The mission of DEANS is to contribute to the health of Nova Scotians by encouraging appropriate drug use.

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, but not always, 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 delivery methods 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. The aim of the Katie program is to encourage all learners to be critical learners. 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. Moderators are encouraged to access the tool “Tips for Moderators”. The goal of this tool is to help session moderators engage the audience and facilitate learning.

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 three Katie videos for the website and for use in educational programs. The Katie team has also developed two online tools that support the clinical interpretation of study data. The Katie Calculator is applicable to dichotomous data and, the Gardner’s Effect Size Illustrator is useful for clinically interpreting continuous or scale data. Other tools include the Katie card, which was developed to support effective, critical, dynamic, action-oriented learning at continuing education programs and other clinical learning experiences. The Knowledge Translator, on the front side of the card, focuses on key clinical questions for reflection when appraising the information presented or discussed. The Appraisal Tool, on the back side of the card, provides more specific questions to guide the user to critically appraise the new clinical information.

As in previous years, Katie principles were incorporated into the Dalhousie Continuing Pharmacy Education Refresher (October 2016) and the Dalhousie Medical Refresher Course (November/December 2016). For information about Katie and to access Katie tools, go to: http://katie.dal.ca/

The mission of DEANS is to contribute to the health of Nova Scotians by encouraging appropriate drug use.
COPD 2016: What to do with all these new inhalers?

In 2016/17, the Academic Detailing Service (ADS) developed an educational intervention “COPD 2016: What to do with all these new inhalers?” This topic addresses the following questions: Is spirometry necessary to diagnose COPD? Should a long acting muscarinic antagonist (LAMA) or long acting beta agonist (LABA) be prescribed when short acting bronchodilators are not controlling symptoms? What is the evidence for benefit or harm for the combination of LAMA plus LABA compared with either agent alone? Who should have an inhaled corticosteroid (ICS) added to therapy? How to choose between the various new inhalers? What are the adverse effects of inhaled COPD medications? This topic has MAINPRO CERT+ Level 2 accreditation, and incorporated evidence from DEANS partner CADTH.

The academic detailers began their educational visits in October 2016. During 2016/17, the detailers saw 240 family physicians, 13 medical students, 18 nurse practitioners, 15 RNs, 3 pharmacists and 2 other health care professionals through office visits.

All materials are published online and are available through the following link:
http://www.medicine.dal.ca/departments/core-units/cpd/programs/academic-detailing-service.html

Type 2 Diabetes: What after Metformin?

In 2015/16, the Academic Detailing Service (ADS) developed an educational intervention “Type 2 Diabetes: What after Metformin?” This topic addresses the following questions: Will interventions that lower blood glucose decrease clinically relevant events in people with type 2 diabetes? What are the recommended glycemic treatment targets? What non-insulin glucose lowering agents are currently available and where do they act? Is there a defined choice and order of intervention? Why is metformin the first line agent? What factors inform choices after metformin?

The academic detailers began their educational visits in March 2016 and continued through 2016/17. During 2016/17, the detailers visited 405 family physicians, 20 medical students, 37 nurse practitioners, 39 RNs, 8 pharmacists and 13 other health professionals. In addition, 50 family physicians participated in a webinar on October 5, 2016.

As with other Dalhousie ADS programs, the materials were modified and delivered through Academic Detailing Rx, Dalhousie Continuing Pharmacy Education. Thirty pharmacists participated in a webinar on June 21, 2016. The presentation was recorded and additional 30 participants requested access following the broadcast. The presentation is available through the following link:

The topic was presented at the Dalhousie Continuing Pharmacy Education Refresher on October 15, 2016, the annual meeting of the Pharmacy Association of Nova Scotia (PANS) on October 22, 2016, the Dalhousie Choosing Wisely with Academic Detailing Conference on October 22, 2016 (as “Type 2 Diabetes: What after Metformin? New data, new messaging”) and the Dalhousie University Continuing Professional Development Refresher on December 2, 2016.

All materials are published online and are available through the following link:
http://medicine.dal.ca/departments/core-units/cpd/programs/academic-detailing-service/AC-Service-Resources.html

Continuing Pharmacy Education: Pharmacists as Immunizers

In 2013, legislation was passed in Nova Scotia permitting pharmacists to deliver this service to patients. As reported previously, Dalhousie Continuing Pharmacy Education (Dal CPE)
created the *Immunization and injection Administration Training Program (IIATP)* and *Immunization and Injection Administration Refresher Program (IIARP)* through the support of many organizations, including DEANS. This program has been used to train pharmacists in the Maritime Provinces to offer immunization and injection services. Dal CPE continued to offer both the IIATP and the IIARP to pharmacists in the Maritimes in 2016/17.

DEANS also provided support for a project that examined the rates of influenza immunization in Nova Scotia. The objectives of this study were: to compare the number of influenza immunizations and the estimated influenza vaccination coverage rates before and after pharmacists began immunizing in NS in 2013/14; and to characterize the demographics of the population receiving influenza immunization from pharmacists.

In 2016/17, a systematic review of the published and grey literature was completed to determine the impact of pharmacists as educators, facilitators, and administrators of vaccines on vaccination rates. Thirty-six studies were included in the review; 22 assessed the role of pharmacists as educators and/or facilitators and 14 assessed their role as administrators of vaccines. All studies reviewed found an increase in immunization rates when pharmacists were involved in the immunization process, regardless of role (educator, facilitator or administrator) or vaccine administered (e.g., influenza, pneumococcal), when compared to vaccine provision by traditional providers without pharmacist involvement. Meta-analysis of the six randomized controlled trials included in the study demonstrated a significant increase in immunization rates when pharmacists were included in the immunization process (RR 2.74, 95% CI 1.58, 4.74).

**Promoting Mental Health and Wellbeing through Community Pharmacy Collaboratives**

DEANS has provided support for a multi-phase, inter-disciplinary project led by Drs. David Gardner and Andrea Murphy. The overarching purpose of this project was to generate and apply knowledge of the integrated community pharmacy team’s roles in improving the mental health and wellbeing of Nova Scotians. All phases are now complete.

The team explored the relationships between community pharmacists and persons with lived experience with mental illness, through interviews and focus groups. The research findings have been published in three peer-reviewed manuscripts.

As previously reported, one article, was published in 2014 and is available at: [http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3908620/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3908620/).

The second paper that focused on the pharmacists’ experiences was published in January 2016 and is available open access at the following link: [https://substanceabusepolicy.biomedcentral.com/articles/10.1186/s13011-016-0050-9](https://substanceabusepolicy.biomedcentral.com/articles/10.1186/s13011-016-0050-9).

The final paper was published in October 2016 in BMC Health Services Research and includes the patients’ experiences. The paper is available at the following link: [http://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-016-1789-4](http://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-016-1789-4).

The funding and subsequent outputs for this project allowed for building a successful foundation to support several other projects (e.g. the Bloom Program at Bloomprogram.ca, Headstrong).

In 2016/17, DEANS supported the research activities of Drs. Andrea Murphy and David Gardner with a summer studentship grant. The studentship funded a student to support the researchers’ work in mental health and addictions care and services at community pharmacies. Student research activities included supporting the roll out of a survey of pharmacists’ experiences and attitudes toward people at risk of suicide, and support for the evaluation of the Bloom Program.
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 Screening Tool of Older Persons’ potentially inappropriate Prescriptions, and START to Screening Tool to Alert doctors to the Right Treatment. 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.

A team of Nova Scotia researchers, funded partly by DEANS, applied the H1 criterion from STOPP to conduct a retrospective observational study to determine the prescribing of benzodiazepine and zopiclone (BZD-Z) in Nova Scotia older adults with a recent history of a fall-related hospitalization. The H criterion identifies drugs that adversely affect persons prone to falls (≥1 fall in the past three months), and H1 specifies benzodiazepines (sedative, may cause reduced sensorium, impair balance).

For this research, claims data from the Nova Scotia Seniors’ Pharmacare Program were linked with data from the Canadian Institutes for Health Information (CIHI) Discharge Abstract Database. Older adults claiming a BZD-Z in the 100 days prior to and following discharge from a fall-related hospitalization were identified. Over the five-year study period, 8,271 older adults were discharged following a fall-related hospitalization. Of these individuals, 21.6% (n = 1,789) had a claim for a BZD-Z prior to admission, and from this pool, 74.2% (n=1,327) made a claim for at least one BZD-Z in the 100 days following hospital discharge. Younger age and female sex were predictors of continuing BZD-Z dispensations post-fall.

SleepWell Nova Scotia: An Interdisciplinary Approach to Managing Insomnia

As reported previously, in November 2013 the Management Committee endorsed the development of an interdisciplinary, multi-phase initiative to address the appropriate management of insomnia. As with other DEANS’ initiatives, this project is a collaborative effort by multiple stakeholders, including researchers, clinicians and decision-makers. The initiative proceeded in early 2014, and has continued throughout 2014/15, 2015/16 and 2016/17.

The objective of the initiative is to promote the rational management of insomnia, with the following aims: to prevent unnecessary starts and use of hypnotics; and to improve sleep outcomes through the use of non-pharmacological interventions. The initiative employs a two-fold approach that includes an education component for health care professionals and the distribution of ‘sleep kits’ that are designed as an alternative to medications.

The initiative was formally introduced in November 2014 with the launch of the SleepWell NS website http://sleepwells.ca/ and the first educational presentations at the Dalhousie Pharmacy Refresher (November 7-9, 2014) and the Dalhousie Medical Refresher (November 27-30, 2014). Sleep kits were distributed to participants at each of the Dalhousie Refresheres.

Ongoing administration of the website, distribution of the kits to the public and health professionals, and promotion of the initiative continued through 2015/16 and into 2016/17. In 2016/17, work began to update the website and to develop a prototype resource kit to enable non-pharmacological management of insomnia in primary care practice.

In May 2016, Drs. David Gardner and Sarah Burgess shared the SleepWell NS message with about 100 people at annual convention of the Federation of Senior Citizens and Pensioners of Nova Scotia in Truro. In June 2016, Diane Harpell delivered a presentation about SleepWell for the Innovation Showcase at the Breakfast Satellite Education Session of the Canadian Pharmacists Conference in Calgary AB. In August 2016, In March 2017, the SleepWell NS team submitted a proposal in response to the Nova Scotia Health Research Foundation (NSHRF) Catalyst Grant funding call. The objective of the Catalyst Grant is
to provide funding to enable Nova Scotia health researchers to conduct work that will strengthen a future submission to a national or international peer-reviewed funding competition.

**Farewells and Welcomes**

This has been a year of change. In early 2016/17, Dr. Nandini Natarajan stepped down from the Management Committee. In November 2016, Diane Harpell resigned from her position with Dalhousie Continuing Pharmacy Education to accept a new position in the private sector.

In December 2016, DEANS welcomed Dr. Alicia Williams and Ms. Susan Mansour to the Management Committee. Dr. Williams is a family physician with Dalhousie Family Medicine. Ms. Mansour is Director and Associate Professor and Assistant Dean, Faculty of Health Sciences, Dalhousie University.

**Publications/Presentations**


Fisher J, Farrell L. Expanding the reach of evidence in Nova Scotia: Can we get the evidence to everyone? 2016 CADTH Symposium, April 11, 2016, Ottawa ON.


Kelly K, Farrell L. “What is CADTH”, and “Type 2 Diabetes, What after metformin?” Presentation for Berwick Diabetes Clinic, Berwick NS, June 2, 2016.


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And

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. Connie LeBlanc, Continuing Professional Development, Faculty of Medicine, Dalhousie University
- Dr. Bronwen Jones, Continuing Professional Development, Faculty of Medicine, Dalhousie University
- Dr. Nandini Natarajan, Department of Family Medicine, Dalhousie University
- Dr. Alicia Williams, 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
- Ms. Susan Mansour, College of Pharmacy, Dalhousie University
- Dr. David Gardner, College of Pharmacy, Dalhousie University
- Mr. Kevin Lynch, Manager, Nova Scotia Prescription Monitoring Program
- Ms. Jennifer Ross Makhan, Regional Pharmacist, First Nations and Inuit Health, Health Canada


To suggest topics or issues, contact Judith Fisher at judith.fisher@novascotia.ca