



Health Innovation Portal: Archive of Innovative Practices

Theme: Quality Improvement and Patient Safety (Vol. 1)

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Health Council of Canada
Conseil canadien de la santé



Selected Search Output Table (December 17, 2013)

SEARCH TERMS:	N/A	LOCATION:	All
HEALTH THEME:	Quality Improvement and Patient Safety	FRAMEWORK CATEGORY:	All
HEALTH SECTOR:	All	SEARCH RESULTS:	23 results out of 52

1. Quality Improvement Training and Support

Implementation Year: Sunday, December 9, 2007 - 15:45	Location: Ontario	Practice Website: http://www.hqontario.ca/quality-improvement/primary-care
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SNAPSHOT:

This innovative practice provides quality improvement (QI) training and support to primary care practices. The practice was launched Ontario and has involved 750 interprofessional practice-based teams supported by QI coaches.

CONTACT INFORMATION:

Susan Taylor Program Manager Health Quality Ontario Telephone: 416-323-6868 ext. 245 Email: Susan.Taylor@hqontario.ca

2. Alberta Access Improvement Measures (AIM)

Implementation Year: Friday, December 9, 2005 - 14:30	Location: Alberta	Practice Website: http://www.albertaaim.ca
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SNAPSHOT:

This innovative practice helps family physicians, speciality care physicians, and Alberta Health Services programs and their teams reduce or eliminate wait times, improve office efficiency, and improve patient care by using quality improvement methods. The initiative has involved 19 learning collaborative supporting improvement teams across Alberta, including 614 family physicians from 133 primary care clinics.

CONTACT INFORMATION:

Steven Clelland Director, Alberta AIM Email: steven.clelland@albertahealthservices.ca Telephone: 780-342-8823

3. Sault Ste. Marie Group Health Centre

Implementation Year: Tuesday, December 9, 1997 - 14:30	Location: Ontario	Practice Website: http://www.ghc.on.ca/index.php
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SNAPSHOT:

This innovative practice facilitates improved accessibility and comprehensiveness of primary care service delivery. The Group Health Centre was originally founded in Sault Ste. Marie in 1962. As a progressive, multi-specialty, ambulatory health organization, the health centre integrated an electronic health record system in 1997 and now serves 71,000 residents of Sault Ste. Marie and Algoma District (population 75,000), with 81 doctors and 350 employees.

CONTACT INFORMATION:

Name: Garry Walsh Title: Vice President of Communications Organization: Group Health Centre Email address: walsh_gary@ghc.on.ca Telephone number: 705-759-5562 Information last updated on: November 13, 2013

4. Better Outcomes Registry & Network (BORN)

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Implementation Year: Wednesday, December 9, 2009 - 14:00	Location: Ontario	Practice Website: http://www.bornontario.ca/en/about-born/
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SNAPSHOT:

This innovative program collects, shares and protects data around each child born in Ontario to inform subsequent programming for maternal and child health care and services, and broader quality improvement in the province. The Better Outcomes Registry & Network (BORN) was established in 2009 through the Children's Hospital of Eastern Ontario in Ottawa. In the 2011 to 2012 fiscal year, BORN collected data on 142,376 babies across the province, and now connects more than 5000 users to data that span all levels of care from pre-pregnancy to early childhood.

CONTACT INFORMATION:

Name: Mari Teitelbaum **Title:** Director **Organization:** BORN **Email address:** info@BORNontario.ca **Telephone number:** 613.737.7600 x 6022
Information last updated on: November 12, 2013

5. Nurse Specialist Wound Care Delivery

Implementation Year: Saturday, November 27, 2004 - 10:00	Location: Ontario	Practice Website: http://www.albertahealthservices.ca/services.asp?pid=service&rid=1001687
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SNAPSHOT:

This innovative practice improves the quality of services nurses provide to patients who require acute and chronic wound care through enterostomal therapy (ET) and mitigates unnecessary complications and hospital readmissions. A cross-sectional study conducted in 2007 assessed the cost-effectiveness of these specialized services among five participating nursing agencies in the Waterloo Community Care Access Centres (CCACs). While this model of care underwent several changes due to concurrent provincial health care restructuring, it has inspired the development of similar models delivered through the South West Regional Wound Care Framework (SWRWCF) and Red Cross Care Partners. General ET is practiced by approximately 300 specialized nurses across Canada.

CONTACT INFORMATION:

Name: Connie Harris **Title:** Senior Clinical Specialist Wound & Ostomy; Clinical Lead for Outcome-based Wound Pathways **Organization:** Red Cross Care Partners **Email address:** connie.harris@redcrosscarepartners.ca **Telephone number:** 519-743-9386 **Information last updated on:** August 30, 2013

6. Advanced Clinician Practitioner in Arthritis Care Program (ACPAC)

Implementation Year: Sunday, November 27, 2005 - 09:30	Location: Ontario	Practice Website: http://chronicdiseases.ca/arthritis/
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SNAPSHOT:

This innovative practice aims to improve the competencies of advanced clinical practitioners delivering care for patients with arthritis. The interprofessional program was launched in 2005 at St. Michael's Hospital, in collaboration with the Hospital for Sick Children in Toronto, and now has over 37 graduates working in diverse clinical settings across Ontario.

CONTACT INFORMATION:

Name: Dr. Katie Lundon BScPT, MSc, PhD or Dr. Rachel Shupak MD, FRCP(C) **Title:** Program Director-General **Organization:** Advanced Clinician Practitioner in Arthritis Care, St. Michael's Hospital **Email address:** k.lundon@cogeco.ca **Information last updated on:** August 1, 2013

7. System-Wide Case Management

Implementation Year: Wednesday, November 26, 2008 - 14:15	Location: Alberta	Practice Website: http://www.albertahealthservices.ca/services.asp?pid=service&rid=7573
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SNAPSHOT:

This innovative practice improves the coordination of care for persons managing chronic illness. The system-wide case management model was first launched in the Calgary region in Alberta in January 2008 as an 18-month pilot project. At that time, seven case managers were hired; within a year, over 200 clients were enrolled in the program. While the model has changed from its original scope and patient population targets, system-wide case management is still in practice in community care settings in the Calgary Region.



CONTACT INFORMATION:

Name: Barbra LeMarquand-Unich **Title:** Executive Director (Interim) **Organization:** Integrated Seniors and Continuing Care (Calgary Zone) **Email address:** barbra.lemarquand-unich@albertahealthservices.ca **Telephone number:** 403-943-0252 **Information last updated on:** August 8, 2013

8. Nurse and Dietitian Health Teams to Prevent Diabetic Complications

Implementation Year: Friday, November 26, 2004 - 14:00	Location: Alberta	Practice Website: http://www.albertahealthservices.ca/services.asp?pid=service&rid=1001687
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SNAPSHOT:

This innovative practice improves the quality of diabetes management through the use of interprofessional health care teams delivering interventions to persons aged 17 years or older with diabetes and hypertension or albuminuria. The initial pilot round was launched in five communities in northern Alberta in 2004. The program has since been expanded to a total of eight communities (two urban and six rural), serving over 3,000 patients.

CONTACT INFORMATION:

Name: Carolyn Good **Title:** Office Coordinator **Organization:** Diabetic Nephropathy Prevention Clinics, Alberta Health Services **Email address:** carolyn.good@albertahealthservices.ca **Telephone number:** 780-407-1443 **Information last updated on:** July 26, 2013

9. Tool for Identifying Harmful Incidents in the Hospital Setting to Disclose

Implementation Year: Thursday, November 5, 2009 - 14:45	Location: Ontario	Practice Website:
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SNAPSHOT:

This innovative practice identifies harmful incidents in the context of patient safety in a simple, accessible manner. The tool was originally piloted in 2009 and is now fully integrated across all sites of a large health organization in Ontario.

CONTACT INFORMATION:

Name: Paula Chidwick **Title:** Director Clinical & Corporate Ethics **Organization:** William Osler Health System **Email address:** paula.chidwick@williamoslerhs.ca **Telephone number:** 416-274-6246

10. Patient Navigation Program for Low-Income Women with Breast Cancer: Seminal Innovation at Harlem Hospital, New York City

Implementation Year: Sunday, October 7, 1990 - 14:15	Location: International	Practice Website: http://www.hpfreemanpni.org/
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SNAPSHOT:

This innovative practice addresses barriers low-income women experience when seeking screening, diagnosis, and treatment of breast cancer. The practice was launched in New York City at the Harlem Hospital Center and involved members of the community trained in patient navigation.

CONTACT INFORMATION:

Name: Amber Paquette **Title:** Development Strategist **Organization:** Harold P. Freeman Patient Navigation Institute **Email address:** apaquette@hpfreemanpni.org **Telephone number:** 1-646-380-4060

11. MRI Process Improvement Project: Improving patient access to imaging services

Implementation Year: Tuesday, October 7, 2008 - 14:00	Location: Ontario	Practice Website:
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SNAPSHOT:

This innovative practice addresses the issue of improving patient access to magnetic resonance imaging (MRI) services through improvements to MRI administrative processes. Between October 2008 and March 2012, all Ontario-based MRI facilities have participated in this program.

CONTACT INFORMATION:

Name: Nahi Siklos, Senior Project Manager **Organization:** University Health Network **Email address:** nahi.siklos@uhn.ca **Telephone number:** (416)-603-5800 ext: 2911

12. Virginia Mason Production System

Implementation Year: Saturday, March 2, 2002 - 00:30	Location: International	Practice Website: https://www.virginiamason.org/VMPS
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SNAPSHOT:

This innovative practice aims to provide a system wide health production system to improve clinical process management, reducing waste and providing better quality care.

CONTACT INFORMATION:

Name: Diane Miller **Title:** Executive Director **Organization:** Virginia Mason Institute **Email address:** diane.miller@vmmc.org **Telephone number:** (206) 341-0140 **Information last updated on:** April 19, 2013

13. The Ottawa Hospital Inter-professional Model of Patient Care (TOH IPMPC®)

Implementation Year: Saturday, February 3, 2007 - 00:30	Location: Ontario	Practice Website: http://www.ottawahospital.on.ca/wps/portal/Base/TheHospital/OurModelofCare/ProfessionalModels/InterProfessionalModelofPatientCare
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SNAPSHOT:

This innovative practice is a guide to organizing the delivery of patient care among health professionals from different disciplines, taking into account their competencies, collaborative patient-centred practice, and their hospital's strategic directions.

CONTACT INFORMATION:

Name: Ginette Rodger **Title:** Senior VP Professional Practice and Chief Nursing Executive **Organization:** The Ottawa Hospital **Email address:** grodger@ottawahospital.on.ca **Telephone number:** 613-737-8749 **Information last updated on:** April 5 2013

14. Advanced Training Program, Intermountain Healthcare

Implementation Year: Friday, February 1, 1991 - 00:45	Location: International	Practice Website: http://intermountainhealthcare.org/qualityandresearch/institute/courses/atp/Pages/home.aspx
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SNAPSHOT:

This innovative practice is designed to train senior leaders, middle managers, and front-line health professionals in the theory and application of cost control, quality control, and the health services academic infrastructure. Launched in the US in 1991, the training program has expanded and is offered across Canada.

CONTACT INFORMATION:

Name: Jean-Ann Wurtz **Title:** Advanced Training Program Coordinator **Organization:** Institute for Health Care Delivery Research, Intermountain Healthcare **Email address:** jean-ann.wurtz@imail.org **Telephone number:** (801) 442-3718

15. Saskatchewan's Clinical Practice Redesign (CPR)

Implementation Year: Saturday, February 3, 2007 - 01:00	Location: Saskatchewan	Practice Website: https://www.sma.sk.ca/Default.aspx?cid=838&lang=1&pre=view
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SNAPSHOT:

This innovative practice is a set of tools and methodologies that improve access to care, communications, office processes, and effectiveness between office settings and other health care providers. Launched in Saskatchewan in 2007, this program aims to help health care professionals enhance communication, streamline office processes and make the best use of everyone's time.

CONTACT INFORMATION:

Name: Lisa Clatney **Title:** Program Director **Organization:** Health Quality Council **Email address:** lclatney@hqc.sk.ca **Telephone number:** 306-668-8810 ext. 106

16. Residents First

Implementation Year: Friday, January 1, 2010 - 00:15	Location: Ontario	Practice Website: http://www.quality-improvement/long-term-care
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SNAPSHOT:

This innovative practice aims to supports long-term care homes in providing an environment for their residents that enhances their quality of life. Launched in Ontario in 2010, this five year initiative aims to strengthen the long-term care sector's capacity for quality improvement.

CONTACT INFORMATION:

Name: Gayle Stuart **Title:** Program Manager, Residents First **Organization:** Health Quality Ontario **Email address:** gayle.stuart@hqontario.ca **Telephone number:** 416-323-6868

17. Physician Integrated Network (PIN) Initiative

Implementation Year: Friday, February 3, 2006 - 00:45	Location: Manitoba	Practice Website: http://www.gov.mb.ca/health/primarycare/pin/index.html
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SNAPSHOT:

This innovative practice facilitates systematic improvements in the delivery of primary care among fee-for-service physician groups. Launched in Manitoba in 2006, this program rewards quality processes in primary care, not health outcomes.

CONTACT INFORMATION:

Organization: Manitoba Health, Physician Integrated Network Initiative **Email address:** pinsupport@gov.mb.ca **Telephone number:** (204) 788-6423

18. Practice Support Program

Implementation Year: Saturday, February 3, 2007 - 00:45	Location: British Columbia	Practice Website: http://www.gpsc.bc.ca/psp/practice-support-program
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SNAPSHOT:

This innovative practice addresses the inadequate number of family physicians working in full service family practice. Launched by the BC Medical Association and the Ministry of Health in 2007, this program focuses on practice support for family physicians, specialist physicians and medical office assistants (MOAs) that is centred on improving clinical and practice management, capacity, patient care, and professional satisfaction for physicians.

CONTACT INFORMATION:

Name: Liza Kallstrom **Title:** Lead, Content and Implementation, Practice Support Program **Organization:** BC Medical Association **Email address:** lkallstrom@bcma.bc.ca **Telephone number:** 604-638-2854

19. Health Quality Council of Alberta—Systematic Systems Analysis: A Practical Approach to Patient Safety Reviews (SSA: PSR)

Implementation Year: Tuesday, February 3, 2004 - 00:30	Location: Alberta	Practice Website: http://www.hqca.ca/assets/files/HQCA%20Review%20FINAL%202011-2012%20(no%20signature).pdf
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SNAPSHOT:

This innovative practice addresses the issue of conducting appropriate reviews of health service quality and patient safety issues. Launched by the Health Quality Council of Alberta in 2004, this methodology is used to conduct retrospective reviews of care where one or more patients suffered harm; or where one or more patients were nearly harmed in a close call.

CONTACT INFORMATION:

Name: Lisa Brake **Title:** Communications Lead **Organization:** Health Quality Council of Alberta (HQCA) **Email address:** lisa.brake@hqca.ca **Telephone number:** 403-297-4091

20. Quality Academy of the British Columbia Patient Safety and Quality Council

Implementation Year: Wednesday, February 3, 2010 - 00:15	Location: British Columbia	Practice Website: http://bcpsqc.ca/learning/quality-academy/
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SNAPSHOT:

This innovative practice is delivered to health care leaders across the system in British Columbia who lead quality improvement initiatives in their organizations. Launched in 2010, the aim of the Quality Academy is to provide participants with the capability to effectively lead quality and safety initiatives in their designated health field, including teaching and advising others in how to improve the quality of health care.

CONTACT INFORMATION:

Title: Director, Learning and Strategic Initiatives, BCPSQC **Organization:** BC Patient Safety and Quality Council (BCPSQC) **Email address:** awray@bcpsqc.ca **Telephone number:** 604-668-8215

21. British Columbia's Clinical Care Management (CCM)

Implementation Year: Wednesday, February 3, 2010 - 00:15	Location: British Columbia	Practice Website: http://www.clinicalcaremanagement.ca
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SNAPSHOT:

This innovative practice is designed to harness the collective energy and commitment of healthcare providers across a province to promote guideline-driven care and clinical best practice. Launched in 2010, this program takes a system-wide approach, with participation from BC's Ministry of Health, regional health authorities and the BC Patient Safety and Quality Council (BCPSQC) to improve the quality, safety and consistency of key clinical services and improve patient experiences of care.

CONTACT INFORMATION:

Name: James Watson **Title:** Director, Clinical Improvement and Risk Management **Organization:** BC Ministry of Health; Patient Safety and Care Quality Branch **Email address:** james.watson@gov.bc.ca **Telephone number:** (250) 952-2336

22. National Surgical Quality Improvement Program (NSQIP)

Implementation Year: Wednesday, February 3, 1999 - 00:15	Location: National, International	Practice Website: http://site.acsnsqip.org/program-specifics/nsqip-history/
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SNAPSHOT:

This innovative practice addresses the need for outcomes-based measures of surgical care. Launched by the US Department of Veterans Affairs in 1999, this program can be used by participating institutions to evaluate their own patient outcomes and quality indicators, make valid, informative comparisons to other sites, and set targets for improvement.

CONTACT INFORMATION:

Name: Gina M. Pope **Title:** RN, CNOR **Organization:** ACS NSQIP **Email address:** gpope@facs.org **Telephone number:** 312.202.5607



23. Toronto Virtual Ward

Implementation Year: Wednesday, February 3, 2010 - 00:15	Location: Ontario	Practice Website: http://www.gim.utoronto.ca/Research/vward.htm
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SNAPSHOT:

This innovative practice addresses the period after discharge from hospital which can be very difficult for patients, and adverse events are common. Unplanned readmission to hospital is a frequent, expensive, and potentially avoidable adverse event. In March 2010, the Toronto Virtual Ward was implemented in central Toronto through a multi-institutional partnership among St. Michael's Hospital, Women's College Hospital, the University Health Network, Sunnybrook Health Sciences Centre, and the Toronto Central Community Care Access Centre (CCAC). Virtual wards use the daily routines and staffing of a hospital ward to deliver care at home to patients at high risk of unplanned hospital readmission.

CONTACT INFORMATION:

Name: Dr. Irfan A. Dhalla **Title:** Department of Medicine **Organization:** St. Michael's Hospital **Email address:** DhallaI@smh.ca



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Quality Improvement Training and Support

LOCATION:	Ontario	HEALTH THEME:	Access and Wait Times
HEALTH SECTOR:	Primary Health Care	FRAMEWORK CATEGORY:	Promising

Snapshot: This innovative practice provides quality improvement (QI) training and support to primary care practices. The practice was launched Ontario and has involved 750 interprofessional practice-based teams supported by QI coaches.

Practice Description:

In 2007, the Ministry of Health and Long-Term Care established the Quality Management Collaborative, with an initial mandate to assist family health teams (FHTs) to navigate the transition to a new team-based model of primary health care. In 2009, the organization became an independent not-for-profit entity and was renamed the Quality Improvement and Innovation Partnership (QIIP). Its expanded mandate is to support quality improvement across the primary care sector. During 2008 and 2009, QIIP ran a series of three learning collaboratives for interprofessional, practice-based QI teams from FHTs and community health centres (CHCs), modelled on the Institute for Healthcare Improvement's Breakthrough series. Participants received coaching support and focused their quality improvement efforts on chronic disease management (diabetes), prevention (colorectal cancer screening), and office practice redesign (access and efficiency).

In 2010, QIIP launched the Learning Community, which combines virtual and face-to-face learning on the application of QI methods and tools, and support from QI coaches. In Wave 1, interprofessional teams from FHTs and CHCs participated in one or more of six action groups focused on improving chronic disease management (asthma, chronic obstructive pulmonary disease, diabetes, hypertension), preventive care (integrated cancer screening) and access and efficiency (office practice redesign). Waves 2 through 5 focused on advanced access and efficiency; they were open to practice-based teams from any primary care model. Wave 6 addressed chronic disease management in addition to advanced access and efficiency.

In April 2011, QIIP merged with three other quality-related organizations funded by the ministry to form Health Quality Ontario (HQO). The Learning Community has continued under the new organization.

HQO is about to pilot a CME/e-Learning model that adopts a hybrid approach for delivering QI training and support for advanced access in primary care organizations. Compared to the traditional learning collaborative model, the hybrid model combines fewer learning sessions and less HQO coaching with a series of four online learning modules and peer-champion support. The revised program will allow interprofessional primary care teams to access the program continuously rather than in discrete waves. In partnership with McMaster University, HQO is mounting a demonstration of the hybrid approach with approximately 20 primary care practices.

Impact:

A research team from the Centre for Studies in Family Medicine at Western University and the Centre for Studies in Primary Care at Queen's University conducted a multi-component, mixed method, external evaluation of the three QIIP learning collaboratives that were mounted during the period from 2008 to 2010 (Harris et al., 2013). The evaluation examined the impact of the program on type 2 diabetes management, colorectal cancer screening, access to care, and team functioning. The performance of the practices before and after participation was compared with the performance of randomly selected non-participating practices from the same geographic location and model of care (FHT or CHC) during the same time periods.

Key findings included the following:

- Participants' knowledge of QI methods (the Model for Improvement) and the Chronic Disease Prevention and Management framework increased.
- Participants improved interprofessional capacity in their practice through better understanding of each other's roles and working together to improve patient care.
- The learning collaboratives facilitated improved team interactions, sharing of information and resources, and collaboration among team members.



- QI coaches were instrumental in helping teams implement QI activities.
- The performance of both participating and control practices improved over time.
- Among patients with diabetes, participating practices showed greater improvement in lipid profile monitoring (chart audit), eye examinations (chart audit and administrative data), peripheral neuropathy examinations (chart audit), and documentation of body mass index (chart audit).
- Participating practices showed greater improvement in HbA1c testing of patients with diabetes (administrative data).
- Among patients with HbA1c above the study target (? 7.3%) at baseline, patients in participating practices were more likely than patients in control practices to be at the Canadian practice guidelines target of ? 7.0% post-collaborative (chart audit).
- Participating practices had greater improvement than control practices in the proportion of patients with diabetes whose LDL cholesterol was at target (? 2.0 mmol/L) (chart audit).
- Among patients with diabetes, participating practices had small but statistically significantly greater increases than control practices in prescribing statin and angiotensin converting enzyme inhibitor (ACE) or angiotensin receptor blocker (ARB) (administrative data).
- Participating practices had greater improvement than control practices in the proportion of eligible patients screened for colorectal cancer (administrative data).
- Participating practices were more likely than control practices to adopt an advanced access model (48% versus 29%). However, the study was not adequately powered for this outcome to detect a difference of this magnitude, and therefore the difference was not statistically significant.
- The median time to third-next available appointment post-learning collaborative was 2.0 days among participating practices and 4.0 days in the control practices. However, the study was not adequately powered for this outcome to detect a difference of this magnitude, and therefore the difference was not statistically significant.

Zorzi et al. (2013) conducted a multi-component formative and summative evaluation of the HQO Advanced Access and Efficiency initiative (Learning Community Waves 3 and 4) in 2011/12. The evaluators urged caution in the interpretation of the summative findings because of the absence of a comparison group and because the patient perspective was not captured. Among their findings:

- Most (91%) of the participating practices reported the time to third-next available appointment measure on a regular basis.
- Almost all of the practices surveyed (80%) were satisfied with their experience in the initiative. Practices in the structured learning stream (six hours/month of face-to-face or virtual coaching support, access to the virtual workspace, monthly calls with participating practices, and two face-to-face learning sessions) tended to be more satisfied (82% satisfied) than those in the self-directed stream (one hour/month of virtual coaching support, access to the virtual workspace, and monthly calls with participating practices) (71% satisfied).
- Two third of practices indicated that the initiative met their expectations completely. Some practices indicated that the program did not meet their expectations, either because it was more time consuming than they expected, or because they didn't perceive the resources and measures to be relevant to the way their practice was set up.
- Key Learning Community strengths identified by participating practices were coaching, QI method/approach, and resources (roadmap and workbook). Key concerns were the time commitment required, the virtual workspace, and measures and specific tools not being applicable to some types of practices.
- QI coaches were considered to be essential by 75% of the practices.
- As of October 2012, 18% of Wave 3 practices and 17% of Wave 4 practices had withdrawn after the first learning session. All withdrawn practices interviewed indicated they left the initiative because there was a lack of interest and buy-in among the team members. In addition, many had difficulty juggling competing priorities with limited time, and some hadn't understood the time commitment that was needed.
- Over half of the participating practices said they were applying the QI principles (plan-do-study-act cycles) from the Learning Community to other aspects of their work. A number of practices mentioned that they have spread their advanced access knowledge and data collection practices across and beyond their organization.
- Eighteen of the 24 practices interviewed found the data reporting aspects of the initiative to be very useful. The data reporting piece was only valuable if the practices were using the measures to identify areas of concern, inform changes, and monitor progress.



- Decreases in time to third-next available appointment (TNA) and cycle time (total length of office visit) were statistically significant, averaging one day per month and one minute per month, respectively.
- Red zone time (percent of the visit spent with a care team member) increased significantly by an average of 1% per month.
- Average improvement in TNA between month one and month six was 2.7 days in the self-directed stream and 5.5 days in the structured stream.
- 52% of teams in the self-directed stream and 66% of teams in the structured stream had moderate (20–49%) or high (> 50%) improvement in TNA.

An assessment of the costs and savings of this practice has not been completed at this time.

Applicability/Transferability

The success of the program is dependent on:

- building relationships with key partners (e.g., medical associations, nursing associations);
- willingness of primary care providers to participate in the initiative;
- targeting participation by all providers on the team rather than individual providers;
- providing information to teams on how the initiative can assist their practice;
- engaging champions to demonstrate the benefits of QI work;
- establishing requirements for QI (e.g., QI plans, alignment of quality indicators with strategic priorities);
- dedicating resources to the coaching of teams;
- the ability of teams to retrieve data from information systems; and
- continuous assessment of the QI training and support program in order to revise practices, methods, and processes based on lessons learned.

Training and support for primary care QI have been implemented in many other jurisdictions internationally and in Canada, including in British Columbia, Alberta, and Saskatchewan.

Contact Information:

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Content has been adapted from the following sources and relevant links:

This practice description is based on materials provided by Brian Hutchison and Monica Aggarwal on behalf of the Canadian Working Group for Primary Healthcare Improvement.

Personal Communication

Dobell, G. (August 25, 2013). [Director, Evaluation and Research, Health Quality Ontario].

Publications



Harris, S., Birtwhistle, R., Brown, J.B., Green, M., Kotecha, J., Reichert, S., ... Webster-Bogart, S. (June 28, 2013). *Evaluation of the Health Quality Ontario quality improvement & innovation partnership learning collaboratives: Final report*. Toronto, ON.

Hutchison, B., Levesque, J.-F., Strumpf, E., & Coyle, N. (2011). Primary health care in Canada: Systems in motion. *The Milbank Quarterly*, 89(2), 256–288. Abstract retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0009.2011.00628.x/abstract>

Zorzi, R., Frank, C., Christian, S., McGuire, M., Bakker, P., & Hauseman, C. (January 15, 2013). *Evaluation of Health Quality Ontario's learning community AA&E initiative*. Toronto, ON.

External Source: <http://www.hqontario.ca/quality-improvement/primary-care>



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Alberta Access Improvement Measures (AIM)

LOCATION:	Alberta	HEALTH THEME:	Access and Wait Times
HEALTH SECTOR:	Acute Care	FRAMEWORK CATEGORY:	Emerging

Snapshot: This innovative practice helps family physicians, specialty care physicians, and Alberta Health Services programs and their teams reduce or eliminate wait times, improve office efficiency, and improve patient care by using quality improvement methods. The initiative has involved 19 learning collaborative supporting improvement teams across Alberta, including 614 family physicians from 133 primary care clinics.

Practice Description:

Alberta AIM's mission is "to support health care teams to create a culture of improvement through the use of evidence informed principles, resulting in access to care that is both timely and effective." The program, funded by Alberta Health and Alberta Health Services, is governed by a multi-stakeholder partnership that includes Alberta Health, the Alberta Medical Association, Toward Optimized Practice, the Primary Care Network Project Management Office, and family physicians. Each practice-based improvement team, which includes physicians, other health professionals, and office staff, completes a program that extends over 10 to 12 months. During that period, the teams attend five two-day face-to-face learning sessions, and are supported by AIM faculty, a facilitator, measurement resources, and tools for data collection and use. Teams are expected to hold weekly meetings and submit monthly reports to monitor progress and share successes.

Evolution of the program includes implementation of increased use of virtual program delivery and efforts to ensure that physicians, providers, and programs can maintain the gains made while in the formal training portions of the program.

Impact:

According to outcomes data collected by Alberta Health Services, the impact of the program includes:

- Many primary care teams have been able to reduce delays for next-available appointments (TNAs) to less than five days, with some reaching same-day access.
- Many specialty care teams were able to reduce delays for TNAs to less than 30 days, with some reaching near same-day access.
- Improvement team members have shown an increase in satisfaction with clinic access across all collaboratives.
- Primary care teams were able to reduce their cycle time (time from a patient's arrival to departure) by as much as 30% for short appointments and 36% for long appointments.
- Primary care teams were able to reduce no-shows by as much as 33%.
- Specialty care teams were able to reduce no-shows by as much as 31%.

The results of improved TNAs are supported by staff perceptions of improved access.

Improvement team members were asked to rate their satisfaction with clinic access before and after one year of the AIM program. Primary care teams and specialty care teams in multiple collaboratives demonstrated significant improvements in staff satisfaction regarding clinic access.

Initial population-level assessment of the impact of the program has been attempted. Indications are that AIM participation in primary care clinics affects other areas of the system, including reduced emergency department visits (Alberta AIM, 2013). Narrative accounts provided by participating clinics and physicians are available at www.albertaaim.ca.

Although an assessment of the costs and savings of this practice has not been completed at this time, micro-level evaluations with individual physicians and practitioners are suggestive of cost-neutrality and perhaps cost reductions associated with access and clinical improvements.



Applicability/Transferability:

Alberta AIM has been adapted from the work of Mark Murray & Associates and the Institute for Healthcare Improvement's *Breakthrough Series*. Similar quality improvement initiatives targeting primary care have been mounted in many jurisdictions throughout Canada, including British Columbia, Saskatchewan, Manitoba, Ontario, and Nova Scotia.

The success of this specific program is dependent on:

- leadership engagement (physician, clinic, program, funders, partners, and stakeholders);
- development of local and provincial capacity (including but not limited to Alberta-based faculty, local practice facilitators, measurement support, and access to other knowledge-based resources); and
- dedicated focus on alumni support to sustain improvement gains and continuing progress while managing incoming new improvement teams.

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Content has been adapted from the following sources and relevant links:

This practice description is based on materials provided by Brian Hutchison and Monica Aggarwal on behalf of the Canadian Working Group for Primary Healthcare Improvement.

Publications

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Alberta AIM. (2012). *Partnering for improvement*. Unpublished.

External Source: <http://www.albertaaim.ca>



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Sault Ste. Marie Group Health Centre

LOCATION:	Ontario	HEALTH THEME:	Access and Wait Times
HEALTH SECTOR:	Primary Health Care	FRAMEWORK CATEGORY:	Promising

SNAPSHOT: This innovative practice facilitates improved accessibility and comprehensiveness of primary care service delivery. The Group Health Centre was originally founded in Sault Ste. Marie in 1962. As a progressive, multi-specialty, ambulatory health organization, the health centre integrated an electronic health record system in 1997 and now serves 71,000 residents of Sault Ste. Marie and Algoma District (population 75,000), with 81 doctors and 350 employees.

PRACTICE DESCRIPTION:

The Group Health Centre provides ambulatory care, diagnostic services, integrated care with primary, secondary, and other health care services such as for congestive heart failure, nutrition, physical therapy, and surgery. A range of health care professionals are located on-site, including doctors, nurses, nurse educators, physiotherapists, optometrists, kinesiologists, dietitians, and lab technicians. The centre focuses on providing same day care as well as offering on-site services including laboratory facilities and longer term chronic care support.

Prior to 1997, there was recognition that patients, particularly those with chronic conditions, were slipping through cracks in the health care system and better record-keeping systems were required. Sault Ste. Marie now has the largest primary care electronic medical records system in Canada. With this system ('Epic' <http://www.epic.com/software-ambulatory.php>), each patient has their own, single electronic medical record. This mode of information storage enables different types of health care providers to access patient data as needed, and facilitates real-time referrals to specialists, thereby increasing interprofessional collaboration and continuity of care. This system allows for greater patient engagement, as patients can access their own health information via an online patient portal and the system generates treatment plans based on best practice templates and algorithms. Another capability of the electronic system is the possibility to aggregate data to track trends and outcomes. With regular monitoring and evaluation, this system can link to the development of new programming based on patient-population needs and integrate accordingly, based on clinical practice guidelines. New programming initiatives are processed through the Committee of Health Promotion Initiatives.

The Group Health Centre functions under an alternative funding structure with support from the Ontario Ministry of Health and Long-Term Care.

IMPACT:

A third-party evaluation of the impact of the electronic medical record system was conducted by Health Informatics Institute (<http://www.hiiu.ca/>) at Algoma University in 2011. Data were collected through observation, one-on-one interviews, focus groups, and surveys, however, this information is not publically available. Anecdotal evidence from participating health care providers suggests that improved health outcomes can be attributed to the integrative functioning of the electronic medical record and greater satisfaction attributed to being able to devote more time to clinical practice rather than administration.

Group Health Centre has won National Best Practice Awards for four consecutive years and was featured in Maclean's Magazine as one of Canada's top ten models of health care.

APPLICABILITY/TRANSFERABILITY:

'Epic' electronic medical records system functions out of Wisconsin, USA and manages over 170,000,000 American patients. Group Health is one of four health care organizations (Children's Hospital of Eastern Ontario, Women's Health Centre in Toronto, and Hamilton Health Sciences) in Canada to use 'Epic', but is unique in its care for outpatients. The continued and increasing coverage of the Sault Ste. Marie Group Health Centre is exemplary of the possibility for this type of health care model to successfully function within a Canadian community and is therefore theoretically transferrable elsewhere.

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Information last updated on: November 13, 2013

Content has been adapted from the following sources and relevant links:

Publications:

Sault Ste. Marie Group Health Centre: Big Success in a Small Community. Government of Ontario.

<http://www.health.gov.on.ca/en/pro/programs/cdpm/pdf/ssmarie.pdf>

Shaw, N., Ward, A. (2011) Case Study: A look into the Group Health Centre's Electronic Medical Record Procurement Process

http://www.nosm.ca/uploadedFiles/Research/Northern_Health_Research_Conference/Ward.%20Amanda_Case%20Study-Group%20Health%20Centre%20Record%20Procurement.pdf

Personal Communications:

Garry Walsh; November 13, 2013 [telephone]

External Source: <http://www.ghc.on.ca/index.php>



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Better Outcomes Registry & Network (BORN)

LOCATION:	Ontario	HEALTH THEME:	Performance Measurement and Reporting
HEALTH SECTOR:	Acute Care	FRAMEWORK CATEGORY:	Promising

SNAPSHOT: This innovative program collects, shares and protects data around each child born in Ontario to inform subsequent programming for maternal and child health care and services, and broader quality improvement in the province. The Better Outcomes Registry & Network (BORN) was established in 2009 through the Children’s Hospital of Eastern Ontario in Ottawa. In the 2011 to 2012 fiscal year, BORN collected data on 142,376 babies across the province, and now connects more than 5000 users to data that span all levels of care from pre-pregnancy to early childhood.

PROGRAM DESCRIPTION:

BORN gathers, aggregates and interprets data on every birth and young child in the province. Clinical data is gathered and used by professions in every health-sector setting including hospitals, midwifery practices, prenatal and newborn screening labs, fertility clinics, public health, follow-up clinics and some primary care offices and clinics.

A central component of BORN is its web-based information system (BIS – BORN Information System), which was formally launched in 2012. BORN has registry status under Ontario’s Personal Health Information Protection Act (2004) and this allows the organization to collect, use and disclose personal health information to facilitate and improve health care. Consequently, this system allows for real-time data entry and reporting, which can be accessed by every user at the contributing sites. Through this method of data collection, BORN is able to conduct regular performance measurement and direct subsequent research. An example of a more targeted reporting mechanism includes the Maternal Newborn Dashboard— a pilot project for the Ontario Antenatal Record, which uses key performance indicators to compare against population benchmark rates to improve the determination of data around congenital anomalies.

BORN is funded through the Ontario Ministry of Health and Long-Term Care and is administered by the Children’s Hospital of Eastern Ontario. Other collaborators include: E-Health Ontario, Health Quality Ontario; Newborn Screening Ontario; the Ontario Midwifery Program; the Ontario Hospital Association; Public Health Ontario; TARGetKids! Applied Research Group; the Provincial Council for Maternal and Child Health; Champlain Maternal Newborn Regional Program; the CHEO Research Institute; the Society of Obstetricians and Gynecologists of Canada; the Institute for Clinical Evaluative Sciences; the Canadian Neonatal Network; and the Southwestern Ontario Maternal, Newborn, Child and Youth Network; as well as fourteen Local Health Integration Networks.

IMPACT:

BORN’s data collection has been reported as integral to the success of partnered initiatives such as at Markham-Stouffville Hospital, where regular monitoring enabled a reduction in cesarean section rates. Another successful pilot program used BORN data to evaluate the efficacy of keeping mothers and newborns together right after birth rather than separating the newborn into a neonatal intensive care unit. Also, the ability to cross-reference births with Newborn Screening Ontario has helped to identify nearly 500 potentially missed screens, reducing unsatisfactory newborn screens for rare genetic diseases from 16% to 7% in one hospital during 2011-2012. Regular tracking of false positive and false negative rates enables screening laboratories to accurately assess and refine their performance.

APPLICABILITY/TRANSFERABILITY:

BORN grew out of efforts beginning in the 1980s with the then Perinatal Education Program of Eastern Ontario (now the Champlain Maternal Newborn Regional Program) which led to the aggregation of data across the province.

For knowledge translation purposes, BORN has a committee structure that is responsible for ensuring consistency of practice across Ontario. It uses communication technologies such as webinars to provide regular education, information and training sessions in more remote settings; and conducts regular clinical data reporting which can be accessed across affiliated institutions. BORN also works with maternal child groups in other provinces to provide comparative perspectives on such things as antenatal care pathways and C-section trends.



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Information last updated on: November 12, 2013

Content has been adapted from the following sources and relevant links:

Publications:

2011-2012. BORN: Better Outcomes Registry & Network

<http://www.bornontario.ca/assets/documents/BORN%202011-2012%20Program%20Report.pdf>

Other:

<http://www.bornontario.ca/assets/documents/webinars/BORN%20Partnership%20-%20eHealth%20Ontario%20&%20PCMH.pdf>

External Source: <http://www.bornontario.ca/en/about-born/>



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Nurse Specialist Wound Care Delivery

LOCATION:	Ontario	HEALTH THEME:	Quality Improvement and Patient Safety
HEALTH SECTOR:	Home and Community Care	FRAMEWORK CATEGORY:	Emerging

SNAPSHOT: This innovative practice improves the quality of services nurses provide to patients who require acute and chronic wound care through enterostomal therapy (ET) and mitigates unnecessary complications and hospital readmissions. A cross-sectional study conducted in 2007 assessed the cost-effectiveness of these specialized services among five participating nursing agencies in the Waterloo Community Care Access Centres (CCACs). While this model of care underwent several changes due to concurrent provincial health care restructuring, it has inspired the development of similar models delivered through the South West Regional Wound Care Framework (SWRWCF) and Red Cross Care Partners. General ET is practiced by approximately 300 specialized nurses across Canada.

PRACTICE DESCRIPTION:

With 50% of wound care occurring in home care settings, there is a need to ensure that the visiting nurses are equipped with the necessary skills and knowledge of best practices. The majority of this care would typically be provided by a generalist nurse, but there have been questions related to the level of training and competencies required to manage more complicated cases, particularly with the aging population. In March 2007, the Canadian Nurses Association recognized ET as a distinctive nursing specialty. The Canadian Association for Enterostomal Therapy offers an Enterostomal Therapy Nursing Education Program at the postgraduate level for baccalaureate-educated registered nurses.

In Ontario, registered nurses trained in enterostomal therapy (RN ETs) are contracted through their respective nursing agency to provide specialized wound care services through the CCACs, which in turn are funded by the Ontario Ministry of Health and Long-Term Care. In Waterloo, the RN ETs undertake all wound admission visits and are responsible for more complex patients. The RN ETs are supported by other nurses who are not trained to the same ET level but have advanced wound ostomy skills, and together collaborate with the attending physician for overall care plan.

IMPACT:

To determine the relative impact of specialized nursing services versus generalist nursing services in this area, there was a multi-centre retrospective chart audit (n=496) of the participating nursing agencies and CCACs in 2007. Three models of care were compared: (1) nurses trained specially in ET and/or advanced wound ostomy skills only, (2) a hybrid model of interventions developed by an RN ET and followed by a general visiting nurse, and (3) a control group of generally trained registered nurses and registered practical nurses only. In this audit, 360 chronic wounds and 54 acute surgical wounds were followed, and outcomes were assessed based on the type of care provided.

Estimates based on the cross-sectional data collected indicate differences in healing times and total costs of nursing care, which were calculated based on the number of nursing visits and related reimbursement. When comparing the care for both acute and chronic wounds provided by the specialized ET/advanced wound ostomy skill services versus the hybrid model, there was a difference of 45 days and a cost reduction of \$5927.00 due to reduced length of stay and hospital readmission favourable to the specialized services. When wound treatment was stratified, for acute wounds only the expected cost-benefit margin was more obvious, with healing time equivalent to 95 days and a cost difference of \$9578.00 per case.

A subsequent systematic review was conducted in 2010 on the value of RN ETs in home care and wound care across Canada. Eight studies were identified as eligible and were analyzed based on outcomes including number of visits, wound-healing times, completed healing, cost of wound care, social support, emergency department visits, hospital readmissions, patient education, and application of standardized protocols. With the available evidence, improved outcomes were consistent across the board, reaffirming the need for specialized training and program implementation for home care nurses in Canada.

APPLICABILITY/TRANSFERABILITY:

This specialist nursing model was studied in 2007, when the province was introducing the local health integration networks and consolidating the number of CCACs. Its continuation was complicated because of support for more generalized services.



However, after some transition time, the positive impact assessment, and new opportunities, resources from this model have been continued via the SWRWCF (<http://www.southwesthealthline.ca/librarycontent.aspx?id=231>) and the Red Cross Care Partners (<http://www.redcrosscarepartners.ca/Our-Services/Nursing-Care>). The SWRWCF provides a standardized wound-care toolkit that is available for all health care providers interested in becoming better informed. The Red Cross Care Partners has trained over 100 front-line nurses and wound resource nurses as part of a quality improvement initiative; this initiative is in response to a new provincial wound-care initiative around outcomes-based pathways. Moreover, The Canadian Association for Enterostomal Therapy continues to represent the RN ETs and advocate for the highest quality of specialized ET services.

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Information last updated on: August 30, 2013

Content has been adapted from the following sources and relevant links:

Publications:

Canadian Association for Enterostomal Therapy. (n.d.). *About us*. Retrieved from <http://www.caet.ca/caet-english/about-et-nurse.htm>

Harris, C., & Shannon, R. (2008). An innovative enterostomal therapy nurse model of community wound care delivery: A retrospective cost-effectiveness analysis. *Journal of Wound Ostomy & Continence Nursing*, 35(2), 169–183. Abstract retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/18344791>

Baich, L., Wilson, D., & Cummings, G.G. (2010). Enterostomal therapy nursing in the Canadian home care sector: What is its value? *Journal of Wound Ostomy & Continence Nursing*, 37(1), 53–64. Abstract retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20075693>

Personal Communications:

Harris, C. (interview, August 30, 2013).

External Source: <http://www.albertahealthservices.ca/services.asp?pid=service&rid=1001687>



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Advanced Clinician Practitioner in Arthritis Care Program (ACPAC)

LOCATION:	Ontario	HEALTH THEME:	Chronic Disease Management
HEALTH SECTOR:	Acute Care	FRAMEWORK CATEGORY:	Promising

SNAPSHOT: This innovative practice aims to improve the competencies of advanced clinical practitioners delivering care for patients with arthritis. The interprofessional program was launched in 2005 at St. Michael's Hospital, in collaboration with the Hospital for Sick Children in Toronto, and now has over 37 graduates working in diverse clinical settings across Ontario.

PRACTICE DESCRIPTION:

The ACPAC program was developed to address issues related to the accessibility to arthritis care specialist services for people living with rheumatoid arthritis and osteoarthritis, and to shift towards a more patient-centred, interprofessional approach to care delivery. The goal of the ACPAC program is to provide comprehensive, advanced education in rheumatology and orthopedics by optimizing the scope of existing health human resources. This post-licensure, academic and clinical-education training program targets physical therapists, occupational therapists, and advanced nurses wishing to advance their knowledge and practice in musculoskeletal/arthritis care. The standardized curriculum, which is offered by over 90 multidisciplinary faculty members in Ontario, applies rigorous training and evaluation standards. Individuals who go through the program receive a certificate of completion from the Department of Continuing Education and Professional Development, Faculty of Medicine, University of Toronto. Graduates of this program are expected to provide effective triage, advanced history taking and physical examination, interpretation of laboratory and diagnostic imaging, early detection/initiation of treatment monitoring and follow-up, assessment of appropriate medications and complications, and patient education in the context of musculoskeletal disorders with the goal of improved overall efficiency of care.

To date, the Ontario Ministry of Health and Long-Term Care has provided the majority of the ACPAC program's funding, supplemented by individual tuition fees. The program is endorsed by the Arthritis Alliance and the Canadian Rheumatology Association. Other key stakeholders include The Arthritis Society, industry, and academia (Continuing Education and Professional Development, Faculty of Medicine, University of Toronto).

IMPACT:

Impact assessments have been targeted at health care providers participating in the program. These assessments involve continuous feedback surveys administered to ACPAC students at baseline, midpoint, and at six and 12 months after graduation. Outcome measures were designed prior to the implementation of the program and have helped to inform the program design for subsequent years. Particular areas of interest for these evaluations include determining changes in necessary role competencies, developing best practice standards, and identifying barriers and enablers for recent graduates carrying out their new roles in diverse clinical settings.

From surveys conducted and published in 2011, 100% of graduates were satisfied with the program and found it highly relevant to their clinical practice. System-level evaluations have indicated improvements in access, particularly in rural and remote regions, perceived impact on patient outcomes, and opportunities for further role promotion and expansion. Extensive health services evaluation of ACPAC program graduates can be found in the ACPAC System Level Outcome Report (<http://www.stmichaelshospital.com/pdf/programs/acpac-executive-summary.pdf>), which was presented to the Ontario Ministry of Health and Long-Term Care in January 2012.

The ACPAC program has won a number of awards, including the Colin Woolf Award for excellence in course development from the Department of Continuing Education Professional Development in 2007, the Ted Freedman Award for excellence in design and delivery of formal, post-licensure health care education training in Ontario in 2008, and the Innovations in Human Health Resources Award from the Ontario Ministry of Health and Long-Term Care in 2009.

APPLICABILITY/TRANSFERABILITY:



Based on the positive impact reported since the ACPAC program's implementation, another five-year commitment of financial support from the Ontario Ministry of Health and Long-Term Care and in-kind support from the identified stakeholders is currently being sought. During this transition time, the Arthritis Society has generously funded the program for 2013/2014. The focus will be on developing a national framework for standardized post-licensure training in arthritis care, maintaining the University of Toronto as the central site, and potentially expanding affiliations with other academic sites to establish branches in western and eastern Canada. As this program continues to evolve, areas to address will include barriers faced at institutional and professional regulatory levels, access to and efficiency of care, and cost indicators. In terms of facilitators, medical directives and administrative support have been reported to help overcome legal issues in order to have the most appropriate care provider delivering the services required, reducing direct dependency on physicians and increasing overall system efficiency. Program directors emphasize the importance of the trickle-down effect of ACPAC graduates, whose presence has the potential to change the way arthritis care is delivered in their respective places of practice across diverse clinical settings.

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Information last updated on: August 1, 2013

Content has been adapted from the following sources and relevant links:

Publications:

Landon, K., Shupak, R., Reeves, S., Schneider, R., & McIlroy, J.H. (2009). The Advanced Clinician Practitioner in Arthritis Care program: An interprofessional model for transfer of knowledge for advanced practice practitioners. *Journal of Interprofessional Care*, 23(2), 198–200. Retrieved from <http://informahealthcare.com/doi/pdf/10.1080/13561820802379987>

Alternative Profiles:

Chronic Disease Management. (n.d.). *ACPAC: Advanced Clinician Practitioner in Arthritis Care program 2013–2014*. Retrieved from www.chronicdiseases.ca/arthritis

Personal Communications:

Landon, K. (emails, August 1, 2013).

External Source: <http://chronicdiseases.ca/arthritis/>



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System-Wide Case Management

LOCATION:	Alberta	HEALTH THEME:	Access and Wait Times
HEALTH SECTOR:	Home and Community Care	FRAMEWORK CATEGORY:	Emerging

SNAPSHOT: This innovative practice improves the coordination of care for persons managing chronic illness. The system-wide case management model was first launched in the Calgary region in Alberta in January 2008 as an 18-month pilot project. At that time, seven case managers were hired; within a year, over 200 clients were enrolled in the program. While the model has changed from its original scope and patient population targets, system-wide case management is still in practice in community care settings in the Calgary Region.

PRACTICE DESCRIPTION:

In its initial stages as a pilot program, the system-wide case management was designed to serve four patient population groups: multiple sclerosis (MS), amyotrophic lateral sclerosis (ALS), mental health related to brain injury, and dementia. Two roles were designed to deliver the services of the system-wide case management program. The first was the case manager, who was responsible for overseeing patients' navigation throughout their care pathway. Core components of the case managers' work included patient intake, assessment, care planning, evaluation, reassessment, discharge, and transition. Case managers were considered as experts in available treatment and program options, bridging services for particularly complicated cases, and improving communication through the development of a report system between patient, care project managers, and providers. The second role was the project manager, who was responsible for overseeing the work of the case manager. The two roles worked together to enable broader care management models that include advocacy, building relationships, education, connecting resources, and working directly with other health care team members. Specific roles were dependent on the setting context, resources, and needs of patients/clients.

Once the project surpassed its pilot phase, the costs of running these services were absorbed into the general operations budget of Alberta Health Services. However, the program underwent significant changes from 2009 to 2012 due to broader provincial restructuring efforts. The project manager role was discontinued towards the end of 2008. In addition, the program currently exists for dementia management only, as this was the patient population group that was identified as benefiting the most from these services relative to human resources input.

IMPACT:

To assess the qualitative impact of this pilot project, nearly 100 interviews were conducted with clients, informal caregivers, families, health care professionals, system-wide case managers, and working group members at the midpoint and endpoint of the pilot phase in February 2009. Among respondents, there was consensus around improved access to and integration of services for patients and their families. Acute care data were also collected, but due to sample size and lack of comparison group no quantitative analysis was possible with the given data set. (The terms of continuity of the initiative had to balance out the positive impact assessments with resource allocation projections.)

APPLICABILITY/TRANSFERABILITY:

The system-wide case manager position is similar to other positions, such as patient navigators or care coordinators, in Canada. However, this initiative is distinctively based on its specific population targets and its evaluation framework. The evaluation framework was informed by the Calgary Health Region's Framework for Case Management, Case Management for Continuing Care Clients, the System-wide Case Management Project Charter, and McMaster University's Case Management Workshop Workbook.

Key factors identified as contributing to the success of this program include collaborative partnerships, clinical practice support, staffing, service provision, target populations, goals, outcomes, and appropriate caseloads. As the program continues, program managers have emphasized the need for greater standardization of the guidelines for client intake and assessment; care planning, evaluation, reassessment; and discharge planning particularly. A province-wide evaluation of case management is due to come out in March 2014.



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Information last updated on: August 8, 2013

Content has been adapted from the following sources and relevant links:

Publications

Trojan, L., & Armitage, G. D. (2009). *Evaluation report: System-wide case management*. Health Systems & Workforce Research Unit, Calgary Health Region. Retrieved from

<http://www.albertahealthservices.ca/Researchers/if-res-hswru-case-management-report-2009.pdf>

Personal Communications:

LeMarquand-Unich, B. (interview, August 8, 2013).

External Source: <http://www.albertahealthservices.ca/services.asp?pid=service&rid=7573>



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Nurse and Dietitian Health Teams to Prevent Diabetic Complications

LOCATION:	Alberta	HEALTH THEME:	Health Human Resources
HEALTH SECTOR:	Primary Health Care	FRAMEWORK CATEGORY:	Promising

SNAPSHOT: This innovative practice improves the quality of diabetes management through the use of interprofessional health care teams delivering interventions to persons aged 17 years or older with diabetes and hypertension or albuminuria. The initial pilot round was launched in five communities in northern Alberta in 2004. The program has since been expanded to a total of eight communities (two urban and six rural), serving over 3,000 patients.

PRACTICE DESCRIPTION:

To address the generally increasing burden of diabetes and chronic kidney disease, interprofessional teams were established to include a registered nurse and a registered dietitian in clinics staffed by an endocrinologist, nephrologist, advanced practitioner/project manager, pharmacist, and clerk. The roles of the nurse and dietitian involved promoting the development and use of evidence-based protocols and guidelines, helping to control risk factors through lifestyle coaching, conducting regular follow-ups, and adjusting multifactorial interventions based on individual development.

The clinics were advertised to health care providers to initiate the referral process. New patient intakes involved a standardized assessment conducted by the nurse and dietitian (two hours in duration), subsequent visits lasted one hour, and reports from each visit were sent to the referring physician. The education program for nurses and dietitians associated with introduction of this care model involved an initial five-day residential training program, followed by monthly one-day training sessions, bi-weekly telehealth sessions, and ongoing, on-site mentoring by the program's advanced nurse practitioner.

Initially, the pilot project was funded by the provincial government, with a start-up budget of \$800,000 per annum. Funding now falls under the Northern Alberta Renal Program, with the local health authority as the acting employer.

IMPACT:

During the initial data collection period between 2004 and 2005, there were 570 referrals received, 99% of which were eligible and came predominantly from family physicians (as compared to specialists). A longer assessment period continued into 2007, in which 235 patients were followed up for one year of receiving services. Clinically significant improvements were reported for patients across indicators for blood pressure, glycemia, lipid levels, and albuminuria. However, patients who did not adhere to lifestyle changes such as smoking cessation had consistently worse clinical outcomes. Successes were attributed to the role of the interprofessional team and the follow-up visits to reinforce advice from physicians to operationalize lifestyle changes. Follow-up visits were calculated to cost \$130 each, but no formal cost-effectiveness evaluation was done.

APPLICABILITY/TRANSFERABILITY:

This innovative practice is considered to be transferrable as demonstrated by its expansion to other northern Alberta communities following the initial pilot period. Although one of the initial clinics in Red Deer closed, there are now eight communities hosting these interprofessional clinics, which are monitoring over 1,800 patients in total. Active clinics include:

- Edmonton, Northeast Community Health Centre (est. January 2004);
- Vermilion (est. January 2004);
- Hinton (est. January 2004);
- Wetaskiwin (est. January 2004);
- Edmonton, Grey Nuns Hospital (est. October 2005);



- Edson (est. January 2007);
- Grande Prairie (est. February 2007); and
- Fort McMurray (est. June 2008).

Challenges in the background context that were noted included persistent underuse of proven therapies, undersupply of physicians in rural settings, and fee-for-service payment schemes that are not aligned with ongoing, chronic disease management. Specific to the introductions of new programs, careful communication was required to establish trust around the transcendence of traditional roles practised by the registered nurses and manage perceptions of overlapping services with pre-existing programs. Key factors contributing to this program's success were the partnership with local health authorities and the positive reception from participating communities.

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Information last updated on: July 26, 2013

Content has been adapted from the following sources and relevant links:

Publications:

Senior, P.A., MacNair, L., & Jindal, K. (2008). Delivery of multifactorial interventions by nurse and dietitian teams in a community setting to prevent diabetic complications: A quality improvement report. *American Journal of Kidney Diseases*, 51(3), 425–434. Retrieved from <http://www.ajkd.org/article/S0272-6386%2807%2901586-7/abstract>

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Personal Communications:

Senior, P.A. (July 25, 2013). [Associate Professor/Principal Investigator, University of Alberta].

McKenzie, J. (July 25, 2013). [Project Manager, Alberta Health Services].

External Source: <http://www.albertahealthservices.ca/services.asp?pid=service&rid=1001687>



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Tool for Identifying Harmful Incidents in the Hospital Setting to Disclose

LOCATION:	Ontario	HEALTH THEME:	Quality Improvement and Patient Safety
HEALTH SECTOR:	Acute Care	FRAMEWORK CATEGORY:	Promising

SNAPSHOT:

This innovative practice identifies harmful incidents in the context of patient safety in a simple, accessible manner. The tool was originally piloted in 2009 and is now fully integrated across all sites of a large health organization in Ontario.

PRACTICE DESCRIPTION:

The tool for Identifying Harmful Incidents was designed to help build a culture of patient safety. Despite multifaceted efforts (such as education rollouts, policy development, flow maps, literatures reviews, poster presentations, and paper presentations) made over the years throughout the William Osler Health System (WOHS), there was still disagreement within the organization on what constituted a harmful incident. Given the organization’s commitment to quality and patient safety, this tool was developed to help staff identify harmful incidents that they had an obligation to disclose.

The tool defines a harmful incident as “an incident that is unexpected in health care that results in harm and is not attributable to recognized complications and negatively impacts a patient’s health and quality of life.” The tool was developed to be accessible by anyone. It asks four simple questions:

- 1) Did the event cause harm (negatively affect health or overall well-being) to the patient now, and/or will it cause harm in the future?
- 2) Was the event unexpected?
- 3) Did the event take place in the course of medical treatment?
- 4) Was the event caused by something other than the patient’s illness or underlying disease?

A yes answer to all four questions identifies a harmful incident. Disclosure and reporting follow identification, and implementation of the tool showed that once the hurdle of identification is overcome, obligations to disclose and report were clear and well understood by staff.

The tool began as a quality improvement project following an Accreditation Canada review in 2009 and was designed by the hospital ethicist. It has now been fully integrated and rolled out across all sites at WOHS. The tool was implemented through regular education sessions and staff safety huddles. Magnet versions of the disclosure tool have been posted in many areas of the hospital, while pocket tools are being used by both staff and physicians. The tool has not changed from its original form and continues to be used to identify adverse events.

IMPACT:

The pocket tool was evaluated following implementation by measuring the percentage of disclosures in relation to the total number of medication and test/procedure incidents in the time periods April–December 2009 and January–September 2010. Results showed the number of disclosures increased appropriately.

Following implementation, the percentage of disclosures in relation to the total number of incidents increased for medication errors. The lowest percentage of disclosures was in June 2009 at below 20%; the percentage disclosure for medication incidents now averages 40%. Over the same period, the percentage of disclosures in relation to the total number of tests/procedures also increased significantly. In April 2010 and June 2010, 100% disclosure of test/procedure incidents was reached. The lowest percentage was 20% in October 2009, but it has not dropped below 40% throughout 2010. Staff



testimonials also confirm the tool is helpful in clarifying when an event must be disclosed and reported, and gives them confidence that the incident identification is not arbitrary.

There was no cost associated with this tool aside from the time for staff education by the ethicist and the production of pocket cards and magnetic backing.

APPLICABILITY/TRANSFERABILITY:

This tool is a key building block of creating a culture of patient safety because unless there is agreement on and easy identification of harmful incidents that need to be disclosed, the processes for doing so will not be accessed.

The tool originated in the ethics department at WOHS and was not based on any other model. The tool was first piloted in 2009 and has now been spread and fully integrated into all areas of WOHS. Furthermore, the tool has been shared with other hospitals throughout Ontario. It received attention after winning a 3M Quality & Safety Award at the Ontario Hospital Association's Health Achieve Conference (2010), with others hospitals interested in adapting the tool to their setting. The tool is theoretically transferable and applicable to other hospitals in the province and across Canada.

One lesson learned for implementation is to design the tool with a magnetic backing and place it in view in rooms in the hospital. The tool has not been changed from its original form and remains relevant over time. While other dissemination methods—such as posters—are often taken down over time, the magnetic tool remains “stuck.” Posting a tool where it will be visible and long-lasting is an important consideration for knowledge transfer and integrating new practices.

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Personal Communications:

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Publications:

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Alternative Profiles:

Other:

Chidwick, P. Abstract submission to the Health Council of Canada's National Symposium on Integrated Care (2012).



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Patient Navigation Program for Low-Income Women with Breast Cancer: Seminal Innovation at Harlem Hospital, New York City

LOCATION:	International	HEALTH THEME:	Health Policies and Governance
HEALTH SECTOR:	Acute Care	FRAMEWORK CATEGORY:	Leading

SNAPSHOT: This innovative practice addresses barriers low-income women experience when seeking screening, diagnosis, and treatment of breast cancer. The practice was launched in New York City at the Harlem Hospital Center and involved members of the community trained in patient navigation.

PRACTICE DESCRIPTION:

The first Patient Navigation program was developed in New York City to reduce disparities in access to diagnosis and treatment of cancer, particularly among poor and uninsured minorities. This program was informed by findings from the American Cancer Society's (ACS's) *Report to the Nation on Cancer in the Poor in 1989* and was funded by a grant from the ACS.

The main purpose of the inaugural program was to eliminate barriers to timely screening, diagnosis, treatment, and supportive care for breast cancer. This model differs from other models of patient assistance, such as hospital-based social workers or patient advocates, by focusing on one health condition rather than the broader objective of improving health in general. Navigators develop relationships with patients to identify, anticipate, and help to alleviate barriers, including issues with:

- finances;
- language, communication, and information;
- missed appointments and lost results;
- culturally appropriate care;
- geographical distance; and
- fear and emotions.

The first patient navigators at the Harlem Hospital Center were primarily lay people selected from the community. No particular level of formal education was required, but navigators were culturally attuned to the community being served, very knowledgeable about the health care system, and highly connected with critical decision-makers in the system. Since 1990, the patient navigation model has expanded along with the credentials of navigators, who are frequently experienced health care professionals or graduates of patient navigation training programs. The Harold P. Freeman Patient Navigation Institute in New York City offers a certificate of completion program in patient navigation provided by its namesake, the founder of patient navigation.

IMPACT:

Research performed at Harlem Hospital compared the health outcomes of economically disadvantaged African-American women treated for breast cancer before and after patient navigators were introduced. Following the implementation of the Patient Navigation program, the five-year survival rate increased from 39% to 70%. These results were published in the *Journal of the American College of Surgeons and Cancer*. Two major factors are believed to account for the improved results in Harlem: providing free/low-cost breast examinations, which led to early detection of abnormal findings, and patient navigation, which ensured timely diagnosis and treatment.

While there are no data available on the costs and savings of the original Patient Navigation program, in general the costs of navigation depend on the needs and goals of the program. For programs that only require navigation of medical system resources, lay people may be employed at a lower cost. If a program requires a more highly trained navigator, such as an oncology nurse, costs rise accordingly. The National Cancer Institute and the ACS are sponsoring a nine-site Patient Navigation



Research Program, an ongoing evaluation of the program's impact and cost-effectiveness.

APPLICABILITY/TRANSFERABILITY:

Patient navigation was first implemented in Harlem to address the disparities in treatment of breast cancer among African-American women. However, to date, patient navigation is used, implemented, and applicable across a broad spectrum of cancers, chronic diseases, and at-risk populations, including Aboriginal peoples, Asian communities, and rural residents.

Since the seminal innovation in 1990, hundreds of different Patient Navigation programs have been established throughout the United States and in jurisdictions around the world, including Canada, Australia, and Europe. In the United States, the inaugural practice served as the model for the 2005 Patient Navigator Outreach and Chronic Disease Prevention Act, which authorized the spending of US\$25 million to set up navigation services in poor and rural communities across the country.

Shortly after patient navigation services were implemented in New York, Cancer Care Nova Scotia began implementing a similar service, the [Nova Scotia Cancer Navigation program](#). The goal of that program is to improve quality of care by arming patients with information, lending them support, and coordinating their appointments. A 2004 formal evaluation report published by Cancer Care Nova Scotia confirmed that the program significantly benefited cancer patients and their families in dealing with the emotional turmoil, informational needs, and logistical challenges associated with having cancer. Navigator programs have now been established in nearly all provinces in Canada.

PRACTICE WEBSITE:

<http://www.hpfreemanpni.org/>

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Publications:

Freeman, H.P. (2006). Patient navigation: A community based strategy to reduce cancer disparities. *Journal of Urban Health*, 83(2), 139–141.

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External Source: <http://www.hpfreemanpni.org/>



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MRI Process Improvement Project: Improving patient access to imaging services

LOCATION:	Ontario	HEALTH THEME:	Access and Wait Times
HEALTH SECTOR:	Acute Care	FRAMEWORK CATEGORY:	Emerging

SNAPSHOT: This innovative practice addresses the issue of improving patient access to magnetic resonance imaging (MRI) services through improvements to MRI administrative processes. Between October 2008 and March 2012, all Ontario-based MRI facilities have participated in this program.

PRACTICE DESCRIPTION:

The MRI Process Improvement Program (MRI-PIP) is a Lean Six Sigma initiative that focuses on creating sustainable improvements in MRI processes by optimizing the use of existing staff and equipment at all participating facilities in Ontario.

The program uses Lean Six Sigma methodology, which is a strategic approach that strives to improve processes and reduce variation by eliminating problematic areas in the process and standardizing the flow of services. The methodology focuses on adding value to the patient and empowering staff and clinicians to improve patient care. It emphasizes the importance of data in developing solutions.

The MRI-PIP focuses on process improvement in the following areas:

- Booking Process: streamlining the process and decreasing the wait time from the time an MRI requisition is received by the MRI facility to the point when an appointment is booked and the patient is notified of the appointment;
- Scheduling System: improving the allocation of MRI resources to reflect the demand of each patient population and the resource constraints in the system; and
- Patient Flow on Day of Exam: streamlining the process on the day of exam, thus maximizing scanner time.

IMPACT:

Overall, MRI-PIP has made a positive impact on the landscape of MRI delivery in Ontario. Results include the following:

- 80% of sites improved their 90th percentile wait times with a combined provincial decrease of 1920 days (or an average of 36 days per site);
- 78% of sites increased their average monthly volumes with a combined provincial increase of 5275 exams (or an average of 98 exams per site);
- 80% of sites increased their rate of patients scanned per hour equal to an additional 54 patients per day across the province, or approximately 20,000 patients per year without increasing resources;
- 500 health care professionals and hospital leaders were trained in quality improvement methodologies and tools; and
- 93% of sites continued to track performance measures, while 75% of sites continued to meet to discuss these measures.

APPLICABILITY/TRANSFERABILITY:

Lean Six Sigma process methodology is used in programs throughout much of Canada, but the Ontario-wide MRI-PIP strategy is the first of its kind in Canada. A similar MRI process program exists at the Akron Children's Hospital in Ohio, although it was done in isolation from Ontario's provincial program. The Akron Children's Hospital's MRI scheduling project won a Lean Six Sigma program award in June 2011 for outstanding health outcomes.



EXTERNAL LINKS: <http://www.mritoolkit.ca/>

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Other:

Health Care Quality Team Awards 2013, Canadian College of Health Leaders. (n.d.) Retrieved from

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Virginia Mason Production System

LOCATION:	International	HEALTH THEME:	Quality Improvement and Patient Safety
HEALTH SECTOR:	Public Health	FRAMEWORK CATEGORY:	Promising

SNAPSHOT:

This innovative practice aims to provide a system wide health production system to improve clinical process management, reducing waste and providing better quality care.

PRACTICE DESCRIPTION:

The Virginia Mason Medical Center (VMMC) includes Virginia Mason Hospital and a network of primary and specialty care clinics in the Seattle, Washington area in the United States. VMMC is a not for profit organization with 238 beds.

In 2002, VMMC adopted the basic tenets of the Toyota Production System (TPS), calling it the Virginia Mason Production System (VMPS). While some medical centers have initiated projects using TPS, Virginia Mason is the first to integrate the Toyota management philosophy throughout its entire system.

The key to using the VMPS is to understanding that staff who do the work know what the problems are and have the best solutions. VMPS strategies range from small-scale ideas tested and implemented immediately to long-range planning that redesigns new spaces and processes.

VMMC uses several continuous improvement activities, such as Rapid Process Improvement Workshops (RPIWs) accompanied by follow-up evaluation points, and Kaizen events focused on incremental changes, as well as 3P (Production, Preparation, Process) workshops intended to completely redesign a process.

IMPACT:

By 2010, VMMC placed in the top 1% of all hospitals in the U.S. in terms of both quality and efficiency, according to the Leapfrog Hospital Recognition Program. VMMC has held 850 continuous improvement activities involving staff, patients and guests. Since the management system was implemented VMMC staff members have regularly evaluated and scrutinized processes from nearly all areas of the medical center using both written and verbal evaluations and feedback. Below are a few examples of how VMPS has improved the quality of patient care:

1. Patients spend more value-added time with providers, and VMPS tools and processes help providers deliver the best possible care with zero defects.
 - VMMC decreased the number of hours the ED was closed and unable to receive new patients by more than 90 percent over the past two years.
 - By making key changes, physicians, who previously stayed until 8 or 9 p.m. doing paperwork, now leave by 6 p.m. Today, these clinics consistently achieve positive net margins and see more patients without sacrificing time spent with each patient.
 - Reduced the time it takes to report lab test results to the patient by more than 85 percent.

1. Patients benefit from greater safety, less delay in seeing physicians for care and more timely results and treatments.
 - The Patient Safety Alert (PSA) system, requiring all staff who encounter a situation likely to harm a patient to make an immediate report and cease any activity that could cause further harm, has had 14,604 PSAs were reported from 2002



to 2009.

- Reduced premiums for professional liability insurance by 56 percent.

1. VMMC staff benefit by having less rework and greater opportunities to care for patients

- Nurse walking distance was reduced in the hospital by 750 miles per day, freeing up more than 250 hours of time spent walking for direct patient care.
- Increased productivity by about 93 percent in a few targeted areas by moving the most common supplies to point of use and creating kits containing frequently needed supplies.

1. The organization benefits because it operates more efficiently. Ultimately, savings are reinvested to support VMMC's mission to improve patient health and well-being.

- Saved \$11 million in planned capital investment by using space more efficiently and freed an estimated 25,000 square feet of space using better space designs.
- Reduced inventory costs by \$2 million through supply chain expense reduction and standardization efforts.

APPLICABILITY/TRANSFERABILITY:

Although other medical centers are using TPS, none have taken the approach and applied it in a holistic manner across all part of the organization. For example, the VMMC Finance Department used VMPS to address outstanding revenue (revenue owed to the organization that had not been paid in a timely manner).

In 2008, the Virginia Mason Institute was established to provide education and training in the VMPS to other organizations, including health care providers – highlighting the fact that this innovative practice as a system is transferable to other health care institutions.

Many long-term partnerships have been formed with other jurisdictions, including a relationship with the North East Transformation System Coalition, comprising of 10 United Kingdom National Health Service (NHS) providers in the North East of England. In the UK, the Tees, Esk and Wear Valleys NHS Foundation Trust, a provider of mental health and learning disability services, has achieved substantial early benefits by enthusiastically embracing the VMPS. Although, representatives from VMMC have visited Saskatchewan, to our knowledge, no province or territory has implemented this practice in Canada

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Virginia Mason Production System [Practice Web Page] <https://www.virginiamason.org/VMPS>

Fast Facts Virginia Mason Production System https://www.virginiamason.org/workfiles/pdfdocs/press/vmps_fastfacts.pdf

<http://www.virginiamasoninstitute.org/>

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What does Lean mean for RHA board members in Saskatchewan? A conversation with Carolyn Corvi, Board Chair of Virginia Mason Health System (Seattle, WA) (February 11, 2013)

<http://hqc.sk.ca/Portals/0/documents/Conversation%20with%20Carolyn%20Corvi%202013-02-11.pdf>

External Source: <https://www.virginiamason.org/VMPS>



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The Ottawa Hospital Inter-professional Model of Patient Care (TOH IPMPC©)

LOCATION:	Ontario	HEALTH THEME:	Health Human Resources
HEALTH SECTOR:	Acute Care	FRAMEWORK CATEGORY:	Emerging

SNAPSHOT:

This innovative practice is a guide to organizing the delivery of patient care among health professionals from different disciplines, taking into account their competencies, collaborative patient-centred practice, and their hospital's strategic directions.

PRACTICE DESCRIPTION:

The Ottawa Hospital Inter-professional Model of Patient Care (TOH IPMPC©) is a guide to organizing the delivery of patient care among health professionals from different disciplines, taking into account their competencies, collaborative patient-centred practice, and The Ottawa Hospital's (TOH's) strategic directions. TOH IPMPC© is the next building block in the TOH system redesign and appears to be the first of its kind. TOH IPMPC© is a set of 22 guiding principles by which teams coordinate clinical care. These principles are centred on the concepts of collaboration, accountability, interprofessional communication, and patient involvement in decision-making.

To support the implementation of TOH IPMPC©, an interprofessional education (IPE) program was created to reinforce the principles of interprofessional care (IPC) with health care professionals, students, and patients. The education program is multidimensional and has reached a large number of health professionals. Financial support for the first three years of implementation of this interprofessional care initiative (2007–2010) was provided by Ontario's Ministry of Health and Long-Term Care (MoHLTC). Funding has since been assumed by TOH.

TOH IPMPC© was created by patients and health care providers and is guided by a steering group whose membership is interprofessional and representative of the health professions. Because it has been created by patients and their health care providers, it is unique in its flexibility to be implemented hospital-wide across diverse teams. It has been implemented with 96 teams across a large academic health science centre. Each team reflects on the guiding principles and decides how to put these principles into practice within the team. The team then develops an Action Plan around the changes to be implemented to meet the guiding principles.

IMPACT:

A research team is using qualitative and quantitative research methodologies to evaluate the model at baseline (T0), six months (T1), and 12 months (T2) post-implementation. T0 and T1 data collection is complete and T2 is underway. The expected outcomes are enhanced quality of patient care through improved interprofessional collaboration, staff well-being, and organizational climate.

Current anecdotal evidence shows that engagement of team members has increased, and that the innovative strategies that have been implemented have enhanced their collaboration and the care being provided to patients and families. Some of these changes were simple ones, such as initiating regular social events to improve team spirit or updating a unit-specific pamphlet. Others were slightly more complicated, such as improving the discharge and transfer process for patients out of and into a unit, implementing a policy of zero tolerance for bullying and disrespectful behaviours, initiating an interprofessional council, and a team commitment to improving interprofessional communication and using interprofessional documentation tools. One such strategy, the Cardiac Arrest with Roles Defined (CARD) study, aims to enhance patient safety in the operating rooms. It was profiled on CJOH, CTV's affiliate in Ottawa, in September 2011.

Over 5,000 nurses and other health professionals are participating in the implementation. Enhancements in empowerment, job satisfaction, and recruitment and retention are anticipated. The findings will affect clinical practice, research, education, and administration.



A preliminary report of the findings will be ready at the end of April, 2013. Full data analysis will commence once T2 data collection is concluded at the end of April.

APPLICABILITY/TRANSFERABILITY:

TOH IPMPC© was fully developed and implemented at TOH, and it appears to be the first program of its kind. However, the guiding principles of this program and the implementation and evaluation processes are flexible enough to be used in a variety of health care settings, for a variety patient populations, and by various kinds of interprofessional teams. Already the TOH IPMPC© model has been implemented across 96 diverse teams in the Ottawa Hospital.

The educational program is available to over 5,000 nurses and other health professionals in the organization, and it has already been adapted for and delivered in five academic health sciences centres in the Champlain LHIN. Additionally, external partners who are currently implementing The Ottawa Hospital Model of Nursing Clinical Practice have indicated interest in also implementing TOH IPMPC©.

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Other:

Rodger, G. (2012). Content developed from an abstract submission for the Health Council of Canada's National Symposium on Integrated Care.

External Source:

<http://www.ottawahospital.on.ca/wps/portal/Base/TheHospital/OurModelofCare/ProfessionalModels/InterProfessionalModelofPatientCare>



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Advanced Training Program, Intermountain Healthcare

LOCATION:	International	HEALTH THEME:	Health Human Resources
HEALTH SECTOR:	Public Health	FRAMEWORK CATEGORY:	Leading

SNAPSHOT: This innovative practice is designed to train senior leaders, middle managers, and front-line health professionals in the theory and application of cost control, quality control, and the health services academic infrastructure. Launched in the US in 1991, the training program has expanded and is offered across Canada.

PRACTICE DESCRIPTION:

Health care professionals, leaders, and managers around the world are continuously striving to improve the performance and quality of health care systems through the advancement of their knowledge and skills. In the United States, the Advanced Training Program (ATP) offers a practical, in-depth course for health care professionals who need to teach, implement, and investigate quality improvement, outcome measurement, and management of both clinical and non-clinical processes.

The ATP was originally implemented in Utah at the beginning of 1991. The program is designed to train senior leaders, middle managers, and front-line health professionals in the theory and application of cost control, quality control, and the health services academic infrastructure. The program is funded through course fees (\$10,500 per participant) and external funds from collaborators of the Institute for Health Care Delivery Research at Intermountain Healthcare.

The purpose of the program is to give participants the knowledge and tools necessary to conduct state-of-the-art clinical practice improvement projects, use quality improvement methods to manage and integrate non-clinical processes, implement quality improvement programs, and conduct internal quality improvement training. The ATP also gives participants the opportunity to join a national/international network that provides ongoing support and information sharing for future collaborations.

As part of the course, each ATP participant must select, complete, and report on an improvement project. The ATP faculty and analysts provide consultation and support for participants' projects. The Institute offers a nine-day mini-ATP course that is largely geared to clinicians, and a full 20-day ATP course that is divided into four sessions. The Institute builds on the experience of Intermountain Healthcare and brings national experts together to teach the theory and techniques of quality improvement, outcome measurement, health care policy and economics, leadership, and other subject areas.

The ATP is a seminal practice that has been recognized around the world for bringing front-line clinicians, health care leaders, and internal change agents to a common understanding of quality and how to make this a core component of organizational strategies in health. The program does not endorse any one specific approach to improvement (such as Plan-Do-Study-Act, Model for Improvement, Lean, or Six Sigma). Instead, it teaches a core set of improvement principles and introduces tools from a variety of approaches. Further, the action-based nature of the program allows for interdisciplinary collaboration and a culture change aimed at continuously improving quality in health care.

IMPACT:

The ATP is part of Intermountain Healthcare Continuing Medical Education, which is evaluated and accredited annually by the Accreditation Council of Continuing Medical Education based on consistent positive outcomes from extensive evaluations. To date, over 3,500 national and international participants have graduated from the program, generating more than 1,000 quality improvement projects, some of which have received recognition themselves. Participants' backgrounds are varied: 40% physician executives, 20% nurse/other clinician executives, 15% administrative staff, 10% senior executives, and 10% academic researchers. The ATP has a proven track record with respect to patient outcomes and value for money. Brent C. James, Intermountain Healthcare's vice-president of medical research and continuing medical education and the executive director of the Institute for Health Care Delivery Research, estimates that the ATP has yielded a four-to-one return on investment for the Intermountain Healthcare system since its implementation in the early 1990's. Currently, only 20% of graduates are from within Intermountain Healthcare.



Intermountain Healthcare has received several awards as a result of its quality improvement initiative, including the ATP. These include the Quality Health Care Award presented in 1996 by the National Committee for Quality Health Care and the Healthcare Forum/Witt Award: Commitment to Quality presented in 1991 by The Healthcare Forum and Witt Associates.

APPLICABILITY/TRANSFERABILITY:

The ATP has been adapted by over 50 jurisdictions and/ or health systems, such as Veterans Affairs in the United States and the National Health System in the United Kingdom. Other countries, including Australia and Germany, have also expressed interest in adapting this practice. In Canada, the ATP has been adapted in British Columbia since 2006 as the Quality Academy, and will begin in Ontario in the fall of 2013 as Improving & Driving Excellence Across Sectors (IDEAS).

Content has been adapted from the following sources and relevant websites:

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Saskatchewan's Clinical Practice Redesign (CPR)

LOCATION:	Saskatchewan	HEALTH THEME:	Access and Wait Times
HEALTH SECTOR:	Acute Care	FRAMEWORK CATEGORY:	Emerging

SNAPSHOT: This innovative practice is a set of tools and methodologies that improve access to care, communications, office processes, and effectiveness between office settings and other health care providers. Launched in Saskatchewan in 2007, this program aims to help health care professionals enhance communication, streamline office processes and make the best use of everyone's time.

PRACTICE DESCRIPTION:

As part of the Saskatchewan Surgical Initiative, the Saskatchewan Medical Association (SMA), the provincial Health Quality Council, and the Ministry of Health launched a joint initiative in 2007 called the Saskatchewan Clinical Practice Redesign (CPR). This program helps health care professionals enhance communication, streamline office processes, and make the best use of everyone's time, thus creating a more manageable workplace and the opportunity to provide quality care sooner. CPR is a set of tools and methodologies that improve access to care, communications, office processes, and effectiveness between office settings and other health care providers. Physicians can access and modify the CPR tools to meet their own needs and address their unique challenges. Some CPR tools include strategies for:

- Allocation of time for scheduled appointments
- No-show management
- Reminder calls for patients

Physicians enrolled in the program have the opportunity to discuss challenges in their practice with a designated CPR coach, and design a tailored action plan to enhance the efficiency of day-to-day office processes. Overall, CPR is structured to achieve four main objectives:

- improve the patient experience
- improve access and efficiency within practice settings
- improve access and efficiency among practice settings
- improve the staff experience

IMPACT:

CPR has been used in a variety of practices and clinics. It includes an online system, TransformMyPractice.ca, where physicians and surgeons can track and measure their progress. One example of successful CPR implementation is in the Regina Qu'Appelle Health Region Sleep Disorders Clinic. After CPR was introduced, patients were asked for feedback on their experience. Survey results indicate that in 2010/2011, 62% of patients in this sleep clinic reported great satisfaction in their clinical experience after the implementation of CPR tools.

Interviews with other patients revealed their satisfaction with their access to care. For example, an SMA news release profiled a patient who required rapid access to care after a leg injury. He was very impressed with how quickly he was able to set up an appointment and receive the treatment he needed through the Advanced Access program, which is part of CPR. He attributed his positive experience to his physician's participation in advanced booking and CPR. Physicians have also been pleased with their experience, saying that CPR has helped them better prioritize and manage their cases to enhance patient flow and reduce wait times. Most surgeons have even expressed an interest in CPR services to be expanded.

APPLICABILITY/TRANSFERABILITY:

Although components of CPR, such as the Advanced Access program, have been previously implemented in the United Kingdom, the United States, and elsewhere in Canada (Nova Scotia), Saskatchewan is the first jurisdiction to implement CPR as a holistic approach to patient care and quality improvement across health care services.



CPR implementation has spread across the province. As of March 2012, 63 clinics in Saskatchewan—involving roughly 100 clinicians and 350 staff—are actively using this innovative practice. Numerous sites have expressed interest in CPR and are currently recruiting CPR coaches to help them better identify how CPR can improve their practices.

Transferability of this practice is possible. However, the needs of each clinic's specific characteristics, including patient load and demographics, should be considered. In addition, the broader thinking of physicians and staff with respect to offering same-day access and striving for lower (or no) wait times should also be taken into account.

Content has been adapted from the following sources and relevant websites:

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External Source: <https://www.sma.sk.ca/Default.aspx?cid=838&lang=1&pre=view>



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Residents First

LOCATION:	Ontario	HEALTH THEME:	Patient Centered Care
HEALTH SECTOR:	Home and Community Care	FRAMEWORK CATEGORY:	Emerging

SNAPSHOT: This innovative practice aims to supports long-term care homes in providing an environment for their residents that enhances their quality of life. Launched in Ontario in 2010, this five year initiative aims to strengthen the long-term care sector's capacity for quality improvement.

PRACTICE DESCRIPTION:

Long-term care has become an integral part of Canadian health care and further efforts to provide appropriate care in the appropriate place for seniors are needed. Residents First is a comprehensive and innovative quality improvement (QI) initiative in Ontario that supports long-term care homes in providing an environment for their residents that enhances their quality of life. Residents First also facilitates comprehensive and lasting change by strengthening the long-term care sector's capacity for QI.

Residents First, a five-year initiative of Health Quality Ontario (HQO), launched in 2009 with funding from the Ontario Ministry of Health and Long-Term Care. HQO experts in quality improvement delivered training. This partnership-driven initiative was developed with the input of a broad range of stakeholders, including organizations representing Long Term Care (LTC) homes, residents and their families. These groups continue to have input as members of the provincial steering committee that guides implementation.

Residents First participating homes receive training to support their QI efforts in topics areas that are known to have a big impact on quality of life for residents, such as: preventing falls and pressure ulcers, behavioural supports, emergency department utilization, continence care, and continuity of care for residents. The Residents First initiative provided different streams for customized training, facilitating and coaching in QI for long-term care leaders and staff. These streams are:

1. Leading Quality Program

This stream aims to strengthen the ability of leaders in the long-term care sectors in Ontario to lead and realize QI as a key strategy to achieve their mission and the goals of the sector as a whole. The program acknowledges the key influence of leaders on the QI journey in their regions, and is based on the best practice to support their achievements of QI. The shared commitment of all participants is to further the Residents First mandate of growing the Ontario LTC capacity for QI, so that the quality of each long-term care resident's care is the best in Canada and is comparable to leading jurisdictions the world over.

2. Collaborative Learning

Each participating home assembles a five-member quality improvement team to join a Residents First Learning Collaborative. Through this Learning Collaborative model, teams work on the same topic, and develop shared aims, measures, and change concepts. Learning workshops teach participants to apply QI tools and methods in their own practice and encourage the sharing of their experiences. Quality improvement teams are supported throughout this process by improvement facilitators, web-based tools, and communications. Teams provide monthly reports on their progress and challenges, and share information through monthly teleconferences and seven face-to-face meetings over a nine month period.

3. Improvement Facilitation

Residents First offered seven-day, intensive in-person training concentrating on the Model for Improvement and Lean methodologies. In the last year, Residents First partnered with Behavioural Supports Ontario (BSO) to offer a condensed version of the seven day training. This three day improvement facilitator (IF) training focused on how BSO clients interact with care across the health system. The third day was designed to assist the IF in applying the newly acquired knowledge and skills to responsive behaviours.

4. LEAN Process Improvement



LEAN is a QI methodology that uses many of the same tools and methods used in general QI systems. LEAN techniques are used by front-line teams, who are the experts on their processes, to redesign those processes. LEAN is an opportunity for quality improvement teams to focus exclusively on analyzing and redesigning a specific key process that is critical to quality. Teams examine workflow processes in their homes, search for ways to reduce duplication, standardize inconsistent steps, and eliminate any work that does not add value to residents.

The Residents First program is unique to Canada in that it provides QI training specifically to the LTC homes across the province and measures and tracks progress on an individual home basis. This substantiates the effort of staff and administrators in improving quality and allows for better accountability. All tools are available online. As of October 2012, Residents First has trained 1,966 long-term care staff and leaders from across the province and 90% of Ontario's long-term care homes have voluntarily taken part in one of the initiative's learning streams. Further, 575 leaders have completed Leading Quality, 433 homes have completed team-based training, and 877 improvement facilitators have been trained. The initiative will conclude in 2014.

IMPACT:

At the time of writing, Residents First is still underway and a formal evaluation has yet to be completed. However, individual participating homes have reported that residents and staff have observed significant positive impact to their home care environments due to the program. One QI project at Leisureworld Etobicoke achieved a reduction in falls from 5.3 to 1.9 per week, with a significant drop in urinary tract infections which were among the main causes of resident being transferred to the Emergency Department. Data indicated an avoided cost of \$162,000 due to reduced transfers.

In addition to observed success stories, HQO reports on quality results for LTC homes on their website on a quarterly basis (<http://www.hqontario.ca/public-reporting/long-term-care>) and is searchable by postal code or by Local Health Integration Networks (LHIN). HQO reports on 12 provincial quality indicators including falls, pressure ulcers, incontinence, and restraints at the home level. These indicators can serve to track the progress of this initiative; however at the time of writing, the data have not been aggregated for a formal evaluation of the program.

APPLICABILITY/TRANSFERABILITY:

Similar capacity building initiatives have been implemented in the United States and the United Kingdom (with a focus on palliative care) in the early 2000s and have led to positive results with an increased interest in QI techniques by those working in LTC homes. In the United States, a program called Advancing Excellence in America's Nursing Homes was consulted to develop Residents First in Ontario. Residents First is also based on lessons learned from another Ontario capacity building strategy, Behavioral Supports Ontario. Residents First has grown throughout the Ontario long term care sector and is likely to be transferable to other jurisdictions.

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External Source: <http://www.quality-improvement/long-term-care>



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Physician Integrated Network (PIN) Initiative

LOCATION:	Manitoba	HEALTH THEME:	Chronic Disease Management
HEALTH SECTOR:	Primary Health Care	FRAMEWORK CATEGORY:	Emerging

SNAPSHOT: This innovative practice facilitates systematic improvements in the delivery of primary care among fee-for-service physician groups. Launched in Manitoba in 2006, this program rewards quality processes in primary care, not health outcomes.

PRACTICE DESCRIPTION:

The Physician Integrated Network (PIN) is a multi-phase primary care renewal initiative in Manitoba. The goal of PIN is to facilitate systematic improvements in the delivery of primary care among fee-for-service physician groups. Fee-for-service physicians account for 76.9% of family physicians in the province. The four key objectives of PIN are to improve access to primary care, to improve primary care providers' access to and use of information, to improve the work life of all primary care providers, and to demonstrate high-quality primary care, with a focus on chronic disease management.

Phase 1 of the PIN initiative began in 2006 with 4 demonstration sites. Phase 2 was launched in September 2008, by which time 13 clinics were participating in the initiative. In August 2011, this phase was extended to August 2015 and is now referred to as Phase 2+. There are currently 12 sites continuing to participate. This includes 142 physicians, which represents 14.2% of all fee-for-service family physicians in Manitoba. PIN is a demonstration project—Manitoba Health works with the collaborating sites to explore and test new initiatives that could be implemented more broadly on a provincial basis.

Physicians that participate in PIN have access to quality-based incentive funding (QBIF). QBIF is a made-in-Manitoba approach to physician compensation that rewards quality processes in primary care, not health outcomes. It is being trialed within the PIN initiative as an opportunity to explore the potential of a blended model for compensating physicians that considers both the quality of services provided (pay-for-performance) and the volume of services delivered (fee-for-service). QBIF has been designed to incentivize physicians for achievement in prevention, risk-factor identification, comprehensive chronic disease management, and continuity of care. Funding is tied to the clinic's performance on primary care quality indicators related to prevention, diabetes management, asthma management, congestive heart failure management, hypertension management, coronary artery disease management, and trial depression screening indicators. These primary care quality indicators are based on a set of evidence-based measures originally developed by the Canadian Institute for Health Information, in collaboration with clinical experts. Participating clinics use an electronic medical record (EMR) system that reminds physicians when someone is overdue for a required test or procedure so that patients receive the right care at the right time. The EMR also allows clinics to track their performance on the primary care quality indicators so they can ensure they are meeting targets and providing optimal care.

The amount of funding available to each clinic is based on the number of patients who attend that clinic as their regular place of care. The amount of funding actually paid is based on the clinic's individual

performance on primary care quality indicators. QBIF is also linked to "clustered achievement" on primary care quality indicators, and to how well the clinic performs comprehensive chronic disease management. QBIF provides clinics with resources to implement practice changes that contribute to PIN objectives, such as establishing interprofessional teams. To participate in PIN, clinics agree to specific deliverables: implementation of their practice change plans, regular reporting on progress (i.e. EMR data extraction every quarter), and participation in evaluation and indicator development for PIN practices and to measure quality of care provincially.

IMPACT

The PIN initiative was evaluated throughout the demonstration period. Each phase of the project was evaluated using a pre- and post- design. The evaluation was designed to measure the impact of PIN on patient care and patient and provider satisfaction in relation to each of PIN's four objectives. The evaluation includes several lines of evidence: a provider survey, a patient survey, analysis of EMR data, and interviews with PIN stakeholders.

In December 2012, Manitoba Health released the findings of the Phase 2 PIN evaluation. PIN has been most beneficial in



improving primary care physicians' access to and use of information by increasing their awareness of clinical practice guidelines and enabling monitoring of PIN compliance through EMR data. Moreover, there has been success in providing greater quality primary care and chronic disease management. In Phase 2 clinics, there were increases in all indicator clusters, as well as individual indicators from Time 1 to Time 2. To illustrate, in the diabetes indicator cluster (comprised of all seven individual diabetes indicators), all diabetes indicators had an increase in proportions over time, in particular foot exams (37% to 64%) and nephropathy screening (52% to 75%). Over time, all hypertension indicators had an increase in proportion, with the full fasting lipid profile screening (62% to 73%) and obesity/overweight screening (68% to 79%) having the highest increases, followed by fasting blood sugar test (67% to 77%) and testing to detect renal disease (73% to 83%).

APPLICABILITY/TRANSFERABILITY

The QBIF model was developed based on evidence and knowledge about pay-for-performance approaches in other jurisdictions (e.g., British Columbia, Ontario) and countries (e.g., the UK's Quality and Outcomes Framework, and Australia's Practice Incentive Program).

In conjunction with the regional health authorities, Manitoba Health has launched a new initiative to establish primary care networks (PCNs) in the province. PIN has informed the development of the PCN, particularly with respect to access to care and providing quality chronic disease management. PCNs are about teams of care providers (located in the same office or connected virtually online) working together to plan and deliver services for a geographic area or specific community or population. Services in PCNs will build on the work of PIN, and will focus on prevention and coordinated disease management, including the identification and reduction of chronic disease risk factors such as physical inactivity and tobacco use. The Physician Master Agreement, negotiated between Manitoba and Doctors Manitoba, includes five new chronic disease management tariffs—diabetes, asthma, congestive heart failure, coronary artery disease, and hypertension. These tariffs were introduced to help physicians spend more time with complex patients, and to acknowledge the link between comprehensive chronic disease management and better patient health.

Content adapted from the following sources and relevant websites:

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Information last updated on: December 20, 2012

External Source: <http://www.gov.mb.ca/health/primarycare/pin/index.html>



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Practice Support Program

LOCATION:	British Columbia	HEALTH THEME:	Chronic Disease Management
HEALTH SECTOR:	Primary Health Care	FRAMEWORK CATEGORY:	Promising

SNAPSHOT: This innovative practice addresses the inadequate number of family physicians working in full service family practice. Launched by the BC Medical Association and the Ministry of Health in 2007, this program focuses on practice support for family physicians, specialist physicians and medical office assistants (MOAs) that is centred on improving clinical and practice management, capacity, patient care, and professional satisfaction for physicians.

PRACTICE DESCRIPTION:

British Columbia, like the rest of Canada's jurisdictions, has encountered challenges in delivering high quality primary care to its patients. The challenge stems from an inadequate number of family physicians (FPs) working in a full-service family practice. In order to improve patient care while also increasing job satisfaction among FPs, BC's health experts from the BC Medical Association and the Ministry of Health created the General Practice Services Committee (GPSC) in 2003. The GPSC underwent consultations with 1000 FPs across the province on Professional Quality Improvement Days (PQIDs) to discuss solutions to problems including decreasing professional morale and lack of support in handling more complex patients. In 2007, the GPSC launched the Practice Support Program that focuses on practice support for FPs, specialist physicians and medical office assistants (MOAs) that is centred on improving clinical and practice management, capacity, patient care, and professional satisfaction for physicians.

In addition to the support from GPSC, PSP now receives additional direction, support, and funding from the Shared Care Committee and the Specialist Services Committee (also partnerships between the BCMA and Ministry of Health).

Practice Support Program (PSP) services include practice coaching, supporting QI initiatives and providing structured learning support (modules). The modules include three paid half-day sessions of group learning followed by a 6-8 weeks action period where physicians aim to use the skills they acquired in their respective clinical practices. Further training sessions are integrated into the action sessions as part of the PSP's Plan-Do-Study-Act Cycle. The cycle is used to try out new practices and test for their effectiveness before embarking on macro-scale implementation. Practice Support team members visit the PSP participants throughout their action periods to ensure ongoing professional support and guidance in implementing new tools in day-to-day medicine. The program is delivered through PSP Regional Support Teams in BC's five health authorities. All clinical PSP content is accredited for continuing medical education.

Modules include:

- Advanced Access and Office Efficiency
- Group Medical Visits (Patient Self-Management/Health Literacy)
- Chronic Disease Management
- Adult Mental Health
- Child and Youth Mental Health
- End-of-Life
- Musculoskeletal
- Shared System of Care(COPD, heart failure)

IMPACT:

As of March, 2013, PSP has worked with over 2900 FPs (representing approximately 70 percent of active FPs in the province)

to improve patient care and professional satisfaction. PSP is currently developing an innovative strategy to support specialists and this initiative will be launched in 2013/2014.



Published evaluation findings, from a survey of 887 GPs and 405 MOAs over the first three years of the PSP, indicate consistently high satisfaction ratings and perceived impact on GP practices and patients, regardless of physician characteristics (gender, age group) or work-related variables (e.g., time worked in family practice). Participants reported reduced patient wait times, better patient care and a more satisfying work environment. More specifically, practices that participated in the PSP Advance Access Learning module reduced appointment wait times from 5.2 to 1.8 days, and over 87% of participants developed a Chronic Disease Management (CDM) patient registry and believed the CDM module improved patient care. Further, 94% of GPs felt more comfortable helping patients who required mental health care after attending the Adult Mental health module, and 76% of MOAs reported improved working relationships overall.

APPLICABILITY/TRANSFERABILITY:

Many European countries, especially the Netherlands, have developed physician-sponsored education initiatives for quality improvement in health care. However, aside from the Australian General Practice and Education Training Program, there are few large-scale (provincial/territorial/national level) continuing medical education initiatives that are centered on government and physician collaboration. Given its success and structure, this innovative focus on practice support should translate well to other provinces and territories.

Content was adapted from the following sources and relevant websites:

<http://www.gpsc.bc.ca/psp/contact>

<http://www.sscbc.ca/content/about>

<http://www.mybettermedicare.ca/primary-care-practice-support-in-british-columbia.html>

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3508962/>

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Health Quality Council of Alberta—Systematic Systems Analysis: A Practical Approach to Patient Safety Reviews (SSA: PSR)

LOCATION:	Alberta	HEALTH THEME:	Health Policies and Governance
HEALTH SECTOR:	Public Health	FRAMEWORK CATEGORY:	Emerging

SNAPSHOT: This innovative practice addresses the issue of conducting appropriate reviews of health service quality and patient safety issues. Launched by the Health Quality Council of Alberta in 2004, this methodology is used to conduct retrospective reviews of care where one or more patients suffered harm; or where one or more patients were nearly harmed in a close call.

PRACTICE DESCRIPTION:

As part of its mandate, the Health Quality Council of Alberta (HQCA) may be requested to conduct reviews of health service quality and patient safety issues. The HQCA has conducted 12 reviews since its inception in 2004, and has since developed and refined its structured review processes. The approach is focused on systems, and all reviews are disciplined, systematic, and thorough.

Systematic Systems Analysis: A Practical Approach to Patient Safety Reviews (SSA: PSR) is one methodology used for conducting reviews. It was developed for health care reviews and draws on aviation and human factors investigation techniques. It is a theory-based method that helps users consider critical health care system factors in their review. The methodology encourages a systemic view of the health care system by considering “how all parts of the health care system play a role” rather than focusing on “only one particular factor in isolation.”

The SSA: PSR methodology is designed to conduct retrospective reviews of care and of the following types of patient safety events:

- One or more patients suffered harm.
- One or more patients were nearly harmed in a close call.

The methodology is characterized by a three-phased approach: (1) collect information, (2) analyze information, and (3) recommend improvements that can be scaled up or down as needed. Phase 2 involves organizing the information gathered, analyzing it to identify system deficiencies, and then testing the findings for its system perspective. A tool, called a SAFER (Systems Analysis and Factor Evaluation Review) matrix, is used to carry out these tasks in an iterative way. The SAFER matrix is designed to support systematic analysis that is focused at the systems level. Another tool is a set of factor review questions (FRQs) that correspond to the five rows of the SAFER matrix, and help with deeper analysis of system factors. Phase 3 of the review is guided by a structured approach to recommending improvements.

Recent HQCA quality assurance reviews that followed the SSA: PSR methodology include

- a review of operations of ground emergency medical services in Alberta (report released March 4, 2013);
- a review of the Safety Implications for Patients Requiring Medevac Services to and from the Edmonton International Airport (2011); and
- a review of the Quality of Anatomical Pathology Specimen Preparation and Interpretation 2010–11. This review was conducted for Rockyview General Hospital, Calgary Laboratory Services Diagnostic and Scientific Centre, and Royal Alexandra Hospital. (2012)



IMPACT:

As with most review methodologies, the SSA: PSR has not been formally evaluated. However, it has been revised over a number of years of use and has received positive feedback from current users.

APPLICABILITY/TRANSFERABILITY:

The HQCA has plans to implement an education program about the SSA: PSR. An evaluation that will include evaluating the education process and the ease of the use of the SSA: PSR methodology will be conducted.

The SSA: PSR methodology draws on systematic reviews conducted in aviation as well as human factors investigation techniques, with a focus on a systems-level of analysis. The SSA: PSR methodology has been developed and applied over three decades, and was used extensively in the former Calgary Health Region for a large number of reviews (of diverse size and scope).

The HQCA has piloted two educational opportunities for training in the SSA: PSR methodology. The first is a two-and-a-half day workshop; it was piloted in Calgary with participants from a number of jurisdictions in Canada. The second is a five-day university certificate course that is offered in partnership with the University of Calgary Faculty of Medicine. It was recently piloted in Winnipeg Health Region. Students in this certificate course receive practical, hands-on training in the SSA:PSR methodology and conduct an review. This certificate course is suitable for application in diverse settings.

CONTENT WAS ADAPTED FROM THE FOLLOWING SOURCES AND RELEVANT WEBSITES:

Cowell, J. (November, 2012). *Health system investigations: Quality assurance reviews [and] health inquiries*. Presentation to Canada's Virtual Forum on Patient Safety and Quality Improvement. Retrieved from http://static.gowebcasting.com/documents/files/events/event_00001152_EtipxVIZ.pdf

Duchscherer, C., & Davies, J.M. (2012). *Systematic systems analysis: A practical approach to patient safety reviews*. Calgary: Health Quality Council of Alberta. Retrieved from <http://www.hqca.ca/assets/files/HQCA%20SSA%20Patient%20Safety%20Reviews%20FINAL%20June%202012.pdf>

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External Source: [http://www.hqca.ca/assets/files/HQCA%20Review%20FINAL%202011-2012%20\(no%20signature\).pdf](http://www.hqca.ca/assets/files/HQCA%20Review%20FINAL%202011-2012%20(no%20signature).pdf)



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Quality Academy of the British Columbia Patient Safety and Quality Council

LOCATION:	British Columbia	HEALTH THEME:	Health Human Resources
HEALTH SECTOR:	Public Health	FRAMEWORK CATEGORY:	Promising

SNAPSHOT: This innovative practice is delivered to health care leaders across the system in British Columbia who lead quality improvement initiatives in their organizations. Launched in 2010, the aim of the Quality Academy is to provide participants with the capability to effectively lead quality and safety initiatives in their designated health field, including teaching and advising others in how to improve the quality of health care.

PRACTICE DESCRIPTION:

The Quality Academy is a professional development program offered through the British Columbia Patient Safety and Quality Council (BCPSQC). The program is delivered to health care leaders across the system in British Columbia (BC) who lead quality improvement initiatives in their organizations. Participants attend five in-person residency sessions and work on a quality project for their affiliated organizations concurrently. The sessions take place over a six-month period, with quality projects potentially lasting many years. During the program, participants receive support through webinars and from an assigned faculty mentor.

The aim of the Quality Academy is to provide participants with the capability to effectively lead quality and safety initiatives in their designated health field, including teaching and advising others in how to improve the quality of health care. Participants build their knowledge, skills, and confidence around the core components of quality improvement, including:

- process and systems thinking;
- personal and organizational development;
- involving patients, users, caregivers, staff, and the public;
- making improvement a habit—initiating, sustaining, and spreading change;
- delivering on cost and quality;
- problem solving/internal consultancy skills; and
- innovation for improvement.

The program has approximately 120 graduates thus far. The fifth cohort completed the program in 2013, and the sixth cohort is already full. BCPSQC plans to continue to run the Quality Academy to meet the growing demand. In 2012, there is a charge of \$1995.00 per participant, which is subsidized by the BCPSQC.

IMPACT:

The targeted outcomes of the Quality Academy program are for participants to develop and improve their skills and knowledge of various quality improvement tools and methods, and develop critical thinking skills to examine how to use opportunities and tools strategically to improve the quality of care. Participants have provided very positive self-reported feedback via interview, suggesting an improved competency level. An independent formal evaluation of the Quality Academy was completed with the first cohort of participants (18 months ago) and key informant interviews. It measured the outcomes of the program using self-rated pre- and post-skills development tests of participants, and internal evaluations of each cohort are ongoing which are indicating a positive impact. BCPSQC is currently planning for a longitudinal evaluation to determine whether there has been a lasting impact on the skills and competencies of participants who have been out of the program for 18 months. The BCPSQC would like to use the results from the evaluation to further refine the Quality Academy program.



APPLICABILITY/TRANSFERABILITY:

In developing the Quality Academy, the BCPSQC completed an international scan of capacity building programs for quality improvement in health care. At first, the goal was to find a program offered elsewhere that the BCPSQC could sponsor BC health leaders to attend. However, the council quickly realized that they needed something specific to the Canadian context, and that there was no ideal program that met the needs of health quality leaders in BC. Therefore, the BCPSQC decided to implement its own program. The Quality Academy is built heavily upon the learning and experience from the Intermountain Healthcare's Advanced Training Program (in the United States, US), the Institute for Healthcare Improvement's Improvement Advisor Program (in the US), and the National Health Service's Institute for Innovation and Improvement (in England). Intermountain Health (considered one of the world leaders for this type of program) generously provided the BCPSQC with their Advancing Training Program curriculum, which has seen positive feedback and improved skill development results since its launch in Utah in 1992. The BCPSQC then adapted the curriculum to meet the needs of BC, becoming the first province in Canada to offer this type of quality improvement capacity building program for health leaders

Content was adapted from the following sources and relevant websites:

<http://bcpsqc.ca/learning/quality-academy/>

<http://bcpsqc.ca/documents/2012/12/Learning-Quality-Academy-Cohort-6-Brochure.pdf>

Wray, A., Director, Learning and Strategic Initiatives, BCPSQC (personal communication, January 25, 2013).

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EXTERNAL LINK:

<http://bcpsqc.ca/learning/quality-academy/>

External Source: <http://bcpsqc.ca/learning/quality-academy/>



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British Columbia's Clinical Care Management (CCM)

LOCATION:	British Columbia	HEALTH THEME:	Health Policies and Governance
HEALTH SECTOR:	Public Health	FRAMEWORK CATEGORY:	Emerging

SNAPSHOT: This innovative practice is designed to harness the collective energy and commitment of healthcare providers across a province to promote guideline-driven care and clinical best practice. Launched in 2010, this program takes a system-wide approach, with participation from BC's Ministry of Health, regional health authorities and the BC Patient Safety and Quality Council (BCPSQC) to improve the quality, safety and consistency of key clinical services and improve patient experiences of care.

PRACTICE DESCRIPTION:

British Columbia's Clinical Care Management (CCM) initiative began in 2010 as a key part of British Columbia's *Innovation and Change Agenda* which supports innovation and transformation across the entire health system, including all areas of care (health promotion and prevention, community care, acute care and end of life care).

As a "Key Result Area" of the *Innovation and Change Agenda*, CCM pursues the goal of "implementing a guideline-driven, evidence informed, clinical care management system to improve the quality, safety and consistency of key clinical services and improve patient experiences of care." To achieve this goal, CCM takes a system-wide approach, with participation from BC's Ministry of Health, regional health authorities and the BC Patient Safety and Quality Council (BCPSQC). It is a shared strategy that involves everyone working together for the common goal of better quality care.

CCM is designed to harness the collective energy and commitment of healthcare providers across the province to promote guideline-driven care and clinical best practice. It provides a provincial forum to identify, establish and promote clinical best practice guidelines by connecting physicians with provincial decision makers. Across the province, Clinical Expert Groups have been formed to review clinical evidence, develop practice standards and recommend province-wide adoption of guidelines, protocols and quality improvement metrics. Guidelines and practice standards are essentially developed from the ground-up with clinician input from the inception of the process, right through to implementation. The connection between the Clinical Expert Groups and the CCM Steering Committee – comprised of senior Ministry leadership (Assistant Deputy Minister), health authority vice presidents of quality / medicine, and the Chair of the BCPSQC – ensures that clinicians have the ability to raise quality of care barriers, opportunities and successes to senior leadership. This connection between senior decision makers and frontline clinicians helps ensure improving quality of care for patients remains the central mandate of the CCM initiative.

To date, CCM has identified eleven Clinical Care Areas (CCA): Hospital care for seniors (48/6), antimicrobial stewardship, stroke, sepsis, surgical site infection, surgical checklist, hand hygiene, heart failure, venous thromboembolisms, medication reconciliation, and critical care related to glycemic control. To support the Clinical Expert Groups for each CCA a provincial quality lead is appointed by the BCPSQC. Quality Leads are experts in change management, engagement and coordination, and they support guideline development and implementation from a provincial perspective, ensuring appropriate communication and coordination among regional health authorities. In addition, they speak on behalf of the clinical expert group that champions guideline driven care in the focused topic area. The role of the BCPSQC as part of the CCM structure is to engage with physicians and nurture these eleven clinical expert groups. As the BCPSQC is an independent organization it is able to have honest and open discussions with clinical experts about priority areas of health care and then take that information to the Ministry of Health for province wide implementation. The BCPSQC helps connect physicians and the Ministry of Health by providing change management, communications and engagement activities across the province.

IMPACT:

Clinical Care Management's structure of integrated decision making between physicians and policy officials for quality improvement has not been formally evaluated at this time.

APPLICABILITY/TRANSFERABILITY:



Many high performing health care systems have adopted a system-wide approach to establishing, promoting, and implementing evidence based clinical best practices. British Columbia's Clinical Care Management's approach has reviewed models implemented in other health systems, notably Intermountain Health Care in Utah.

CONTENT WAS ADAPTED FROM THE FOLLOWING SOURCES AND RELEVANT WEBSITES:

Contact List for the CCM: <http://www.bcpsqc.ca/quality/documents/ClinicalCareManagementContactDirectory.pdf#page=9>

CCM Data Guide: <http://www.bcpsqc.ca/quality/documents/CCM%20Data%20Guide%202012%20v1.0.5.pdf>

Document outlining targets (April 2, 2012):

<http://www.bcpsqc.ca/quality/documents/CCM-Principles-for-Target-Setting-v13-ApprovedbySC.pdf>

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Write-up information last updated on: January 28, 2012

EXTERNAL LINK: www.clinicalcaremanagement.ca

External Source: <http://www.clinicalcaremanagement.ca>



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National Surgical Quality Improvement Program (NSQIP)

LOCATION:	National, International	HEALTH THEME:	Health Policies and Governance
HEALTH SECTOR:	Acute Care	FRAMEWORK CATEGORY:	Leading

SNAPSHOT: This innovative practice addresses the need for outcomes-based measures of surgical care. Launched by the US Department of Veterans Affairs in 1999, this program can be used by participating institutions to evaluate their own patient outcomes and quality indicators, make valid, informative comparisons to other sites, and set targets for improvement.

PRACTICE DESCRIPTION:

Originally developed by the United States (US) Department of Veterans Affairs, the National Surgical Quality Improvement Program (NSQIP) is offered through the American College of Surgeons (ACS) across North America and internationally. ACS NSQIP is the first validated, risk-adjusted, outcomes-based program to measure and improve the quality of surgical care.

Participating hospitals submit surgical data (i.e. safety and quality indicators) to a central NSQIP database, so that relevant data on surgical practice at participating hospitals can be analyzed to evaluate the current status of surgical quality and to direct improvement in priority areas of surgical safety and quality.

The two cornerstones of NSQIP involve the use of risk-adjusted data and 30-day follow-up with post-operative patients to collect data on post-surgery infection rates and readmissions. All data submitted to the NSQIP database are adjusted for patient variables that could influence surgical site infections and other patient outcomes (e.g., obesity, age, co-morbidities). The database can therefore be used by participating institutions to evaluate their own patient outcomes and quality indicators, make valid, informative comparisons to other sites, and set targets for improvement. Further, trained surgical clinical nurse reviewers follow-up with patients 30 days post-operation to inquire about infections and other post-surgery outcomes to ensure accurate measurement. Hospitals enrolled in NSQIP receive their risk-adjusted data in comprehensive, semi-annual, and real-time reports, allowing hospitals to monitor quality improvement efforts and compare surgical outcomes with over 500 other hospitals that are participating in the NSQIP program. This allows hospitals to compare themselves to their peers and make changes and improvements to better patient care and safety.

IMPACT:

ACS NSQIP has been the subject of numerous formal evaluations since its inception. The initiative has resulted in significant benefits and improved outcomes in the US Department of Veterans Affairs and in private hospitals in the United States. For example, a study in the *Annals of Surgery* (2009) involving 118 ACS NSQIP hospitals concluded that the program helped each hospital prevent between 250 to 500 complications per year. In addition, 82% of those hospitals saw improvement in morbidity levels and 66% saw improvement in mortality levels. Hospitals that have significantly improved their performance or sustained excellent performance over time are asked to share their experience with ACS NSQIP. This feedback is combined with the data collected during structured site visits to produce a continually updated set of best practices that is disseminated to all participating ACS NSQIP sites across the country in the published annual report.

APPLICABILITY/TRANSFERABILITY:

Following the successful use of NSQIP among Veterans Affairs hospitals in the United States, the ACS launched a pilot study in 1999 to determine the feasibility of implementing NSQIP in the private sector. The pilot study involved three hospitals and found that after the first year the data collection processes and the risk-adjustment models produced were valid for the non-VA environment. A second pilot, launched in 2001 and funded by the Agency for Healthcare Research and Quality (AHRQ), demonstrated that NSQIP also functioned very well in reducing morbidity and mortality in private sector hospitals.

Beginning in 2004, the American College of Surgeons brought the NSQIP initiative into the private sector in the United States,



expanding to include over 380 hospitals. The ACS and external reviewers continue to evaluate the program and its outcomes at numerous levels of analysis.

In 2006, three publicly-funded hospital sites from Fraser Health Authority in British Columbia (BC) were the first Canadian sites to join the ACS NSQIP. Since then, the program has expanded to include 24 sites in the province. Outside of BC, other participating Canadian hospitals include, but are not limited to: Jewish General Hospital in Montreal (Quebec), the Ottawa Hospital (Ontario), and hospital sites of the University Health Network in Toronto (Ontario). The British Columbia Patient Safety Quality Council (PSQC) continues to provide support to NSQIP sites across Canada.

Content was adapted from the following sources and relevant websites:

Hall, B.L., Hamilton, B.H., Richards, K., Bilimoria, K.Y., Cohen, M.E., and Ko, C.Y. (2009). Does surgical quality improve in the American College of Surgeons National Surgical Quality Improvement Program. *Annals of Surgery*, 205(3), 363–376.

van Dijk, M., Director of NSQIP, BCPSQC (personal communication, January 23, 2013).

<http://site.acsnsqip.org/program-specifics/data-collection-analysis-and-reporting/>

<http://site.acsnsqip.org/participants/>

<http://site.acsnsqip.org/program-specifics/nsqip-history/>

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EXTERNAL LINK:

<http://site.acsnsqip.org/program-specifics/nsqip-history/>

External Source: <http://site.acsnsqip.org/program-specifics/nsqip-history/>



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Toronto Virtual Ward

LOCATION:	Ontario	HEALTH THEME:	Health Policies and Governance
HEALTH SECTOR:	Acute Care	FRAMEWORK CATEGORY:	Promising

SNAPSHOT: This innovative practice addresses the period after discharge from hospital which can be very difficult for patients, and adverse events are common. Unplanned readmission to hospital is a frequent, expensive, and potentially avoidable adverse event. In March 2010, the Toronto Virtual Ward was implemented in central Toronto through a multi-institutional partnership among St. Michael’s Hospital, Women’s College Hospital, the University Health Network, Sunnybrook Health Sciences Centre, and the Toronto Central Community Care Access Centre (CCAC). Virtual wards use the daily routines and staffing of a hospital ward to deliver care at home to patients at high risk of unplanned hospital readmission.

PRACTICE DESCRIPTION:

The period after discharge from hospital can be very difficult for patients, and adverse events are common. Unplanned readmission to hospital is a frequent, expensive, and potentially avoidable adverse event. In Ontario, approximately one-third of patients discharged from internal medicine wards are readmitted to hospital within 90 days. The Ontario Ministry of Health and Long-Term Care (OMHLTC) estimates that these readmissions cost the province over \$700 million each year.

In March 2010, the Toronto Virtual Ward was implemented in central Toronto through a multi-institutional partnership among St. Michael’s Hospital, Women’s College Hospital, the University Health Network, Sunnybrook Health Sciences Centre, and the Toronto Central Community Care Access Centre (CCAC). Virtual wards use the daily routines and staffing of a hospital ward to deliver care at home to patients at high risk of unplanned hospital readmission. Patients receive the best elements of hospital care, such as interprofessional team-based care, shared notes, a single point of contact, 24-hour access to a physician, and increased coordination of specialist, primary, and home and community care for several weeks after discharge. The Toronto Virtual Ward supports general internal medicine patients for two to eight weeks after discharge from hospital, after which patients are discharged to their primary care provider.

The process for admission to the Toronto Virtual Ward begins in hospital. A LACE index is used to quantify patients’ risk of readmission or death within 30 days of discharge, to help clinicians identify those individuals who might benefit from more intensive post-discharge care.¹ Patients with a LACE score greater than or equal to 10 are offered care through the virtual ward for the post-discharge period. Patients are managed by a virtual ward team, comprised of a physician (usually a general internist), a pharmacist, two care coordinators, nursing support, and a team assistant/ward clerk. Physicians rotate onto the virtual ward team for three-week blocks at a time. The Toronto Virtual Ward team meets daily at Women’s College Hospital, and most members of the team (except the physician and hospital-based nurse) work for the CCAC. Care includes telephone support, dietary and medication counselling, education to improve self-management of chronic disease, medication reconciliation, home safety assessments, and home visits by physician, nurse, and care coordinator. It also includes care coordination with other health care providers (including family doctor), social supports, addictions counselling, lab work, and specialists. The virtual ward team meets for office-based medical rounds every day for approximately one hour to share updates on patients and determine next steps in the plan of care. Patients are discharged from the virtual ward once their health and social care management plan has been optimized and ongoing care by their primary care provider and community-based supports has been fully established.

The University of Toronto’s Department of Medicine provided start-up funding for the initiative, and the OMHLTC, the Toronto Central Local Health Integration Network, and each of the institutional partners provide operational funding. The OMHLTC, the Canadian Institutes of Health Research, and the Green Shield Canada Foundation are funding the evaluation component.

IMPACT:

A randomized controlled trial is currently being conducted to assess the efficacy of the virtual ward compared to usual care. Patients are randomized to either the virtual ward or usual care on the day of hospital discharge, and followed for one year. The primary outcome measure is readmission to hospital or death within 30 days of discharge. Secondary outcome measures include readmission or death, readmission, death, emergency department visits, long-term care admission, and death at 30 days, 90 days, 6 months, and one year after discharge. It is hypothesized that the virtual ward will reduce readmission rates by



approximately one-third.

This initiative has demonstrated that several independent organizations can collaborate at the point of care in an attempt to provide functionally integrated care. It has also demonstrated that complex health service interventions can be evaluated rigorously. From a clinical perspective, the virtual ward has raised awareness about the fragmentation of care for older adults with complex health needs and the challenges associated with care transitions from hospital to home. Anecdotal evidence has shown that patient, family, and staff satisfaction is very high. Results of the randomized controlled trial are expected in the summer of 2013.

APPLICABILITY/TRANSFERABILITY:

The implementation of the Toronto Virtual Ward has influenced the development of virtual wards and other post-hospital care models in other jurisdictions, including Singapore, the United States, the United Kingdom, and elsewhere in Canada.

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Relevant websites:

<http://www.healthcouncilcanada.ca/content.php?mnu=4&mnu1=34#Presentations>

1. van Walraven, C., Dhalla I.A., Bell, C., Etchells, E., Stiell, I. G., Zarnke, K., ... Forster, A.J. (2010). Derivation and validation of an index to predict early death or unplanned readmission after discharge from hospital to the community. *Canadian Medical Association Journal*, 182(6), 551–557. doi:10.1503/cmaj.091117

External Source: <http://www.gim.utoronto.ca/Research/vward.htm>