



## CCORT OBJECTIVES

- Improve the quality of cardiovascular care in Canada
- Work with local, provincial and national partners on policy-relevant research projects & knowledge exchange
- Train future leaders of cardiovascular outcomes research in Canada
- Make a measurable impact on the CV health of Canadians through research that changes clinical practice, health policy & patient outcomes

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# CCORT PULSE

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## New study, "Use of Ezetimibe in the US and Canada" puts spotlight on drug policy and utilization patterns

This CCORT investigator-led paper describing utilization patterns for the cholesterol lowering drug ezetimibe, was published in April 2008, in the New England Journal of Medicine as a special article in conjunction with the American Heart Association (AHA) conference in Chicago. In this study, lead author Dr. Cynthia Jackevicius (see CCORT Profile on pg 2) found that while prescriptions for ezetimibe have been increasing in both Canada and the US, the pace of growth in the US and associated costs were dramatically higher than in Canada over the 5 year study period, despite uncertainty regarding its clinical effectiveness.

Results from the ENHANCE trial, also released during the AHA conference, found simvastatin combined with ezetimibe to be no better than simvastatin alone for preventing plaque build up in arteries. The lack of clear scientific evidence showing ezetimibe's effective-

ness as a first-line therapy for primary or secondary prevention, raised questions about the rapid rise in US prescriptions as compared to Canada. One possible reason may be the use of direct-to-consumer advertising in the US, which is not permitted in Canada. The authors noted that more than \$200 million (US) was spent on direct-to-consumer advertising as US sales of ezetimibe topped \$5 billion (US) in 2007. While other factors including drug availability and insurance coverage may also have led to the rapid uptake of ezetimibe in the US, co-author Dr. Jack Tu notes that, "Canada's approach to this drug was much more appropriate and evidence-based as compared to the US, where it's been marketed very aggressively."

Media coverage included the New York Times, Forbes.com, CBC, Maclean's and others.

**N Engl J Med** 2008; 358(17):1819-1828.

## Failure to fill medication prescriptions following heart attack found to increase risk of dying

Another CCORT investigator-led paper, "Prevalence, Predictors and Outcomes of Primary Non-adherence Post-Acute Myocardial Infarction", found that 1 out of 4 Ontarians aged 65 years and older failed to fill some or all of their required prescriptions after having a heart attack. In failing to do so, patients increased their risk of dying by 80% in the year following their heart attack.

Dr. Cynthia Jackevicius, lead author, noted that "those patients who were educated in the hospital were more likely to fill their prescriptions." In response to this find-

ing, co-author Dr. Jack Tu commented, "We hope that members of the health care team including physicians, nurses and pharmacists will use this information to reinforce their educational efforts aimed at ensuring heart attack patients understand the importance of filling their prescriptions after leaving hospital." While education is a key component in ensuring that patients who have had a heart attack fill their required prescriptions, further study would help identify why some patients do not fill their prescriptions.

**Circulation** 2008; 117(8):1028-1036.

## Dr. Peter Liu delivers keynote address at 8th annual national CCORT meeting

CCORT held its 8th national meeting in May in Toronto. This annual event provides a key opportunity for CCORT researchers to meet in person, discuss research projects, progress to date, dissemination strategies and next steps. Over 50 attendees took part, including investigators, statisticians, staff and invited guests.

In his keynote address, Dr. Peter Liu, Scientific Director, Canadian Institutes of Health Research's (CIHR) Institute of Circulatory and Respiratory Health (ICRH) described CIHR's strategic plan Blueprint II, its key themes and related research initiatives.

Dr. Liu noted the need for partnerships involving various levels of government, community groups, private sector and NGO's. He also described the Team Grant model, as partnerships that bring the best minds together to focus on pressing health challenges, and the need to deliver tangible, quantifiable benefits to improve the health of Canadians.



Drs. Peter Liu (Rt) and Jack Tu at CCORT meeting



# Canadian Cardiovascular Outcomes Research Team

Improving the Quality of Canadian Cardiovascular Care



## CCORT PROFILE—Dr. Cynthia A. Jackevicius

A CCORT investigator since 2001, Dr. Cynthia Jackevicius's research interests include medication utilization, prescribing patterns, patient education and adherence, with a focus on cardiovascular diseases.

A pharmacotherapy specialist in cardiology, Cynthia works at the University Health Network (UHN), Toronto, and the Veterans Affairs Greater Los Angeles (VAGLA) Healthcare System, California. She is also an assistant professor with the Department of Health Policy, Management and Evaluation, Faculty of Medicine at the University of Toronto and an associate professor of pharmacy practice at Western University of Health Sciences, California.

Cynthia is the lead author on two recent, high profile papers published in the *New England Journal of Medicine* and *Circulation* (see page 1). These papers provide insight into the impact of drug policy and drug utilization on cardiovascular outcomes and received considerable media coverage.

Cynthia also led two studies published as part of the CCORT CV Atlas focusing on medication utilization and acute care of AMI patients.

Cynthia finds CCORT to be a stimulating environment; "Working with CCORT has enabled me to work with talented researchers across the country who share a similar passion for improving the quality of care for patients with heart disease."

When not working on her research, Cynthia can be found on a snowboard, road bike or mountain bike.



### CCORT makes the rounds

#### PUBLICATIONS

Demers V, Melo M, Jackevicius CA, Cox J, Kalavrouziotis D, Rinfret S et al. Comparison of provincial prescription drug plans and the impact on patients' annual drug expenditures. **CMAJ** 2008; 178(4):405-409.

Ezekowitz JA, Lee DS, Tu JV, Newman AM, McAlister FA. Comparison of one-year outcome (death and rehospitalization) in hospitalized heart failure patients with left ventricular ejection fraction >50% versus those with ejection fraction <50%. **Am J Cardiol** 2008; 102(1):79-83.

Jackevicius CA, Li P, Tu JV. Prevalence, predictors, and outcomes of primary nonadherence after acute myocardial infarction. **Circulation** 2008; 117(8):1028-1036.

Jackevicius CA, Tu JV, Ross JS, Ko DT, Krumholz HM. Use of Ezetimibe in the United States and Canada. **N Engl J Med** 2008; 358(17):1819-1828.

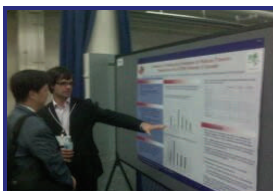
#### PRESENTATIONS

Hirsch GM, Yip AM, Buth KJ. Inclusion of longitudinal outcomes in a provincial cardiac surgery CQI initiative: feasibility and early results. Poster Presentations. 9th Scientific Forum on Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke, Baltimore, MD, April 30-May 2, 2008.

Kalavrouziotis D, Li D, Buth KJ, Legare J. The EuroSCORE is not appropriate for withholding surgical treatment of aortic stenosis in high-risk patients. Division of Cardiology Research Day, Halifax, NS, Canada, May 2008.

Schull M, Vaillancourt S, Donovan L, Boothroyd L, Andrusiek D, Trickett J, et al. Use of prehospital strategies to reduce time to reperfusion for STEMI patients varies widely among Canadian EMS operators. Society for Academic Emergency Medicine (SAEM) Annual Meeting, Washington, DC, May 30, 2008.

Oreopoulos A, Kalantar-Zadeh K, Padwal R, Ezekowitz J, Sharma AM, Fonarow G, et al. Relationship Between Obesity, Treatment and Mortality in Patients with Established Coronary Artery Disease. Mazankowski Heart Institute Inaugural Congress University of Alberta, Edmonton, AB, June 5, 2008.



S Vaillancourt at SAEM Mtg

## 2008-09 CALENDAR OF EVENTS



### September 21-24 2008

The 12th Annual Scientific Meeting of the Heart Failure Society of America  
Toronto, Ontario

[http://www.hfesa.org/annual\\_meeting.asp](http://www.hfesa.org/annual_meeting.asp)

### October 25-29 2008

Canadian Cardiovascular Congress 2008  
Toronto, Ontario

<http://www.cardiocongress.org/english/index.html>

### November 8-12 2008

AHA Scientific Sessions 2008  
New Orleans, Louisiana

<http://www.americanheart.org/presenter.jhtml?identifier=3050985>

## Student Day Heads West

Six CCORT students attended the annual Student Research Day, June 25, in Calgary, Alberta. Held, this year, in conjunction with the annual Alberta Provincial Project for Outcomes Assessment in Coronary Heart Disease (APPROACH) meeting, the students were able to interact with clinician researchers and fellow students from centres from coast to coast, in addition to those from CCORT.

The students presented their research projects (topics include Applications of Geographical Information Systems [GIS] in Health Research; Race, Ethnicity, and Cardiovascular Health; Identifying myocardial infarction patients in family practice electronic medical records; Efficacy of popular diets; Meta-analysis of popular diets; Meta-analysis of randomized controlled trials of Thiazolidinediones) to peers and CCORT investigators and received feedback and advice to further enhance their research. Activities also included a workshop on how to effectively disseminate research results—a relevant topic for all researchers.

Thank you to our host, senior CCORT scientist, Dr. William Ghali and his team.



**FAREWELL**—Dr. Laila Khalid recently relocated to Boston after spending the past year working with CCORT in Toronto. Laila begins a 3 year intern program at Mount Auburn Hospital, Cambridge where she will combine her interests in medicine and research. We wish Laila continued success and thank her for her contributions to CCORT.