARK   | Bagshaw, S                    |
| 4  | GLADIATOR   | Bagshaw, S & Singh, G         |
| 5  | GLS from Biplane Contrast Echo                                | Becher, H                     |
| 6  | IMAGE -CAD Study  | Becher, H                     |
| 7  | AMS Database  | Bungard, T                    |
| 8  | C-PASS  | Butcher, K                    |
| 9  | ICH ADAPT II  | Butcher, K                    |
| 10 | Brain Cooling Study   | Chan, Michael                 |
| 11 | Ultrasound test for Pressure Ulcer                            | Chan, Ming                    |
| 12 | ABLE - cGVHD Study  | Cuvelier, G                   |
| 13 | Rheumatology Database   | Devoe, D & Mosher, D          |
| 14 | Prebiotics for Prevention of Ulcerative Colitis               | Dieleman, L                   |
| 15 | Diet in Ulcerative Colitis                                    | Dieleman, L and Madsen K      |
| 16 | Pearlium/Effectical   | Fedorak, R and Sinoveda       |
| 17 | Cirrhosis Registry  | Gonzales                      |
| 18 | Diabetes Care Optimization                                    | Gyenes, G                     |
| 19 | Perceptions of Pharmacist's Role and Professional Development | Hughes, C                     |
| 20 | RAPPORT - Biologics   | Institute of Health Economics |
| 21 | RA Risk Reduction   | Keeling, S                    |
| 22 | esACS Substudy  | Khan, N                       |
| 23 | SWI – Vancomycin Sternal Wound                                | Khani-Hanjani                 |
| 24 | esACS Study   | King-Shier, K                 |
| 25 | C-STOP  | Majumdar, S                   |
| 26 | Medication Risk Assessment Survey                             | Makowsky, M                   |
| 27 | FORCAST   | Maksymowych, W                |
| 28 | RAPPORT   | Maksymowych, W                |
| 29 | RAPPORT - Newfoundland  | Maksymowych, W                |
| 30 | Early Inflammatory Arthritis                                  | Martin, L                     |
| 31 | RAPPORT - Calgary   | Martin, L                     |



## APPENDIX C:

|    |  |                          |
|----|--|--------------------------|
| 32 | HAART Study  | Mason, A                 |
| 33 | PROACTIVE  | McAlister, F             |
| 34 | ABLE - Thrombosis                                  | Mitchell, L              |
| 35 | Long Term Renal Outcomes                           | Morgan, C                |
| 36 | Renal Oxygenation as Predictors of AKI             | Morgan, C                |
| 37 | EVOLUTION  | Padwal, R                |
| 38 | SETS – Schroth Exercise - Scoliosis                | Parent, E                |
| 39 | MANTICORE  | Paterson, I              |
| 40 | ABLE - Cisplatin and Hearing loss                  | Rassekh, R               |
| 41 | ABLE – Clinical Trial – Prevention of Hearing Loss | Rassekh, R.              |
| 42 | Antibiotics in Cystic Fibrosis                     | Saad, E & Brown N        |
| 43 | ABLE   | Schultz, K               |
| 44 | RxEACH   | Tsuyuki, R               |
| 45 | SPAT   | Tyrrell, G and Marrie, T |
| 46 | SPAT 4   | Tyrrell, G and Marrie, T |
| 47 | COMPACT  | Van Diepen, S            |
| 48 | CV ICU Readmission                                 | Van Diepen, S            |
| 49 | Cisplatin and Kidney Disease                       | Zappitelli, M            |

## Appendix D: EPICORE Centre Publications - 2014

1. Bagshaw SM, Stelfox T, McDermid RC, Rolfson DB, Tsuyuki RT, Baig N, Artiuch B, Ibrahim Q, Stollery DE, Rokosh E, Majumdar SR. Association Between Frailty and Short and Long-Term Outcomes in Critically Ill Patients: A Multi-Centre Prospective Cohort Study. *CMAJ* 2014;186(2):E95-E102. DOI: 10.1503/cmaj.1306.39.
2. Houle SKD, Rosenthal MM, Tsuyuki RT. A case study in mobilizing all pharmacy team members in the community setting – A clinical facilitation role for pharmacy technicians. *Can Pharm J* 2014; 147(2):85-88. DOI: 10.1177/1715163513513865.
3. Sebastianski M, Makowsky MJ, Dorgan M, Tsuyuki RT. Paradoxically lower prevalence of peripheral arterial disease in South Asians: a systematic review and meta-analysis. *Heart* 2014;100:100-105. Published online June 11, 2013, doi:10.1136/heartjnl-2013-303605.
4. Grindrod K, Forgione A, Tsuyuki RT, Gavura S, Giustini D. Pharmacy 2.0: a scoping review of social media use in the profession. (Commentary). *Res Soc Admin Pharm* 2014;10:256-270. DOI:10.1016/j.sapharm.2013.05.004.
5. Neczyk C, Tsuyuki RT, Boon H, Foster BC, LeGatt D, Cembrowski G, Murty M, Barnes J, Charrois TL, Arnason JT, Ware MA, Rosychuk RJ, Vohra S. Pharmacy Study of Natural Health Product Adverse Reactions (SONAR): A Cross-Sectional Study using Active Surveillance in Community Pharmacies to Detect Adverse Events Associated with Natural Health Products. *BMJ Open* 2014;4:e003431. Doi:10.1136/bmjopen-2012-0003431.
6. Rosenthal MM, Chen CB, Hall K, Tsuyuki RT. Mixed messages: The Blueprint for Pharmacy and a communication gap. *Can Pharm J* 2014;147(2):118-123. DOI: 10.1177/1715163514520948.
7. McAlister FA, Majumdar SR, Padwal RS, Fradette M, Thompson A, Buck B, Dean N, Bakal JA, Tsuyuki R, Grover S, Shuaib A. Case management for blood pressure and lipid level control after minor stroke: PREVENTION randomized controlled trial. *CMAJ* 2014;186(8):577-84. DOI:10.1503/cmaj.140053.
8. Houle SKD, Chatterley T, Tsuyuki RT. Multidisciplinary approaches to the management of high blood pressure. *Curr Opin Cardiol* 2014;29(4):344-353. DOI:10.1097/HCO.000000000000071.
9. Houle SKD, Padwal R, Poirier L, Tsuyuki RT. The 2014 Canadian Hypertension Education Program (CHEP) guidelines for pharmacists: An update. *Can Pharm J* 2014;147(2):203-208. DOI: 10.1177/1715163514535341.
10. Houle SKD, Grindrod KA, Chatterley T, Tsuyuki RT. Paying Pharmacists for Patient Care: A Systematic Review of Remunerated Pharmacy Clinical Care Services. *Can Pharm J* 2014;147(4): 209-232. DOI: 10.1177/1715163514536678.
11. Tsuyuki RT. Research Primer: Designing Pharmacy Practice Research Trials. *Can J Hosp Pharm* 2014; 67(3): 226-229.
12. Campbell NRC, Duhane T, Arango M, Ashley L, Bacon SL, Gelfer M, Kaczorowski J, Mang E, Morris D, Nagpal S, Tsuyuki R, Willis K. Healthy Food Procurement Policy: an Important Intervention to Aid the Reduction in Chronic Noncommunicable Diseases. *Can J Cardiol* 2014;30:1456-1459.
13. Zolezzi M, Bye L, Shaw J, Harrison J, Tsuyuki RT. Provision of health/disease screening and medication monitoring/management in New Zealand community pharmacies. *J Pharm Pract Res* 2014;44:188-194.
14. Sebastianski M, Tonelli M, Tsuyuki RT. Ethnic Differences in Prevalence of Peripheral Artery Disease in Patients Undergoing Hemodialysis. *J Racial Ethnic Health Disparities* 2014. DOI 10.1007/s40615-014-0066-7.

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15. Sebastianski M, Narasimhan S, Toleva O, Shavandia J, Abualnaja S, Tsuyuki RT, Graham MM, McMurtry MS. Usefulness of the Ankle-Brachial Index to Predict High Coronary SYNTAX scores, Myocardium at Risk and Incomplete Coronary Revascularization. *Am J Cardiol* 2014;114(11):1745-1749.
16. Kopolovic I, Lee AYY, Wu C. Management and outcomes of cancer-associated venous thromboembolism in patients with concomitant thrombocytopenia: a retrospective cohort study. *Ann Hematol* 2014/ DOI 10.1007/s00277-014-2198-6.
17. Punja S, Shamseer L, Olson K, Vohra S. Rhodiola Rosea for Mental and Physical Fatigue in Nursing Students: A Randomized Controlled Trial. *PLoS ONE* 2014; 9(0):e108416. Doi: 10.1371/journal.pone.o108416.
18. Berresheim M, Wilkie J, Nerenberg KA, Ibrahim Q, Bungard TJ. A case series of LMWH use in pregnancy: Should trough anti-Xa levels guide dosing? *Thrombosis Research* 2014;134(6):1234-1240.
19. Bainey KR, Ferguson C, Ibrahim QI, Tyrrell B, Welsh RC. Impact of Reperfusion Strategy on Aborted Myocardial Infarction: Insights from a large Canadian ST-elevation Myocardial Infarction Clinical Registry. *Can J Cardiol* 2014;30:1570-1575.
20. Ao P, Sebastianski M, Selvarajah V, Gramlich L. Comparison of Complication Rates, Types, and Average Tube Patency Between Jejunostomy Tubes and Percutaneous Gastrostomy Tubes in a Regional Home Enteral Nutrition Support Program. *Nutrition in Clinical Practice* 2014. DOI: 10.1177/0884533614554263.
21. McAlister FA, Bakal J, Majumdar SR, Dean S, Padwal RS, Bacchus M, Kassam N, Colbourne A. Safely and effectively reducing inpatient length of stay: A controlled study of the General Internal Medicine Care Transformation Initiative. *BMJ Qual & Safety* 2014;23:446-456. [accompanying editorial: Kaboli PJ, Mosher HJ. Using balanced metrics and mixed methods to better understand QI interventions. *BMJ Qual & Safety* 2014;23:456]
22. Padwal R, McAlister FA, McMurray JVV, Cowie MR, Rich M, Pocock S, Swedberg K, Maggioni A, Gamble G, Ariti C, Earle N, Whalley G, Poppe KK, Doughty RN, Bayes-Genis A. The obesity paradox in heart failure patients with preserved versus reduced ejection fraction: a meta-analysis of individual patient data. *Int J Obesity* 2014;38:1110-1114.
23. Au A, Padwal RS, Majumdar SR, McAlister FA. Outcomes in teaching versus nonteaching General Internal Medicine services: systematic review. *Acad Med* 2014;89:517-523.
24. Gamble JM, Majumdar SR, Johnson JA, McAlister FA, Simpson SH, Eurich DT. Changes in thiazolidinedione use and outcomes following removal of a prior authorization policy: Controlled time-series analysis. *Med Care* 2014;52:47-55.
25. van Diepen S, Youngson E, Ezekowitz JA, McAlister FA. Which risk score best predicts postoperative outcomes in non-valvular atrial fibrillation patients undergoing non-cardiac surgery? *Am Heart J* 2014;168:60-67.
26. Eastwood C, Howlett J, King-Shier K, McAlister FA, Quan H. Determinants of 7- and 30-day Readmissions After Heart Failure Hospitalization in Alberta, 2004-2012. *Can J Cardiol* 2014;30:612-618.
27. The VISION Investigators. Myocardial injury after noncardiac surgery: a large, international, prospective cohort study establishing diagnostic criteria, characteristics, predictors, and 30-day outcomes. *Anesthesiology* 2014;120:564-578.
28. McAlister FA, Majumdar SR, Padwal RS, Fradette M, Thompson A, Buck B, Dean N, Bakal JA, Tsuyuki RT, Grover S, Shuaib A. Case management for blood pressure and lipid level control after minor stroke: PREVENTION Randomized Controlled Trial [Clinicaltrials.gov Identifier: NCT00931788]. *CMAJ* 2014;186:577-584.

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29. Sidhu R, Youngson E, McAlister FA. Physician continuity improves outcomes for heart failure patients treated and released from the emergency department. *J Am Coll Cardiol: Heart Fail* 2014;2:368-376.
30. Clement F, Chen G, McAlister FA, Khan N, Tu K, Campbell N, Smith M, Hemmelgarn B, Quan H. Primary care physician visits for patients with incident hypertension. *Can J Cardiol* 2014;30:653-660.
31. Majumdar SR, McAlister FA, Johnson JA, Weir DL, Bellerose D, Hanley DA, Russell AS, Rowe BH. Critical impact of patient knowledge and bone density testing on starting osteoporosis treatment after fragility fracture: secondary analyses from 2 controlled trials. *Osteoporos Int* 2014;25:2173-2179.
32. Quan H, McAlister FA, Khan N. The many faces of hypertension in Canada. *Curr Opinion Cardiol* 2014;29:354-359.
33. Lyons KJ, Ezekowitz JA, Liu W, McAlister FA, Kaul P. Mortality Outcomes Among Status Aboriginals and Whites with Heart Failure. *Can J Cardiol* 2014;30:619-626.
34. Bushnik T, Levallois P, Damour M, Anderson T, McAlister FA. The association between blood lead, blood pressure and hypertension in Canada: results from the Canadian Health Measures Survey (2007-2011). *Health Reports* 2014;25:12-22.
35. Weir DL, McAlister FA, Senthilselvan A, Sandhu-Minhas JK, Eurich DT. Sitagliptin use in patients with Diabetes and Heart Failure: A population based retrospective cohort study. *J Am Coll Cardiol Heart Fail* 2014;2:573-582 (accompanying editorial: Bhatt DL, Cavender MA. Do dipeptidyl peptidase-4 inhibitors increase the risk of heart failure? *J Am Coll Cardiol Heart Fail* 2014; )
36. Tu K, Anderson LN, Butt DA, Quan H, Hemmelgarn BR, Campbell N, McAlister FA. Antihypertensive drug prescribing and persistence among new elderly users: implications for persistence improvement interventions. *Can J Cardiol* 2014;30:647-652.
37. Murphy GK, McAlister FA, Weir D, Tjosvold L, Eurich DT. Cardiovascular medication utilization and adherence among adults living in rural and urban areas: A systematic review and meta-analysis. *BMC Public Health* 2014;14:544.
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39. Ezekowitz JA, Becher H, Belenkie I, Clark AM, Duff HJ, Freidrich MG, Haykowsky MJ, Howlett JG, Kassiri A, Kaul P, Kim DH, Knudtson ML, Light PE, Lopaschuk GD, McAlister FA, Noga ML, Oudit GY, Paterson DI, Quan H, Schulz R, Thompson RB, Weeks SG, Anderson TJ, Dyck JRB. The Alberta Heart Failure Etiology and Analysis Research Team (HEART) Study. *BMC Cardiovascular Disorders*.2014, 14:91. DOI: 10.1186/1471-2261-14-91
40. Bakal JA, McAlister FA, Liu W, Ezekowitz JA. Heart Failure Re-Admission: Measuring the Ever Shortening Gap between Repeat Heart Failure Hospitalizations. *PLoS One*. 2014 Sep 11;9(9):e106494. doi: 10.1371/journal.pone.0106494.
41. Walker RL, Chen G, McAlister FA, Campbell NR, Hemmelgarn BR, Dixon E, Ghali W, Rabi D, Tu K, Jette N, Quan H; Hypertension Outcome and Surveillance Team. Relationship between primary care physician visits and hospital/emergency use for uncomplicated hypertension, an ambulatory care sensitive condition. *Can J Cardiol* 2014;30:1640-1648.
42. McAlister FA, Majumdar SR, Grover S, Padwal RS, Youngson E, Fradette M, Thompson A, Buck B, Dean N, Tsuyuki RT, Shuaib A. Case Management Reduces Global Cardiovascular Risk after Stroke: Secondary Results from the PREVENTION Randomized Controlled Trial. *Am Heart J* 2014;168:924-930.

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43. Nickonchuk T, Lindblad AJ, Kolber MR. Oral cholera vaccine for traveler's diarrhea prophylaxis. *Can Fam Physician*. May 2014;60 (5):451.
44. Houle SK, Kolber MR, Chuck AW. Should vitamin B12 tablets be included in more Canadian drug formularies? An economic model of the cost-saving potential from increased utilisation of oral versus intramuscular vitamin B12 maintenance therapy for Alberta seniors. *BMJ Open*. May 2014;4 (5):e004501.
45. Harbin M, Turgeon RD, Kolber MR. Cardiovascular safety of NSAIDs. *Can Fam Physician*. Mar 2014;60 (3):e166.
46. Kolber MR, Houle SK. Oral vitamin B12: a cost-effective alternative. *Can Fam Physician*. Feb 2014;60 (2):111-2.
47. Kolber MR, Lau D, Eurich D, Korownyk C . Effectiveness of the trivalent influenza vaccine. *Can Fam Physician*. Jan 2014;60 (1):50.
48. de Almeida JR, Guyatt GH, Sud S, Dorion J, Hill MD, Kolber MR, Lea J, Reg SL, Somogyi BK, Westerberg BD, White C, Chen JM, Bell Palsy Working Group, Canadian Society of Otolaryngology - Head and Neck Surgery and Canadian Neurological Sciences Federation. Management of Bell palsy: clinical practice guideline. *CMAJ*. Sept 2014;186 (12):917-22.
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50. Taylor IC, Lindblad AJ, Kolber MR. Fracture healing and NSAIDs. *Can Fam Physician*. Sept 2014;60 (9):817, e439-40.
51. Christina Korownyk, Michael R Kolber, James McCormack Vanessa Lam, Kate Overbo, Candra Cotton, Caitlin Finley, Ricky D Turgeon, Scott Garrison, Adrienne J Lindblad, Hoan Linh Banh, Denise CampbellScherer, Ben Vandermeer, G Michael Allan. Televised medical talk shows—what they recommend and the evidence to support their recommendations: a prospective observational study. *British Medical Journal*. Dec 2014;349:g7346. **This paper since publication is in the top 1% of all-time viewed BMJ articles.**
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54. Dang TT, Eurich DT, Weir DL, Marrie TJ, Majumdar SR. Rates and risk factors for recurrent pneumonia in patients hospitalized with community-acquired pneumonia: Population-based prospective cohort study with 5 years of follow-up.

## APPENDIX E

### Appendix E: Summary Income Statement

#### EPICORE Income Statement

For the 12 month periods ending December 31, 2014 and 2013

|  | 2014              | 2013              |
|--|-------------------|-------------------|
| Revenue                                  |                   |                   |
| Project income                           | \$ 348,440        | \$ 473,532        |
| Faculty of Medicine and Dentistry Grant  | 250,000           | 250,000           |
| Accrued revenue not invoiced             | 28,096            | 291,532           |
| Total revenue                            | <u>626,536</u>    | <u>1,015,064</u>  |
| Expenses                                 |                   |                   |
| Salaries, benefits, bursaries and grants | 335,773           | 681,291           |
| Severance costs related to realignment   | 0                 | 198,100           |
| Consulting and outside services          | 12,014            | 41,025            |
| Supplies                                 | 5,481             | 23,193            |
| Computer and office supplies             | 2,231             | 9,690             |
| Telecommunications                       | 6,217             | 9,089             |
| Facility and equipment related costs     | 4,721             | 7,334             |
| Travel                                   | 3,902             | 2,958             |
| Parking and other registrations          | 442               | 328               |
| Bad debts (recovery)                     | 27,335            | (134,358)         |
| Total expenses                           | <u>398,116</u>    | <u>838,652</u>    |
| Net income (loss)                        | <u>\$ 228,420</u> | <u>\$ 176,412</u> |