

**Centre for Community Pharmacy Research and
Interdisciplinary Strategies (COMPRIS)
2004 Annual Report
January 27, 2005**

BACKGROUND INFORMATION

Approved by the University of Alberta in 2003, the Centre for **COMM**unity Pharmacy Research and **Interdisciplinary Strategies (c/ COMPRIS)** is a unique multidisciplinary health research centre with a focus on exploring the role of pharmacists in community-based healthcare. COMPRIS is supported by the Faculty of Medicine and Dentistry, Faculty of Pharmacy and Pharmaceutical Sciences, and EPICORE Centre, and sponsored by Bristol-Myers Squibb Canada Co./Sanofi-Aventis, Merck Frosst Canada Ltd., Pfizer Canada Inc., and Overwaitea Food Group. COMPRIS is a subsidiary of the Epidemiology Coordinating and Research (EPICORE) Centre and shares resources by purchasing services from the parent centre.

For more information on the activities of EPICORE Centre and COMPRIS, please see the website: www.epicore.ualberta.ca.

VISION

- To become the leading internationally-recognized centre for pharmacy practice research.
- To have pharmacists engaged in patient-centered care, supported by high quality research evidence of its efficacy, supported in their work environment, continuously learning, and recognized for their contributions to primary healthcare.

MISSION/OBJECTIVES OF COMPRIS

Today's healthcare challenges need team-based, flexible, sustainable solutions. COMPRIS fosters the development of new and renewed roles for pharmacists in community-based healthcare. It uses clinical trials methodology to examine the impact of collaboration between pharmacists, physicians and other health care professionals and to look at community pharmacist intervention in disease management programs.

Pharmacists are highly accessible community-based drug therapy experts who are often the first point of contact with the healthcare system for patients. Indeed, patients visit their pharmacist 5-8 times more frequently than their physician - providing an excellent

opportunity for pharmacists to work with patients and other health care professionals to provide better disease management.

MISSION

To demonstrate, support, and promote the development of new and renewed roles for pharmacists within the community-based interdisciplinary health care team, using clinical trials methodology to examine the impact of a) collaboration between pharmacists, physicians and other health care professionals, and b) community pharmacist intervention in disease management programs.

GOALS AND OBJECTIVES

1. To design, implement, analyze, publicize and promote community practice research;
2. To act as a resource for practice research stakeholders to conduct, promote, apply and integrate research, education, training and practice;
3. To identify and steward resources (human, intellectual and financial) connected to practice research; and
4. To deliver education and training in practice research.

CURRENT STRUCTURE OF COMPRIS

GOVERNANCE

Director

Ross Tsuyuki, BSc (Pharm), PharmD, MSc, FCSHP
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FACULTY

COMPRIS has access to a unique cadre of staff with expertise in a wide range of health research and clinical expertise:

- Ross Tsuyuki, BSc(Pharm), PharmD, MSc, FCSHP (Professor – Medicine/Pharmacy & Pharmaceutical Sciences, University of Alberta, Director – EPICORE Centre/COMPRIS)
- Jeff Johnson, BSP, MSc, PhD (Professor - Public Health Sciences, University of Alberta)
- Glen Pearson, BSc, BSP Pharm, PharmD, FCSHP (Associate Professor – Cardiology, Co-Director, Cardiovascular Risk Reduction Clinic, University of Alberta)
- Terri Schindel, BSP, MCE, FCSHP (Director, Outreach Education, Faculty of Pharmacy & Pharmaceutical Sciences, University of Alberta)
- Finlay A. McAlister, MD, MSc, FRCPC (Associate Professor -Medicine/General Internist, University of Alberta)
- Sumit R. Majumdar, MD, MPH, FRCPC (Assistant Professor -Medicine/General Internist, University of Alberta)
- Kathryn King, RN, PhD (Associate Professor - Faculty of Nursing, University of Calgary)
- Maricel Reddy, BHE, RD (Clinical Dietician, Capital Health)
- Tammy Bungard, BSP, PharmD (Assistant Professor – Medicine, Director – Anticoagulation Management Service, University of Alberta)
- Marcelo Shibata, MD (Clinical Instructor – Medicine, Cardiologist, Misericordia Hospital)
- Scot Simpson, PharmD, MSc, (Assistant Professor, Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta)
- Nesé Yuksel, Pharm.D. (Associate Professor, Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta)
- Carlo Marra, PharmD, Ph.D., FCSHP (Assistant Professor, Faculty of Pharmaceutical Sciences, University of British Columbia)

RESEARCH ADVISORY COMMITTEE

The Centre's sponsors participate in its activities through membership in a Research Advisory Committee. (Terms of Reference Appendix I). Membership of the Research Advisory Committee follows:

Name	Position	Affiliation and Address
Dr. Franco Pasutto	Dean	Faculty of Pharmacy and Pharmaceutical Sciences 3118 Dentistry/Pharmacy Centre University of Alberta Edmonton, AB T6G 2N8
Dr. Tom Marrie	Dean	Faculty of Medicine and Dentistry 2J2.02 WMC University of Alberta Edmonton, AB T6G 2R7
Dr. Alexander Dubyk	Associate Director, Regional Medical & Research Specialist - Alberta, Medical Division, Cardiovascular	Pfizer Canada Inc. 17,300 Trans-Canada Highway Kirkland, QC H9J 2M5
Ms. Bonnie Cochrane	Director of Patient Health Management	Merck Frosst Canada Ltd. 16711 TransCanada Hwy Kirkland, QC H9H 3L1
Ms. Hawley Crosby	Senior Consultant, Health Outcomes	Bristol-Myers Squibb 2365 Côte-de-Liesse Saint-Laurent, QC H4N 2M7
Mr. Ralph Lai Mr. Gary Jung	Director, Pharmacies Manager, Professional Services	Overwaitea Food Group 19855 - 92A Avenue Langley, BC V1M 3B6
Dr. Kirsten Woodend	Director, Research	Canadian Pharmacists Association 1785, prom. Alta Vista Dr. Ottawa, ON K1G 3Y6
Mr. Greg Eberhart	Registrar	Alberta College of Pharmacists 1200, 10303 Jasper Avenue Edmonton, AB T5J 3N6
Mr. Barry Cavanagh	Chief Executive Officer	Pharmacists Association of Alberta 1800 - 10303 Jasper Avenue NW Edmonton, AB T5J 3N6
Dr. Ross Tsuyuki	Director, COMPRIS	EPICORE Centre University of Alberta 220 College Plaza Edmonton, AB T6G 2C8
Mr. Chuck Wilgosh	Business Manager, COMPRIS	EPICORE Centre University of Alberta 220 College Plaza Edmonton, AB T6G 2C8

SPONSORS

- Bristol-Myers Squibb Canada Co./Sanofi-Aventis
- Merck Frosst Canada Ltd.
- Overwaitea Food Group
- Pfizer Canada Inc.

COLLABORATORS

- Alberta College of Pharmacists
- Canadian Pharmacists' Association
- Faculty of Pharmacy & Pharmaceutical Sciences, University of Alberta
- Faculty of Medicine and Dentistry, University of Alberta
- Pharmacists' Association of Alberta

PARTNERSHIPS

1. EPICORE Centre, University of Alberta.

COMPRIS is an approved Research Centre of the University of Alberta, operating as part of an established infrastructure (EPICORE Centre) and research program. The activities of COMPRIS constitute a specialized (community-based health outcomes research) focus within the broader health outcomes, epidemiologic and clinical trials research managed through EPICORE Centre. Dr. Ross Tsuyuki serves as Director of both EPICORE Centre and COMPRIS.

The Centres share common space at College Plaza, University of Alberta.

COMPRIS purchases general office support from EPICORE Centre, as well as office supplies, photocopying and other infrastructure support.

COMPRIS purchases expertise and assistance from EPICORE related to study design, clinical trial co-ordination, logistics, data management and quality assurance, database design, health records, and biostatistics.

2. University of Alberta

The Faculty of Pharmacy and Pharmaceutical Sciences has appointed Dr. Ross Tsuyuki to the position of Full Professor.

The Faculty of Pharmacy and Pharmaceutical Sciences, with its new curriculum to introduce a higher level of clinical training, is supported by COMPRIS's activities.

Pharmacists who participate in COMPRIS are better equipped to provide pharmacy students with clinical placement supervision emphasizing patient care.

The Faculty has committed to sharing five new tenure track clinical practitioner/researcher positions, at the Pharm D level, with COMPRIS. At no cost to COMPRIS, these individuals will liaise, support, participate and lead COMPRIS research projects. Some individuals will have up to 50% of their time allocated to research. Two of these practitioners have been recently hired (Dr. Nesé Yuksel and Dr. Scot Simpson). Joint Faculty/COMPRIS recruiting is being conducted to fill the remaining positions.

COMPRIS has worked with the Division of Continuing Education, Faculty of Pharmacy and Pharmaceutical Sciences to design *PHARMALearn*, a unique, award-winning web-based education for pharmacists on disease states with applications to practice-based research (www.pharmalearn.com).

Dean Franco Pasutto, as a member of the COMPRIS Research Advisory Committee, is a strong supporter of COMPRIS. Recently Dean Pasutto has actively engaged in recruitment of new corporate sponsors for COMPRIS infrastructure support, as well as financial sponsors for specific research projects.

Dr. Tsuyuki has also been appointed to the Merck Frosst Chair in Patient Health Management in the Faculty of Pharmacy and Pharmaceutical Sciences. The Faculties of Medicine and Dentistry and Pharmacy and Pharmaceutical Sciences recently created endowed chairs in patient health management, to conduct research in health outcomes. Dr. Finlay McAlister, is the Aventis Chair in Patient Management in the Faculty of Medicine and Dentistry. Dr. Tsuyuki and Dr. McAlister will conduct their work through EPICORE Centre, where they serve as Director and Deputy Director respectively. The chairs were created by a partnership of the Government of Alberta, through the Alberta Science and Research Authority, (\$1 million) Merck Frosst and Aventis Pharma, (\$750,000 each), the University of Alberta, (\$500,000) and Capital Health, through the Northern Alberta Clinical Trials and Research Centre, (\$500,000), over five years.

Dr. Tsuyuki is a full Professor in the Division of Cardiology, Department of Medicine, in the Faculty of Medicine and Dentistry.

The Faculty of Medicine and Dentistry is the host faculty of EPICORE Centre and COMPRIS. The Faculty provides space in College Plaza (a temporary arrangement until permanent space is located).

EPICORE Centre (and COMPRIS) provides expert research support services for a large number of clinical investigators in the Faculty of Medicine and Dentistry (as well as for other Faculties and other Universities). EPICORE Centre/COMPRIS provide support services for approximately 70 ongoing studies for 40 investigators at the University of Alberta and 5 other Universities.

EPICORE Centre/COMPRIS is also the home of the Anticoagulation Management Service (led by Dr. Tammy Bungard). This began as a project funded by the Health Innovation Fund of Alberta Health and Wellness, and negotiations are well underway for Capital Health to continue to fund the program.

3. Alberta Health and Wellness

Alberta Health and Wellness (AH&W) was a participant in the completed project “Effect of a Special Authorization Process on Patient Compliance and Outcomes: An Example with Clopidogrel Following Coronary Stenting” (described below). AH&W ongoing participation is being sought in the follow up study currently in the development phase.

In addition, AH&W is routinely apprised of all COMPRIS projects including interim and final results. Where applicable, AH&W is invited to participate in pre-protocol planning and design.

Currently an AH&W employee, Victor Juorio, is facilitating access for researchers at the University of Alberta, and is temporarily housed in COMPRIS. This is further evidence of the strong collaborative working relationship between AH&W and COMPRIS.

Recent discussions within COMPRIS have focused on strategy formulation to impact the incorporation of research results into health policy change at the government level. (see communications strategy below).

4. Canadian Pharmacists Association

COMPRIS has partnered with the Canadian Pharmacists Association Canadian Pharmacy Practice Research Group (CPPRG) regarding advocating for health policy change. CPPRG will focus mostly on advocacy and COMPRIS on research. The chair of CPPRG is Dr. Lisa Dolovich from McMaster University.

Discussions are ongoing to formulate a unified plan for advocacy for health policy change.

5. Center for Health Outcomes Research (CHOR)

Led by Dr. Tom Feasby, the new Centre for Health Outcomes Research (CHOR) will be operated jointly by the University of Alberta and Capital Health. It appears that the mission of CHOR is very similar with that of EPICORE Centre (i.e., patient-focused research and the provision of research support). A merger of EPICORE Centre and CHOR was initially considered. Theoretically, a merger would benefit CHOR as EPICORE Centre is an already-established health research centre with a strong track record. Much of the resources and expertise required by CHOR is already in place within EPICORE Centre. Conversely, a merger might benefit EPICORE Centre in terms of ensuring a sustained and consistent cash flow, both during and between major projects.

EPICORE Centre has set a condition of any merger that the relationship between EPICORE Centre and COMPRIS must be maintained. COMPRIS is a University-approved health research centre, which is wholly owned by EPICORE Centre. The research focus of COMPRIS is similar to that of EPICORE Centre, however it is more focused on community-based health outcome studies involving community pharmacies.

At the time of this writing, a merger is not imminent, but has not been ruled out for the future.

FINANCIAL POSITION

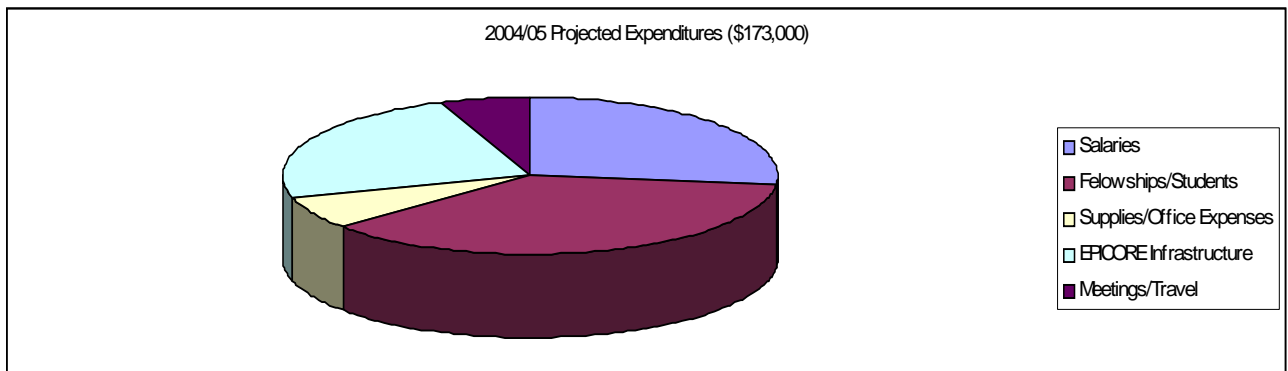
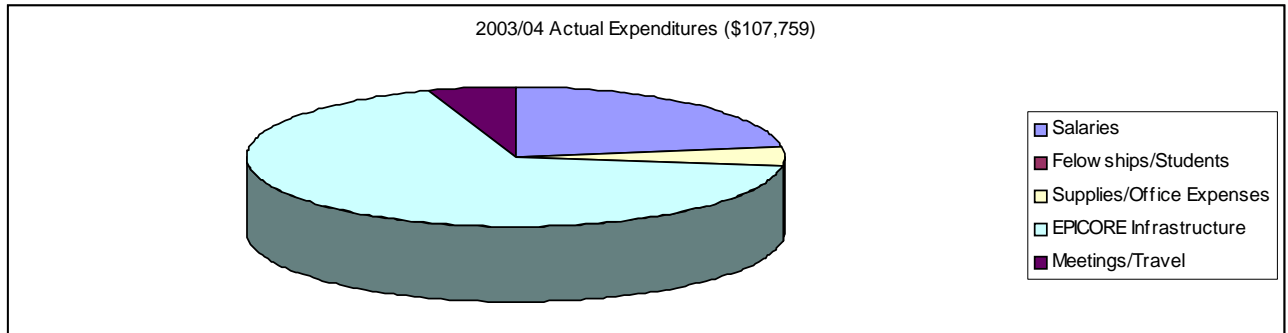
BUDGET VERSUS ACTUAL REVENUES AND EXPENDITURES

Category	2003/04 Budget	2003/04 Actual	Variance	2004/05 Budget Projected
Revenues	\$100,000	\$100,000	\$0	\$175,000
Expenses				
Salaries	\$31,000	\$24,650	\$6350	\$46,000
Fellowships/Students	\$0	\$0	\$0	\$64,000
Supplies/Office Expenses	\$6,000	\$4,475	\$1525	\$12,000
EPICORE Centre Infrastructure	\$51,000	\$72,850	-\$21850	\$41,000
Meetings/Travel	\$10,000	\$5784	\$4216	\$10,000
TOTAL EXPENSES	\$98,000	\$107,759	-\$9759	\$173,000
Revenues - Expenses	\$2000	-\$7759	-\$9759	\$2000

NOTE

Higher than expected EPICORE Centre infrastructure expenditures in 2003/04 reflect the development costs of setting up a new center.

EXPENSES



Note: the above charts and illustrations account for revenues from corporate sponsors received in support of COMPRIS infrastructure. Funds received to support specific research projects are accounted for within the budgets of the projects.

REVENUES

COMPRIS revenues are obtained from the Pharmaceutical Industry and from Community Pharmacies through three sponsorship opportunities:

- 1) Contribution through a three-year membership (\$50,000 annually for Pharmaceutical Industry, \$25,000 for Pharmacies) as a formal sponsor and Research Advisory Committee Member.
- 2) Provision of grants to support specific research projects.
- 3) Financial support for salary and research expenses of a named postdoctoral fellowship position.

Required revenues for COMPRIS infrastructure support in 2004/05 total \$175,000. A corporate sponsorship fee of \$50,000 annually is being introduced. This increase from \$25,000 annually will provide COMPRIS with an adequate and stable funding base to enable consideration of an increased number of projects. Currently some corporate

sponsors are contributing \$50,000 annually and some \$25,000. Our intent is to standardize the amount paid by all industry partners. Community Pharmacy sponsors will continue to pay \$25,000 annually.

EDUCATION

Examination of innovative healthcare delivery methods has implications for interdisciplinary health sciences education. The Centre promotes professional development and lifelong learning for the healthcare professionals who participate in its projects and programs. COMPRIS has worked with the Office of Continuing Education, Faculty of Pharmacy and Pharmaceutical Sciences to design unique web-based education for pharmacists on disease states with applications to practice-based research (PHARMA*Learn*).

COMPRIS is also committed to excellence in professional development through life long learning, application to practice, and evaluation. Distance learning programs, such as www.pharmalearn.com provide pharmacists with access to resources relevant to an evolving practice. The PHARMA*Learn* courses integrate theory and evidence-based practice to practical application in the workplace and serve as an ongoing resource to promote practice change. The educational programs developed have been custom designed for ease of application in practice settings.

Through its research activities, COMPRIS also has an active training program for graduate students and postdoctoral fellows.

FELLOWSHIPS/GRAD STUDENTS

Fellowships: As a new research centre, COMPRIS has not yet had any postdoctoral fellows. Discussions are underway with several individuals to begin a 2-year post-PharmD fellowship starting in June 2005.

COMPRIS has 2 graduate students:

Theresa Charrois, B.Sc.(Pharm.) is a student in the Clinical Epidemiology MSc. Program within Public Health Sciences. Her thesis is entitled "Improving Asthma Care in a Rural Setting: The Better Respiratory Education and Asthma Treatment in Hinton and Edson (BREATHE) Study". Teri successfully defended her thesis on December 10, 2004.

Teri won the best student presentation award at the Canadian Pharmacists Association annual meeting in Niagara Falls in May, 2004.

Donna McLean, RN, MN is a Ph.D. student in Medicine. Her focus has been on the management of hypertension in the community. She has recently completed a systematic review of hypertension management in diabetics, entitled "Treatment and Blood Pressure Control in 47,964 People with Diabetes and Hypertension: A Systematic Review of Observational Studies", and submitted to Diabetes Care.

Donna has been successful in a number of grant competitions: Canadian Diabetes Association (\$95,000 over 2 years), Canadian Council of Cardiovascular Nurses (\$5000),

and Donna is a member of the CIHR New Emerging Team on Rural and Northern Health (\$1.47 million over 5 years). She has captured several awards, including the Alberta Association of Registered Nurses scholarship, and 3 years of salary support from the Heart and Stroke Foundation.

SUPPORT of RESEARCH

Like EPICORE Centre, COMPRIS acts as a resource for practice research stakeholders to conduct, promote, apply and integrate research, education and practice. COMPRIS's research support services include protocol design, clinical trial co-ordination, data management and quality assurance, database creation, health records, and bio-statistics.

2003/04 INITIATIVES/ACTIVITIES

COMPRIS's mission and objectives complement and enhance University and Faculty priorities, in particular those of the Faculty of Pharmacy and Pharmaceutical Sciences related to education, research and community service. In this regard, a high priority for the Faculty is to be a leader in practice-related research programs in pharmaceutical sciences and of pharmacy practice. The partnership with COMPRIS fulfils the pharmacy practice component.

2003/04 initiatives are summarized below.

1. Completed research projects

The Study of Cardiovascular Risk Intervention by Pharmacists (SCRIP):

- Designed to address the poor identification and under treatment of cholesterol risk, particularly in those at high risk for cardiovascular events.
- Primary outcome measure was a composite of measurement of a fasting lipid profile by the family physician, initiation of cholesterol-lowering drug therapy, or increase in dose of cholesterol-lowering drug therapy.
- In 675 patients the primary outcome was achieved in 57% of patients receiving enhanced pharmacist care, compared to 31% in usual care ($p < 0.00001$).
- Despite being stopped early for benefit, SCRIP is the largest randomized trial of pharmacist intervention ever conducted.
- SCRIP was published in the Archives of Internal Medicine in 2002.
- SCRIP was referred to as "an exemplary study" by CIHR in its guidelines on New Emerging Teams in Novel and Integrative Approaches to the Assessment, Care and Management of Patients with Circulatory and Respiratory Diseases.
- Important insights into community pharmacists' motivations for participating in practice research and their opinions on the process of practice research were reported in *Pharmacotherapy* in 2001 (5).

The Second Study of Cardiovascular Risk Intervention by Pharmacists (SCRIP-plus):

- SCRIP-plus was conducted in partnership with Pharmasave Drugs (42 centres in 6 provinces).

- 419 patients at high risk for cardiovascular events and not at their target LDL cholesterol level were enrolled in a 6-month program of enhanced pharmacist care consisting of patient education, serum cholesterol measurement, physician referral, and close follow-up.
- Serum LDL cholesterol values were significantly reduced over 6 months.
- This study was published in the American Journal of Medicine in January, 2004.

Review of Education on ACE inhibitors in CHF Treatment (REACT):

- This 10-centre study was designed to improve the use of ACE inhibitors in patients hospitalized with heart failure (Stage I) and to determine the effect of a patient education and support program on medication adherence and clinical events 6 months after discharge from hospital.
- In-hospital ACE inhibitor use was significantly increased from 58 to 83%. There was also an increase in average daily dose of ACE inhibitors.
- While medication adherence was high in both the patient support and usual care groups, there were fewer clinical events in the patient support group, resulting in a savings of \$2500 per patient over 6 months.
- The study was published in the Journal of Cardiac Failure in December 2004.

Effect of a Special Authorization Process on Patient Compliance and Outcomes: An Example with Clopidogrel Following Coronary Stenting

- Following a change from a special authorization (SA) process, utilized by Blue Cross for patients requiring clopidogrel following intravascular stent insertion, to an authorized prescriber (AP) list, data from these two periods were compared to determine the effect of this change on patients' filling of prescriptions and the delay in this filling.
- Significantly fewer patients in the SA group had their prescription for clopidogrel filled upon the day of discharge (31% vs 53%; $p=0.02$).
- The median time to fill a clopidogrel prescription following discharge was significantly longer in the SA group.
- This study legitimizes the concerns of health professionals that special authorization procedures delay patient access to necessary medications and have the potential for negative clinical consequences. SA processes currently used do not appear to be a safe and appropriate method of ensuring that only patients meeting specified criteria receive certain medications.
- The manuscript is under review at the Canadian Journal of Cardiology.

2. Current Active Projects

Better Respiratory Education and Asthma Treatment in Hinton and Edson (BREATHE):

- This ongoing study funded by CIHR (rural and northern health), Institute of Health Economics, University Hospital Foundation, and the Alberta Strategy to Help Manage Asthma (ASTHMA), will determine the effect of a patient education and referral program, initiated by rural community pharmacists, integrating a respiratory therapist and local family physicians into the care of patients with asthma.

- High-risk asthma patients (defined as those with over-use of their reliever inhalers or recent emergency room visit for asthma) are identified by the pharmacist and are randomized to pharmacist intervention or usual care.
- Intervention includes patient education, assessment and optimization of drug therapy, referral to a respiratory therapist and physician referral as needed.
- Manuscript describing the study protocol has been published in *Controlled Clinical Trials* 2004;25:502-514.
- The final investigators' meeting was held in November 2004, and the manuscript is currently in preparation.

Assessing the Impact of Opinion Leaders on Improving the Quality of Prescribing for Patients with Chronic Cardiovascular Disease (Dr. S. Majumdar):

- Funded by CIHR, this study links patients recruited by community pharmacists, to evidence summaries endorsed by one of eight designated local physician opinion leaders.
- The objective is to optimize use of statins and ACE inhibitors in patients with congestive heart failure or ischemic heart disease.
- Eligible patients are randomized to usual care versus opinion leader intervention in collaboration with the primary care physician.
- Change in use of efficacious prescription therapies will be measured.
- The study has recently completed enrolment; results will be available in early 2005.

Anticoagulation Management Service (AMS) (Dr. Tammy Bungard):

- Funded by the Health Innovation Fund (Alberta Health and Wellness) AMS is a 3-stage project which supports the development of a pharmacist-run anticoagulation management service at the University of Alberta Hospital (Phase I).
- In the second and third phases the core clinic was used as a training facility and resource centre to bring satellite AMS's to community pharmacies and community hospitals in Alberta.
- An evaluation team is conducting comprehensive evaluation of the services based upon time in therapeutic range, thrombotic and hemorrhagic events, and patient satisfaction.
- Study enrolment concluded in December 2004.
- Two abstracts were presented at the Canadian Cardiovascular Congress 2004, Calgary, AB, on October 23-27:
 - 1) Bungard TJ, Gardner L, Tsuyuki RT. A Randomized Trial of Community Pharmacist-Led Anticoagulation Clinics.
 - 2) Bungard TJ, Gardner L, Ohinmaa A, Tsuyuki RT. An Evaluation of Patient Outcomes in a Pharmacist-Managed, Tertiary Care Anticoagulation Management Service: From Adequacy of Anticoagulation to Patient Satisfaction.
- The preliminary results have been markedly positive, with improvements in time in therapeutic range, reduced thromboembolic events and hemorrhagic events, hospitalizations and increased patient satisfaction. Economic analysis has shown cost savings compared to usual physician-based care.

Congestive Heart Failure Outreach Program of Education (COPE):

- Funded by the Heart and Stroke Foundation of Canada, COPE will determine the impact of education of patients with congestive heart failure on clinical outcomes, economic measures, and patient knowledge of self care activities related to CHF.
- Patients admitted to hospital with CHF are identified by pharmacists or nurses for possible participation in the study.
- Patients are randomized to usual care versus a structured educational program consisting of a specially created video (focusing on self care and medication adherence) and accompanying booklet. Total sample size is 500.
- Enrolment from 9 centres began in November 2004.

3. Projects Planned for 2004/05

Improving Hypertension Management in Patients with Diabetes and Hypertension in Urban Communities (Donna McLean)

- The purpose of this study is to determine the proportion of individuals with diabetes who have sub-optimal blood pressure control and the demographic and health-system factors associated with poor control.
- 220 patients with diabetes will be identified by community pharmacists and randomized to usual care or to visit a blood pressure clinic held in the pharmacy (10-12 sites).
- Outcome measures will include degree of blood pressure control according to the Canadian Hypertension Education Program and Canadian Diabetes Association, prevalence of antihypertensive medication use and of non-pharmacologic measures, and degree of patient awareness of diagnosis and treatment goals.
- It is anticipated that an equal number of rural sites will be added in the Fall of 2005.
- Funding grants have been received from: a) the Canadian Diabetes Foundation (\$95,000); b) the Heart and Stroke Foundation of Canada full salary support for PhD student Donna McLean); c) the Alberta Association of Registered Nurses (a \$25,000 scholarship for Donna McLean); and d) the Canadian Council of Cardiovascular Nurses (\$5000).
- A further application has been made to the Heart and Stroke Foundation of Canada.

Vascular Intervention Program (VIP) (Dr. Scot Simpson):

- The purpose of VIP is to improve treatment of lipids, hypertension and use of ASA in patients with diabetes.
- Similar in concept to the AMS program above.
- This study will be conducted in partnership with the regional diabetes program.
- In future stages, the core clinic will be used to train pharmacists to set up satellite clinics in the community.
- Funding (source) achieved to date: Phase 1: \$97,000 (from Canadian Diabetes Association) and \$40,000 from The Institute of Health Economics.
- Estimated funding required for the project: Phase 1: \$137,000 over 2 years and Phase 2: \$260,000 over 3 years.
- Further applications have been made to CIHR and AHFMR.

Pharmacist Identification of New Diagnostically-confirmed Osteoarthritis (PHIND-OA)
(Dr. C. Marra):

- The purpose of this study will be to determine if pharmacists can identify patients with early knee osteoarthritis through the use of a simple questionnaire.
- In this multicentre, community pharmacy based study, patients will be identified and enrolled by the pharmacist using various methods (clinic days, shelf-talkers, advertising). Patients will be seen by a rheumatologist to determine the presence of osteoarthritis.
- This study will help address the need to identify patients with osteoarthritis as early as possible in their disease process, and will provide the basis for a future intervention study.
- Partial funding has been received from CIHR (new emerging teams grant) and Merck Frosst. Save-On-Foods will also partner on this study.

The OsteoPharm Study (Dr. N. Yuksel):

- This study will determine the effect of pharmacist identification, patient education, and physician referral on the process of osteoporosis care in patients at high risk for osteoporosis.
- Patients randomized to the intervention group will receive a heel ultrasound, education, and referral to their family physician as necessary.
- Usual care patients will receive a pamphlet on osteoporosis only.
- Primary outcome measure is a process-based endpoint of bone scans (DEXA) ordered by the family physician or prescription of antiresorptive therapy.
- This project has been identified to receive partial funding from the Institute of Health Economics (\$95,000).

Role of the Pharmacist in Rural and Northern Regions:

- This project will examine and evaluate the roles of pharmacists in rural and northern communities as they relate to the provision of primary health care.
- In partnership with the University of Saskatchewan, University of Northern British Columbia, the Rural and Remote Nursing Study, and the Canadian Pharmacists Association, a survey similar to that used in the Rural and Remote Nursing Study will be administered to pharmacists in rural and northern settings.
- The survey instrument captures current primary healthcare practices, support networks, and challenges in provision of healthcare in these settings. Information from this survey, combined with that from the Nursing survey, will provide an important picture of the potential and challenges for improvement of healthcare for Canadians living in rural and northern areas.
- This project has been funded for approximately \$1.5 million over 5 years from the CIHR Rural and Northern Health Initiative.

PHARMALearn (www.pharmalearn.com):

- This web-based pharmacist education program, created in partnership with Terri Schindel, Director of Outreach Education, Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta. Since its launch in 2000, PHARMALearn has been

used by thousands of pharmacists across the country as a continuing education medium.

- Examination of the course evaluations has demonstrated a very high level of satisfaction with the program.
- Modules for cholesterol, hypertension, diabetes, anticoagulation, and drug information have already been launched. Support is being sought for updating of the modules and for development of new modules.
- Funding support is being sought for updating of the modules and for development of new modules. Estimated funding required for the project: \$25,000 per module for 6 modules over 3 years.

PUBLICATIONS

1. Olson KL, Tsuyuki RT. Patients' Achievement of Cholesterol Targets: A Cross-Sectional Evaluation. *Am J Prev Med* 2003;25(4):339-342.
2. Tsuyuki RT, Olson KL, Dubyk AM, Schindel T, Johnson JA. Effect of community pharmacist intervention on cholesterol levels in patients with high risk of cardiovascular events: The second Study of Cardiovascular Risk Intervention by Pharmacists (SCRIP-*plus*). *Am J Med* 2004;116:130-3.
3. Simpson SH, Johnson JA, Tsuyuki RT for the SCRIP Investigators. Greater Effect of Enhanced Pharmacist Care in People with Diabetes: A Planned Subgroup Analysis of the Study of Cardiovascular Risk Intervention by Pharmacists (SCRIP). *Pharmacotherapy* 2004;24:389-394.
4. Fradette M, Bungard TJ, Simpson SH, Tsuyuki RT. Development of educational materials for congestive-heart-failure patients. *Am J Health-Syst Pharm* 2004;61:386-9.
5. Charrois T, Newman S, Sin D, Senthilselvan A, Tsuyuki RT. Improving Asthma Symptom Control in Rural Communities: The Design of the Better Respiratory Education and Asthma Treatment in Hinton and Edson (BREATHE) Study. *Controlled Clinical Trials* 2004;25:502-514.
6. Tsuyuki RT, Fradette M, Johnson JA, Bungard TJ, Asthon T, Gordon W, Ikuta R, Kornder J, MacKay E, Manyari D, O'Reilly K, Semchuk W, for the REACT Investigators. A Multicenter Disease Management Program for Hospitalized Patients with Heart Failure. *Journal of Cardiac Failure* 2004;10(6):473-480.
7. Yamada C, Johnson JA, Robertson P, Pearson G, Tsuyuki RT. Long Term Impact of a Community Pharmacist Intervention on Cholesterol Levels in Patients at High Risk for Coronary Heart Disease Events: The Second Study of Cardiovascular Risk Intervention by Pharmacists (SCRIP-*plus*) Extended Follow-up. *Pharmacotherapy* 2005;25:110-5.

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ABSTRACTS

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PRESENTATIONS

1. "Program Evaluation - Ensuring Quality Distance Learning". Presented by Terri Schindel to the 4th Annual National Forum on Continuing Pharmacy Education, November 22, 2003, Montreal.
2. "CSI: Saskatchewan Community Pharmacists Serving as Investigators". Presented by Ross Tsuyuki at the 11th Annual Professional Enhancement Day with Kendra Townsend, Faculty of Pharmacy and Nutrition, University of Saskatchewan, Saskatoon, SK, September 16, 2003.
3. "Pharmacy Practice-Based Research Opportunities and Challenges". Presented by Ross Tsuyuki at the Faculty of Pharmacy and Pharmaceutical Sciences Leonard Wiebe Pharmacy Research Day, Edmonton, October 3, 2003.
4. "The Changing Role of Pharmacist in Health Care Delivery". Presented by Ross Tsuyuki to Alberta Blue Cross, Edmonton, October 16, 2003.
5. "Pharmacy Practice-Based Research - Opportunities and Challenges". Presented by Ross Tsuyuki at Faculty Seminar, Faculty of Pharmacy and Nutrition, University of Saskatchewan, Saskatoon, SK, October 19, 2003.
6. "Research Issues and Challenges: Clinical Trials in Rural Settings". Presented by Ross Tsuyuki at "New Models, New Values: Research in Rural Interdisciplinary Health Care" (Canadian Rural Health Research Society), Saskatoon, SK, October 19, 2003.
7. "The Practical Value of Integrated Health Care Delivery - Experience of Community Pharmacists". Presented by Ross Tsuyuki at the Drug Information Association Annual Conference, Ottawa, ON, November 17, 2003.
8. "Congestive Heart Failure New Guidelines, New Challenges". Presented by Ross Tsuyuki to Lakeland Health Authority Pharmacists, Vegreville, AB, November 20, 2003.
9. "Drug-Induced Heart Failure". Presented by Ross Tsuyuki at Cardiology Rounds, University of Alberta, Edmonton, January 7, 2004.
10. "Hypertension and Stroke: Perception and Facts". Presented by Ross Tsuyuki to Satellite Symposium at the Canadian Society of Hospital Pharmacists Professional Practice Conference, Toronto, ON, February 1, 2004.

11. "Getting to Target: The Next Big Challenge in Lipid Management". Presented by Ross Tsuyuki to Satellite Symposium at the Canadian Society of Hospital Pharmacists Professional Practice Conference, Toronto, ON, February 2, 2004.
12. "The Role of Community-Based Pharmacists in Managing High Risk Dyslipidemic Patients". Presented by Ross Tsuyuki to Capital Health Region Pharmacists Association, Edmonton, March 9, 2004.
13. "Diabetes Update – Canadian Diabetes Association 2003 Clinical Practice Guidelines." Presented by Jeff Johnson to Western Branches – Canadian Society of Hospital Pharmacists Banff Seminar, Banff, AB, March 19, 2004.
14. "Closing Treatment Gaps – Implementation of the Canadian Diabetes Association 2003 Clinical Practice Guidelines". Presented by Jeff Johnson to BC Branch – Canadian Society of Hospital Pharmacists - Spring Therapeutics Update, Burnaby, British Columbia, April 19, 2004.
15. "Hypertension and Stroke Risk". Presented by Ross Tsuyuki to the Capital Health Pharmacists Association, Edmonton, AB, April 26, 2004.
16. "Innovative Pharmacist's Roles: Practice-Based Research". Presented by Ross Tsuyuki at the 7th Annual Contemporary Therapeutic Issues in Cardiology and Nephrology, Toronto, Ont, May 1, 2004.
17. "Patient Education Issues in Heart Failure". Presented by Ross Tsuyuki at the 7th Annual Contemporary Therapeutic Issues in Cardiology and Nephrology, Toronto, ON, May 1, 2004.
18. "Economic Burden of Diabetes: Epidemiologic and Cost Projections for Canada." Presented by Jeff Johnson at City Wide Endocrine Rounds presentation, Mt. Sinai Hospital, Toronto, Ont, May 7, 2004.
19. "Strategies for Patient Education: Trials and Tribulations in Heart Failure". Presented by Ross Tsuyuki at the Canadian Society of Hospital Pharmacists 57th Annual General Meeting, Edmonton, AB, August 16-17, 2004.
20. "ACE Inhibitors vs. Angiotensin Receptor Blockers in Heart Failure; W5". Presented by Ross Tsuyuki at the 4th Annual Contemporary Cardiovascular Therapy Fall Symposium, Regina, SK, September 18, 2004.
21. "Evidence-Based Medicine Workshop - Focus on the COMET Study". Presented by Ross Tsuyuki at the 4th Annual Contemporary Cardiovascular Therapy Fall Symposium, Regina, SK, September 19, 2004.
22. "Community Pharmacist Practices in Hypertension Management". Presented at the IMPACCT/CDM Hypertension Meeting, Calgary, November 2, 2004.

23. "Improving Heart Failure Management: The Hospital Pharmacist's Role". Presented to the Canadian Society of Hospital Pharmacists Alberta Branch, Capital Chapter, Edmonton, AB, November 16, 2004.

AWARDS/ACHIEVEMENTS

Donna McLean received an Alberta Registered Nurses Educational Trust (ARNET) scholarship, in support of her educational program.

Donna McLean received a 2-year scholarship from TORCH (Tomorrow's Research Cardiovascular Health), through the CIHR Strategic Training Program.

Donna McLean received the 2004 Heart and Stroke Foundation of Canada Nursing Research Fellowship. This 3-year award is one of only two available in Canada.

Tammy Bungard won two awards for a) best oral presentation and b) best moderated poster (both AMS projects) at The Annual Meeting of the Canadian Pharmacists Association in May, 2004.

1. Best Moderated Poster: Tammy J Bungard, Leslie Gardner, Terri Schindel, Ross T Tsuyuki, University of Alberta, Edmonton, AB. A Comprehensive Educational Program For Pharmacists In Anticoagulation Management

2. Best Oral Presentation (Research): Tammy J Bungard, Leslie Gardner, Ross T Tsuyuki, University of Alberta, Edmonton, Alberta. An Evaluation of Patient Outcomes In an Anticoagulation Management Service (AMS): From Adequacy of Anticoagulation To Patient Satisfaction

Teri Charrois won an award for best student presentation at The Annual Meeting of the Canadian Pharmacists Association in May, 2004.

Best Student Presentation: T.L. Charrois, Department of Public Health Sciences, University of Alberta, J.A. Johnson, Department of Public Health Sciences, University of Alberta, S.Blitz, Division of Emergency Medicine, University of Alberta, R.T. Tsuyuki, Department of Medicine, University of Alberta. The "Dose Response" Relationship of Pharmacist Interventions on Patient Outcomes

Dr. Tsuyuki was appointed to the Merck Frosst Chair in Patient Health Management in the Faculty of Pharmacy and Pharmaceutical Sciences (approximately \$60,000/year for 5 years).

RESEARCH GRANTS

Approved/Received

Donna McLean received a \$5000 research grant award from Canadian Council of Cardiovascular Nurses for the period July 2004 to June 2005.

Donna McLean received a research grant from the Canadian Diabetes Association (\$95,000 over 2 years) for the project Hypertension Control and Management in Patients with Diabetes.

Donna McLean received a \$2500 research award from the Tomorrow's Research Cardiovascular Health Professionals (TORCH) Program.

VIP Program – Dr. Scot Simpson. \$98,000 (from Canadian Diabetes Association) and \$40,000 from The Institute of Health Economics.

Exploring and Untapped Resource: The Role of Pharmacists in Improving Healthcare Rural and Northern Regions (CIHR-NET grant of \$1.5 Million over 5 years).

A randomized trial of community pharmacist-initiated screening and treatment program for osteoporosis - the Osteopharm Study – Dr. Nesé Yuksel (\$95,450 from The Institute of Health Economics).

APPOINTMENTS

Dr. Ross Tsuyuki has also been appointed to the Merck Frosst Chair in Patient Management in the Faculty of Pharmacy and Pharmaceutical Sciences

Dr. Finlay McAlister has been appointed to the Aventis Chair in Patient Management in the Faculty of Medicine and Dentistry

Dr. Ross Tsuyuki has accepted the position of Chair of the Editorial Board for the Canadian Pharmaceutical Journal (CPJ) of the Canadian Pharmacists Association.

COMMUNICATIONS STRATEGY

COMPRIS has been working with the Canadian Pharmacists Association (Dr. Kirsten Woodend, former Research Director) to develop a communications plan in order to facilitate:

- timely dissemination of information and research results to stakeholders including key policy decision makers.
- working with Alberta Health & Wellness and other governments and government agencies.

- promotion of the COMPRIS agenda to impact government/drug insurer policy related to drug approval criteria and processes.
- development of a strategic plan for impacting policy change and possibly participate in actioning certain aspects of the plan.

To assist in the above, Mr. David Bougher, former Director of Pharmacy Program of Alberta Health and Wellness, has agreed to serve as a consultant/advisor to COMPRIS and the Research Advisory Committee, regarding health policy issues and government liaison. A draft communications plan will be presented to the annual meeting of the Research Advisory Committee in December 2004.

COMPRIS will also be considering strategies to improvement communications with key internal stakeholders. Possibilities include increasing the frequency of Research Advisory Committee meetings, distribution of monthly or quarterly newsletters, and creation of subgroup(s) of RAC to discuss particular issues.

Respectfully Submitted,

Dr. Ross Tsuyuki
Director