

April 2012 - March 2013

The Drug Evaluation Alliance of Nova Scotia (DEANS) provides Nova Scotia with a structure to identify, develop, implement, and evaluate educational interventions that address drug utilization issues in Nova Scotia (NS). These educational interventions are often coordinated with policy interventions in the NS Pharmacare programs to facilitate change and to provide the rationale for change.

Most DEANS interventions are multi-faceted and inter-professional, using presentation vehicles such as live online classrooms, didactic presentations, small-group workshops, and academic detailing to disseminate evidence on best practices. To measure the impact of interventions, DEANS establishes linkages with academic evaluators and encourages evaluations that generate new evidence to inform drug policy.

DEANS is coordinated by a volunteer Management Committee which oversees all activities and is responsible for establishing and managing partnerships. Much of the success of DEANS is due to its ability to build a framework of key partnerships and to engage these partners in the implementation and evaluation of initiatives.

Health Technology Assessment

DEANS continues to pursue ways to encourage the use of health technology assessment as a bridge between research and clinical decision-making.

The *Katie* Program, which was launched in 2009, continues to support innovative methods of transferring knowledge from learning activities to clinical practice. New educational tools have been developed to help learners enhance their critical appraisal skills. Workshops were developed to

encourage presenters to incorporate *Katie* principles in their presentations and to encourage moderators to pose *Katie* questions during the question and answer portion of educational programs.

Funding from the Canadian Institutes of Health Research (CIHR) through a Meeting, Planning and Dissemination Grant under the Knowledge Translation Supplement competition facilitated the further development of the *Katie* tools, including the production of *Katie* videos for the website and for use in educational programs. One video has been completed, a second is almost complete and a minimum of two more are planned. *Katie* templates for PowerPoint slides and other materials have also been developed. As reported in last year's summary, the *Katie* Clinical Significance Calculator has been developed and posted on the website. This online tool allows the user to enter study data and calculate the relative risk reduction (RRR), the absolute risk reduction (ARR) and numbers needed to treat (NNT) or harm (NNH). For information about *Katie* and to access *Katie* tools, go to: <http://katie.dal.ca/>

During 2012/13, the *Katie* team worked towards streamlining *Katie* activities to ensure that these tools are being used efficiently. The goal is to incorporate *Katie* concepts into all continuing education activities and conferences, with two target audiences – presenters and learners. Presenters are encouraged to attend a speakers' workshop and learners are encouraged to think about how they can apply the messages received at the event to their practice. An additional tool was developed in 2012: "Tips for Moderators". The goal of this tool is to help session moderators engage the audience and facilitate learning. Some helpful advice is posted on the website:

<http://katie.dal.ca/presenters.htm>).

In 2012, *Katie* principles were incorporated into the Dalhousie Continuing Pharmacy Education Refresher (October 2012) and the Dalhousie Medical Refresher Course (November/December 2012). The *Katie* team also provided a live webinar for speakers at the request of the organizers of the 2013 Canadian Agency for Drugs and Technology in Health (CADTH) Symposium.

Diabetes Management

As detailed in previous years' annual summaries, DEANS funded an inter-professional educational program, "*Self-Monitoring Blood Glucose: Are We Singing from the Same Song Sheet?*", which was launched in February 2011. The program has been very well-received. A request was made for an additional presentation of this program in April 2012 to family practice nurses.

DEANS funded the development of a second inter-professional educational program related to diabetes management, "*Appropriate Use of Insulin in Type 2 Diabetes*" in 2012. The focus of this program will be how to proceed once the decision is made to prescribe insulin. The intention is to create a 90 minute live event with a format similar to the program "*Self-Monitoring Blood Glucose: Are We Singing from the Same Song Sheet?*". The program will be available online following the roll out of the live programs.

Managing Drug Diversion

As detailed in previous reports, Dalhousie University's Continuing Medical Education (CME) and Continuing Pharmacy Education launched an inter-professional education program to improve collaboration and communication between physicians and pharmacists in the area of drug diversion. This innovative program was designed to be highly interactive with the presenters providing information through role-played scenarios and cases, and has been well received by participants across the province.

The final presentation of this program took place in

Cape Breton on January 10, 2013, with 30 physicians and pharmacists attending.

Hypertension

As detailed in last year's annual summary, the Academic Detailing Service (ADS) developed an educational intervention "*Issues in Hypertension*" in 2011. The academic detailers completed educational visits in 2012, visiting 405 physicians and 24 nurse practitioners. All materials for this topic are available on the CME website at: http://cme.medicine.dal.ca/ad_resources.htm

As with other Dalhousie ADS programs, the materials were modified and delivered to other health professionals: nurses through their videoconference continuing education; and pharmacists through *Academic Detailing Rx*, Dalhousie Continuing Pharmacy Education.

Antibiotics

In 2012, the ADS developed an educational intervention "Antibiotics: Why and why not". The detailers visited 442 physicians and 37 nurse practitioners. All materials for this topic are available at:

http://cme.medicine.dal.ca/ad_resources.htm#ID

This topic addresses the treatment of the most common community-acquired infections, including pharyngitis, otitis media, acute bacterial rhinosinusitis, acute exacerbations of COPD, community acquired pneumonia, and urinary tract infections (uncomplicated in women and in the elderly and long term care patients). Two key messages are: 1) not all infections need antibiotics; and 2) in most cases, the old 'common' antibiotics are effective and are 'first-choice'.

The academic detailers began their educational visits to family physicians in May 2012, and continued throughout 2012/13. This topic has been very well received. In particular, physicians appreciate the one-page summary table of antibiotic options.

As with other Dalhousie ADS programs, the

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materials were modified and delivered to other health professionals: nurses through their videoconference continuing education; and pharmacists through *Academic Detailing Rx*, Dalhousie Continuing Pharmacy Education.

Lipids in Primary Prevention: A Calculated Risk

In 2012/13, the ADS developed an educational intervention "*Lipids in Primary Prevention: A Calculated Risk*". This topic is an update of the 2005 session on statins and cardiovascular disease, with a focus on primary prevention. One objective is to discuss the extent to which changes in risk assessment tools since 2005 increase the number of individuals on treatment and the absolute benefits and harms of this treatment. The topic is addressed using a case-based approach. The session also includes: information on adverse effects of statins; characteristics and costs of different statins; and a discussion of the evidence for lipid lowering in select populations (women, elderly, frail elderly). The academic detailers began their educational visits to family physicians on March 26, 2013.

As with other Dalhousie ADS programs, the materials will be modified and delivered to other health professionals: nurses through their videoconference continuing education; and pharmacists through *Academic Detailing Rx*, Dalhousie Continuing Pharmacy Education.

Evidence-Based Medicine Specialist Project

Members of the DEANS Management Committee have been educating medical students and family physicians about considerations when interacting with the pharmaceutical industry. This work evolved into a research project known as DocInfo that has been led by Dalhousie Continuing Medical Education and was launched in 2010. The purpose of this project was to explore how physicians use various sources of information when making prescribing decisions.

The focus of the DocInfo project was primary care physicians. The "Evidence-based Medicine Specialist Project", launched in 2011, addressed

similar issues for medical specialists. The research questions for this project were: 1) how well do learners and speakers understand relative and absolute terms? 2) What are learners' preferences about the presentation of research data? 3) How are research data presented? To address these questions, the researchers examined data obtained from the 2011 Annual Scientific Meeting of the Canadian Society of Internal Medicine. They surveyed the audience and presenters at the conference, recorded and analyzed 15 presentations. The analysis of these data was completed in 2012.

The findings indicated that there was considerable interest in having research data included in conference presentations, but that there was a large gap between expressed desires for research data and the actual presentations. In addition, the results suggested that there is a substantial knowledge gap regarding the interpretation of research data, e.g. understanding relative vs. absolute risk, and numbers needed to treat and numbers needed to harm (NNT, NNH).

Promoting Mental Health and Wellbeing through Community Pharmacy Collaboratives

In 2012, DEANS provided funding for the first phase of this multi-phase, inter-disciplinary project. The overarching purpose of this project is to generate and apply knowledge of the integrated community pharmacy team's roles in improving the mental health and wellbeing of Nova Scotians. Phase I explored the relationships between community pharmacists and persons with lived experience with mental illness, through interviews and focus groups.

This project is led by Drs. David Gardner and Andrea Murphy, with co-investigators Drs. Ruth Martin-Misener and Stan Kutcher from Dalhousie University, and Donna Methot, with the HRM Chapter of the Schizophrenia Society of Nova Scotia.

Optimizing Care of the Frail Elderly in Long-Term Care Facilities: A KT Network for Atlantic Canada

Polypharmacy, the use of multiple concurrent medications, is common among the elderly and is an important risk factor for adverse drug-related events and hospitalizations. In particular, appropriate prescribing for frail elderly patients living in long term care (LTC) facilities remains a challenge. Current practice guidelines are based on medication use studies conducted on younger, healthier populations, and may not be applicable to frail, elderly patients. Further, frail elderly patients are at high risk for adverse drug reactions.

DEANS provided support for a 3-day meeting in September 2012 of 36 stakeholders involved in LTC in Atlantic Canada. The goal of this group is to develop a network to improve care for frail elderly residents of LTC facilities in Atlantic Canada.

STOPP-START Criteria

The STOPP-START criteria are evidence-based sets of explicit criteria developed to facilitate screening for potentially inappropriate prescribing in older persons. STOPP refers to **S**creening **T**ool of **O**lder **P**erson's potentially inappropriate **P**rescriptions, and START to **S**creening **T**ool to **A**lert doctors to the **R**ight **T**reatment. These criteria were developed in Ireland using a modified Delphi process that involved 18 experts in geriatric pharmacotherapy from across the United Kingdom and Ireland.

DEANS provided funding to support a systematic review of research studies related to the STOPP-START criteria. The objective of this review was to describe the criteria and to examine the evidence of the impact of its application on clinical, humanistic and economic outcomes in older persons. The review found that STOPP-START criteria have been used to review and evaluate the medication profiles of community dwelling, acute care and long term care older patients in North America, Europe and Asia. These criteria appear to be more sensitive than the Beers Criteria; however,

limited evidence was found related to the clinical and economic impact of the application of the criteria.

DEANS also provided support for a retrospective observational study that examined benzodiazepine and benzodiazepine-related drug use by older persons in Nova Scotia. Preliminary data suggest high rates of use of these agents in this population, in particular among the oldest age group, i.e. age 85 years and older. Further, use of benzodiazepine-related drugs, i.e. zopiclone appears to be increasing.

Audit and Feedback of Prescribing Profiles to Nova Scotia Family Physicians who are using Electronic Medical Records for Prescribing

The use of electronic medical records (EMRs) in primary care provides an opportunity to collect accurate, complete and timely data on patient-health system interactions that can support clinical decision-making. These data may also be used to promote optimal medication use by providing feedback to physicians regarding their prescribing profiles.

DEANS provided funding to support the development of a project "Audit and feedback of prescribing profiles to Nova Scotia family physicians who are using electronic medical records for prescribing", led by Dr. Nandini Natarajan, Associate Professor, Department of Family Medicine, Dalhousie University, with co-investigators Dr. Ingrid Sketris (College of Pharmacy, Dalhousie University) and Ms. Heather Neville (Capital District Health Authority). The objective is to assess the feasibility of using prescription data extracted from the Nightingale EMR for Maritime Network Canadian Primary Care Surveillance System Network (MarNet CPCSSN) to calculate the DU90% prescribing indicator for all participating and consenting physicians, and to provide the physicians with their individual DU90% prescribing profiles.

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Approaches to Insomnia: An Interdisciplinary Initiative

Insomnia is a common condition. Treatment of the underlying causes and nonpharmacological therapies are recommended. However, the use of prescription sedative-hypnotic medications, in particular benzodiazepines e.g. lorazepam and benzodiazepine-related drugs, e.g. zopiclone is common. Concerns have been raised regarding the potential inappropriate use, overuse and misuse of these agents.

DEANS recognizes these concerns. At the December 2012 meeting, the Management Committee approved the development of an interdisciplinary, multi-phase initiative to address this issue. Planning for this initiative is currently underway. As with other DEANS' initiatives, this project will be a collaborative effort by multiple stakeholders, including researchers, clinicians and decision-makers.

Publications/Presentations

Allen M. *Katie*: Because sometimes knowledge needs a translator. Workshop for Department of Anesthesia residents. Dalhousie University, December 2012.

Allen M. Presenting Evidence in Teaching. Faculty Development Workshop Dalhousie University December 2012.

Allen M, Fleming I, Kelly K. Hypertension: evidence behind systolic targets in the elderly and people with diabetes. Workshop. Family Medicine Forum, Toronto, November 2012.

Allen M, Kelly K, Fleming I. Meta-analysis supports ACCORD BP but effect of excessive diastolic blood pressure lowering uncertain. *Journal of Hypertension* 2012;30:436-8.

Allen M, Kelly K, Fleming I. Hypertension in elderly patients: recommended systolic targets are not evidence based. *Can Fam Physician* 2013 Jan; 59(1):19-21.

Allen M, Kelly K, Fleming K. Uncertainty about the systolic blood pressure target in people with diabetes. *Can Fam Physician* 2013 Feb;59(2):128-31.

Allen M, Kelly K, Fleming I. Informing Physicians about the Uncertainty in Guideline Recommendations: Lessons Learned from Academic Detailing. Presentation, Canadian Agency for Drugs and Technology in Health (CADTH) Symposium. Ottawa April 2012

and

Presentation, Cochrane Symposium Winnipeg May 2012.

Allen M, McLean-Veysey P. Knowledge to Practice - A Practical Tool to Enhance Presentation of Evidence in CME Programs. Workshop CME Congress Toronto May 2012.

and

Workshop Cochrane Symposium Winnipeg May 2012

Allen M, McLean-Veysey P, Dunbar P, Zwicker B, Harpell D. Self-Monitoring Blood Glucose: Are We Singing from the Same Song Sheet? Interprofessional Continuing Education. Cape Breton Regional Hospital Nov 8 2012.

Antibiotics: Why and Why Not. *Academic Detailing Rx*. Sydney NS, June 21, 2013; Halifax NS, November 21, 2012.

Duncan J, Fleming I. Academic Detailing – Antibiotics: Why and Why not. 48th Annual Dalhousie Pharmacy Refresher & PANS Conference. Oct 20, 2012

Drug diversion: An interdisciplinary approach. Sydney NS, January 10, 2013.

Dunbar P, Fleming I, McLean-Veysey P, Allen M. Evidence into Practice Through Synergistic Partnerships: Self-monitoring of Blood Glucose in Non-insulin Using Diabetes. Presentation CME Congress Toronto May 2012

Hill-Taylor B, Sketris I, Hayden J, Byrne S, O'Sullivan D, Christie R. Application of the

STOPP/START (Drug) Criteria: A systematic review of the prevalence of potentially inappropriate prescribing in older persons and evidence of clinical, humanistic and economic impact. Our Future is Aging: Current Research on Knowledge, Practice and Policy, November 2012; Halifax NS. (Poster)

and

Journal of Clinical Pharmacy and Therapeutics 2013 April 2. Doi: 10.1111/jcpt.12059 [Epub online]<http://onlinelibrary.wiley.com/doi/10.1111/jcpt.12059/abstract>

Issues in Hypertension. *Academic Detailing Rx*. Sydney NS. May 31, 2012; Halifax NS, July 12, 2012.

Katie workshop for speakers at the Annual Dalhousie Pharmacy Refresher. Live online webinar. Halifax NS. September 24, 2012.

Katie workshop for speakers at the 2013 Canadian Agency for Drugs and Technology in Health (CADTH) Symposium. Live online webinar. Halifax NS. March 6, 2013.

Katie workshop for speakers at Annual Meeting, Canadian Society of Hospital Pharmacists. Live online webinar. Halifax NS. March 16, 2013.

Kelly KD, Marr D, Pearce N, Scott M, Wilson S, Young S. Atlantic Canadian Guidelines for the Acute Use of Oral Anti-Platelet Therapy in Patients With Acute Coronary Syndromes. Atlantic anti-platelet initiative; Atlantic Cardiovascular Society. April 14, 2012.

Kelly K. Criteria status review of adalimumab in Crohn's disease. Presented to the NIHB Federal Pharmacy and Therapeutics Committee. May 31, 2012

Kelly K et al. Atlantic Anti-platelet Initiative (AAPI) Panelist video production on the AAPI process. Acute Coronary Syndrome (ACS) website at Capital Health; Nov 28, 2012. <http://ac-society.org/aapi-videos/>

Love MP, Bergin P, Paddock V, Rose B, Adams L,

Callaghan M, D'Astous M, Harrigan K, Harris R, Kelly KD, Marr D, Pearce N, Scott M, Wilson S, Young S. Atlantic Canadian Guidelines for the Acute Use of Oral Anti-Platelet Therapy in Patients With Acute Coronary Syndromes. Atlantic anti-platelet initiative; Atlantic Cardiovascular Society. April 14, 2012.

Mallery L, Steeves B, Allen M. Prescribing for common chronic conditions in frail older adults. Let them eat cake. Webinar Dalhousie CME, February 2013.

McLean-Veysey P. Does anyone use critical appraisal in the real world? Drug Evaluation Unit Collaborative Partnerships. Atlantic Pharmacy Advancement Conference (APAC) Nov 3 2012.

McLean-Veysey P, Isenor J. The *Katie* Program. Canadian Society of Hospital Pharmacists (CSHP) NS Branch Education Day/AGM May 5, 2012, Halifax NS.

Natarajan N. Collaborative practice with a nurse practitioner in primary care: Provider continuity of care and chronic disease prevention and management. 40th Annual North American Primary Care Research Group Conference. New Orleans, LA. December 3, 2012.

Natarajan N, Putnam W, Van Aarsen K, Lawson B, Burge F. Adherence to Antihypertensive medications among family practice patients with diabetes mellitus and hypertension. *Canadian Family Physician* 2013 Feb; 59(2), e93-e100.

Singh S, Colburne A, Allen M. Research and Recommendations for Self-Monitoring of Blood Glucose: Moving From Evidence to Practice. Workshop Family Medicine Forum, Toronto, November 2012.

Sketris I, McLean-Veysey P, Hill-Taylor B, Haughn C. Pharmaceutical Quality Indicators for Older Persons. Optimizing Care of the Frail Elderly in Long-Term Care Facilities: A Knowledge Translation Network for Atlantic Canada September 21, 2012

DEANS Management Committee

- Ms. Lisa Farrell, (Chair) Liaison Officer, Canadian Agency for Drugs and Technologies in Health
- Ms. Pam McLean-Veysey, Team Leader, Drug Evaluation Unit, QEII Health Sciences Centre
- Dr. Michael Allen, Continuing Medical Education, Dalhousie University
- Dr. Connie LeBlanc, Continuing Medical Education, Dalhousie University
- Dr. Nandini Natarajan, Department of Family Medicine, Dalhousie University
- Dr. Ingrid Sketris, College of Pharmacy, Dalhousie University
- Ms. Diane Harpell, Division of Continuing Pharmacy Education, College of Pharmacy, Dalhousie University
- Dr. David Gardner, College of Pharmacy, Dalhousie University
- Ms. Denise Pellerin, Manager, Nova Scotia Prescription Monitoring Program (until November 2012)
- Mr. Kevin Lynch, Manager, Nova Scotia Prescription Monitoring Program (November 2012 onwards)
- Ms. Jennifer Ross Makhan, Regional Pharmacist, First Nations and Inuit Health, Health Canada
- Ms. Kathleen Shipp, Regional Pharmacist, First Nations and Inuit Health, Health Canada
- Ms. Allison Bodnar, Pharmacy Association of Nova Scotia

For more information about DEANS, go to <http://www.gov.ns.ca/health/pharmacare/deans.htm>

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