



INSTITUTE OF
HEALTH ECONOMICS
ALBERTA CANADA

Encouraging Optimal Use of DI for Low Back Pain

Workshop October 26-27, 2010



Workshop Summary

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TABLE OF CONTENTS

Acknowledgements.....	ii
Background.....	1
Understanding the Issue	2
Knowledge Translation Approach.....	4
Adapt Knowledge to Local Context.....	6
Assess the Barriers to Knowledge Use.....	6
Select, Tailor, Implement Interventions.....	10
What does the literature say?	10
Where to start in Alberta?	11
Monitor knowledge use and evaluate outcomes	12
Sustain knowledge use	13
Next Steps.....	14
Appendices	
A: List of Workshop Participants	17
B: Alberta Networks	20
C: Barriers and Facilitators to Action.....	22
D: References.....	24
E: References and Resources Provided by Speakers.....	29

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BACKGROUND

Albertans expect their health care system to provide high quality and timely services. Providers, administrators, and policy makers have tenaciously responded to these complex challenges through an increased emphasis on the use of evidence in decision-making and innovations in service design and integration.

This report describes the outcomes of a two day workshop that explored options for improving quality and access to diagnostic imaging services for low back pain (LBP) in Alberta through the engagement of stakeholders that are involved in the assessment, diagnosis, treatment, and management of this condition. These include health professionals, health service managers, administrators, policy makers, and patients.

The workshop was the most recent undertaking in a process initiated 10 years ago by Alberta Health and Wellness, the HTA Program and pain clinicians from Calgary and Edmonton to identify and disseminate the evidence base for chronic pain management. This highly productive process known as the *Chronic Pain Ambassador Program*, a component of the larger HTA Program, has recently collaborated with the Alberta physician clinical practice guideline group, Towards Optimized Practice, and a wide ranging network of agencies, organizations, and multidisciplinary clinicians to produce *Evidence-Informed Primary Care Management of Low Back Pain*. This guideline has been widely disseminated by Albertan health professional colleges and associations and has the distinction over the past 2 years of being among the ten most downloaded guidelines listed on the Canadian Medical Association's clinical practice guideline database. The guideline and associated documents are available for free download at www.topalbertadoctors.org/informed_practice/cpgs/low_back_pain.html.

Feedback from guideline users identified the recommendations related to evidence-based use of diagnostic imaging as being among the most difficult to implement in primary care practice. These concerns are consistent with Canadian and world literature that indicates diagnostic imaging is over used for LBP.^{1,2}

The guideline recommendations for diagnostic imaging state that for both acute and chronic LBP, diagnostic imaging is indicated solely for further investigation of clinical indicators, commonly known as clinical 'red flags', that may be indicative of a serious underlying cause for the pain. In the absence of clinical red flags, imaging tests are known to have poor specificity since upwards of 75% of patients without complaints of LBP show abnormalities on lumbar X-rays and MRI scans.³ Given the high false positive rate, it is not surprising that a systematic review published in the *Lancet* found that routine lumbar diagnostic imaging had no beneficial impact on patient outcomes.⁴

To appreciate the impact of the overuse of lumbar imaging, especially MRI scanning, it is important to consider that timely access to MRI scanning has been an important and largely intransigent challenge for Alberta and other provincial health care systems in spite of costly increases in capacity.

With this in mind, the leaders of the Ambassador Program approached the policy division of Alberta Health and Wellness for support in order to better understand the challenges involved with implementing two of the diagnostic imaging recommendations¹ in the LBP guideline. This was accomplished by engaging relevant Alberta stakeholders to participate in an invited workshop and to develop a framework for a multifaceted strategy to optimize the use of lumbar imaging. Selected representatives from British Columbia, Saskatchewan, and Ontario were also invited.

The objectives of the workshop were to:

- Review the available data on use of diagnostic imaging (DI) for low back pain;
- Develop an understanding of the barriers and facilitators of appropriate use of diagnostic imaging in primary care settings;
- Review the results of implementation science (Knowledge Translation) research related to implementing policy, professional and patient level interventions to align clinical practice with evidence-informed recommendations; and
- Develop a framework for a multi factorial knowledge translation plan for diagnostic imaging in low back pain for primary care in Alberta.

Workshop attendees (Appendix A) discussed the barriers and facilitators to implementation from their various perspectives (policy, patient/public, clinician and system/administration) and identified potential Knowledge Translation strategies that lay the foundation for next steps.

A copy of the workshop program and presentations can be found online at: <http://ihe.ca/news-events/events/encouraging-optimal-use-of-di-for-low-back-pain---workshop/>.

UNDERSTANDING THE ISSUE

The initial sessions of the workshop were geared towards establishing a common and shared understanding of the issue.

Diagnostic imaging has been recognized as one of the highest areas of growth facing health ministries and is one of the top three drivers of health care expenditures across Canada.⁵ This reflects a complex set of interactions:

- ↑ investment by governments to improve access to CT and MRI through increasing the number of machines available

¹ The recommendations related to DI state: For non-specific acute low back pain (no red flags), diagnostic imaging tests, including X-ray, CT and MRI, are not indicated...use of X-ray is not justified due to the risk of high doses of radiation and lack of specificity. Key messages to patients are: 1) Since most low back pain is caused by muscle or ligament strain, these tests will not reveal anything and therefore are not needed and 2) Your doctor will order tests only if another cause of low back pain is suspected and can be verified by these tests.

- ↑ ordering of imaging
- ↑ patient expectations and misconceptions about the role of diagnostic technology

Imaging technologies consume significant resources (money, time, manpower) and their often inappropriate use creates a burden on the health care system.^{1,2,6,7}

We heard from workshop participants that issues are primarily related to the appropriateness of the tests (i.e. the potential for negative consequences such as increased cost, system delays, and adverse outcomes) and the processes by which patients receive assessment and treatment. Many reported poorly coordinated systems. Examples from other jurisdictions and efforts already underway in Alberta helped inform these discussions.

The Alberta government's need to balance what is best for patients with budget restrictions and other challenges is at the crux of a long-term health system sustainability plan. The document *Vision 2020* outlines a number of actions designed to make the system more effective and accountable and to improve the quality of and accessibility to health services. It clearly puts patient care at the center.

The MRI action plan, which was recently developed through partnerships with Alberta Health and Wellness, Alberta Health Services, the Alberta Medical Association, and others, established recommendations for policy, operations and practice in MRI in the province, and for identified roles and responsibilities.² Numerous drivers were identified and though limited evidence of systematic inappropriate ordering was seen, several efficiencies aimed at data utilization, evidence, and other areas were recommended. This partnership identified four areas: headache; low back pain; osteoarthritis; and, ordering practices of physicians, and while these areas are still being monitored, an early win includes LBP as diagnostic imaging is one of the cost drivers in the Alberta system. The number of MRIs and CT scans are increasing and it was estimated that 1 in 20 Albertans have had a MRI scan in the last year (unpublished). Addressing appropriateness could improve access by reducing waiting times.

Albertans have access to a range of diagnostic imaging services under the public health system and through independent community providers in over 130 sites province-wide. Approximately half of the 2.7 million exams done annually occur in hospital facilities with the remainder performed through community providers. In terms of payment, community CT and MRI imaging is not covered by the Alberta Schedule of Medical Benefits (SOMB), though these providers can bill the SOMB for all other modalities (for example, ultrasound, nuclear medicine, general radiology). They can also privately charge patients for CT and MRI (for example through Workers' Compensation, private pay, industry, and military). In order to maximize additional capacity and minimize capital costs, some community providers are currently under contract to Alberta Health Services to provide pre-defined services for additional MRI activity.

² Information provided through presentation by Dr. Douglas Perry (AHW).

Many health care providers involved in the assessment, diagnosis, treatment, and management of LBP traditionally work independently. Practice variations in settings across the province mirror practice patterns elsewhere in Canada and the United States. In urban areas, patients with LBP have a degree of access to multi-disciplinary teams while rural citizens typically have very limited access to distant urban tertiary care services. Duplication of efforts (including image ordering) is common as is lack of access to patient information and data about provider practice in this area. Patients express frustration over the lack of collaboration and integration. The PCN based multidisciplinary pain clinic under development by the Foothills PCN jointly with the Calgary Pain Centre reflects a desire to work more collaboratively and may be a model that will address some of the access issues.

After listening to presentations from policy, system/administration, clinician and patient/public representatives, a designated multidisciplinary panel of experts participating in the meeting reflected on what they had heard and summarized the issues and opportunities regarding implementation of the LBP guideline in primary care for Alberta:

Issues:

- The process for guideline development needs to be open, transparent, inclusive and based on best evidence.
- Time is an issue for all health care providers.
- Implementing guidelines is a complex issue, requiring complex solutions.
- Evidence-based guidelines in isolation are not enough; clinical skills and experience coupled with knowledge of the individual patient all impact treatment decisions.
- Many patients judge the quality of their care based on whether they have had imaging or not.

Opportunities:

- A single health system streamlines the ability to standardize approaches across the province.
- Common data collection systems will facilitate audit and feedback on individual practice.
- LBP could be managed more effectively through multi-disciplinary centres where providers are working to their full scope of practice.
- Alberta stakeholders are engaged and willing to change; opportunity is knocking.

KNOWLEDGE TRANSLATION APPROACH

The Knowledge to Action Framework has been adopted by Canadian Institutes of Health Research (CIHR) as a framework for the KT process and is in general the basis upon which work in this area is grounded. As it was important to be in tune with how the national KT community is proceeding,

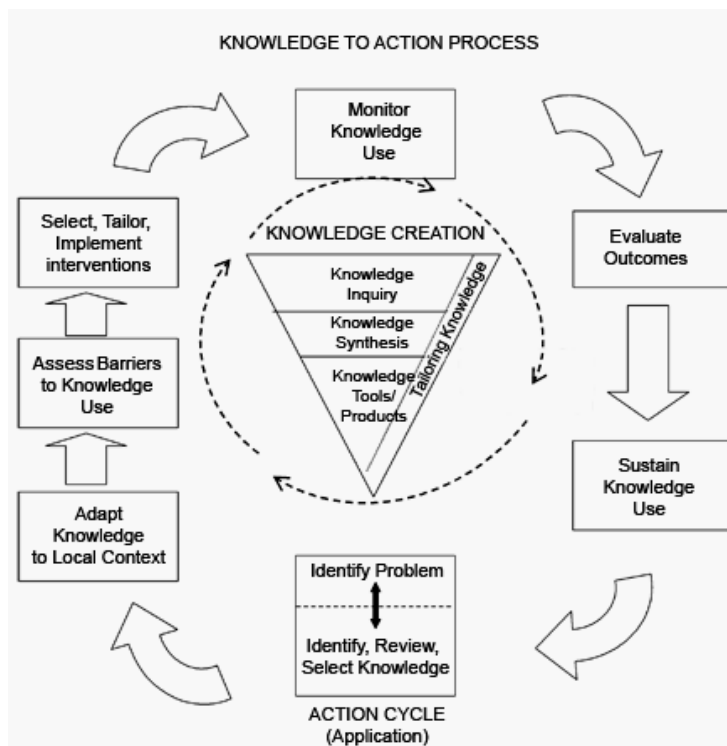
the workshop format reflected the framework’s structure and allowed for exploration of the various stages within the model, starting with identification of the problem.

There are almost 100 terms to describe the process of putting knowledge into action but the one endorsed by the CIHR is most broadly accepted:

Knowledge translation is a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system.

Knowledge Translation (KT) can target different stakeholders and can be theoretically or empirically driven. The Knowledge to Action Framework, developed by Graham and colleagues, builds on the commonalities found in an assessment of planned-action theories and adds a knowledge creation process.

Figure 1: Knowledge to action framework



(Used with permission from the Journal of Continuing Education in the Health Professions, Vol.26, No.1, Graham, I. D. et al., *Lost in knowledge translation: Time for a map*, pp. 13-24, copyright ©2006, John Wiley & Sons, Inc.)

The model shows that putting knowledge into action is dynamic, iterative, and complex. Success requires an integrated approach where all players work together to select, tailor, and implement KT interventions. The science of KT is gaining momentum and over the past decade leaders and researchers in this field have developed useful tools for those wanting to develop successful KT interventions (<http://ktclearinghouse.ca>).

Workshop participants discussed options for improving quality and access to diagnostic imaging services for LBP and their observations and recommendations are noted below using each of the steps of the action cycle.

Adapt Knowledge to Local Context

As noted earlier, the current clinical practice guideline for management of LBP in Alberta was developed using a rigorous and intensive process that employed the best quality published guidelines from other jurisdictions and adapted the recommendations for the Alberta context at that time. Since that time major system changes have occurred that may influence the adoption of innovations.

Alberta is unique.....

- Single health authority system with potential for consistent DI services and processes throughout the province.
- Family physicians, chiropractors, and (soon) physiotherapists have the authority to order imaging as part of their scope of practice. The public has a choice among these provider disciplines for primary care assessment and management of their back pain.
- Primary Care Networks and the Clinical Networks established by Alberta Health Services are maturing and many have the capacity to be key drivers and venues for implementing KT strategies (Appendix B).

These unique characteristics generate both constraints and opportunities for implementing KT strategies and highlight the importance of broad consultation to ensure the recommendations related to DI for the assessment and management of non-specific, non-malignant LBP and the selected KT approaches pass the “real world” test.

Assess the Barriers to Knowledge Use

National and provincial health systems fail to consistently use evidence or the same evidence source in decision making at the policy, administrative, health care provider and patient levels. If we are to successfully implement the DI recommendations for LBP in Alberta, serious consideration needs to be given to understanding barriers to change at each level. Barriers to knowledge use can be the targets for specific KT strategies.

Clinical practice guidelines play an important role in assuring quality health care and are valuable tools for translating evidence into practice for health care providers.^{8,9} Unfortunately, it has been found that just producing guidelines is not sufficient enough to ensure evidence-based decision-making.¹⁰ Cabana and colleagues¹¹ identified a total of 293 potential barriers to the use of clinical practice guidelines by health care practitioners. Family physicians have demonstrated poor adherence to clinical practice guideline recommendations on LBP in key areas that include

awareness of red flags, use of medication, the need for patient education, and the appropriate use of radiographic studies and physical modalities. Reported barriers specific to the area of LBP include:

- Pressure and expectations from patients¹²⁻¹⁷
- Contradictory information for patients by other professionals (e.g., family physicians, orthopaedic surgeons, physiotherapists)¹⁴
- Access to actual/alternative health care services^{14,16}
- Pressure from other healthcare providers¹⁶

Workshop participants identified several barriers to action in Alberta which are consistent with the literature. The participant identified barriers have been grouped under the following main headings:

Patient Expectations

Media stories about advances in medical technologies coupled with limited societal and patient knowledge about pain management and treatment options contribute to increased patient expectations including the need for MRI and CT scans. Health care providers may not fully appreciate that patient expectations are driven by a fear of chronicity and the impact pain has on their lives.

Stakeholder investment

Adherence to guidelines requires clinicians to have confidence in the evidence and the processes undertaken to develop the final recommendations. Recent efforts have resulted in one guideline for Alberta. The update process for the guideline provides a timely window of opportunity to discuss areas of concern and to consider evidence that has evolved since the initial review.

Time pressures

“Back in the old days”....family doctors knew their community and developed and nurtured therapeutic and personal relationships with patients. The current reality is that family physicians are pushed for time and have an expanded portfolio of responsibilities. They are bombarded with new information, tools, and processes and often do not believe that they have the time to read and process new guidelines or spend time talking with a patient about health concerns.

Reimbursement Structures

Current fee-for-service billing codes do not encourage guideline compliant and potentially time consuming activities such as thorough examination, completing detailed referral forms and patient education. Re-aligning reimbursement models with clinical best practice is required.

Organizational constraints

Alberta moved to a single health authority system April 1st, 2009 resulting in temporary disruptions of regional processes created by the new system.

Practice variation

The assessments and treatments a patient receives varies across the province and between health care providers. This reflects who the patient chooses as their primary care provider and their practice environment.

Lack of benchmarking

There currently is no way of knowing if individual ordering practices comply with the guidelines. This is due to a lack of standard requisition forms (electronic physician order entry), data collection systems, auditing capability, and monitoring. Quality improvement activities require a standardized data collection system.

Variable access to services

Where patients live matters as does the ability to pay for services (for example, access to private physiotherapists). Increased wait times to see a specialist may result in the development of chronic pain behaviours. Telehealth is a useful modality for ongoing assessment of pain for patients in rural and remote areas. However, patients desire some face to face and personal interaction with providers. Complex patients may require access to multiple providers for their care.

Lack of shared decision making

Over 3 million people in Canada have chronic pain.¹⁸ The current model for chronic disease management embodies the philosophy of shared decision making between an informed patient and their care providers as well as patients taking an active role in managing their condition (for example, engaging in pain self-management activities). However, while many patients desire an active role in decision making, they and sometimes their providers do not have the communication skills to engage in this process.

Competing priorities

Clinicians, administrators and policy makers all have multiple priorities competing for their time and attention including other guidelines and strategies. Diagnostic imaging services have to be seen as a priority by all stakeholders if appropriateness is to be addressed successfully.

The complexities and reality of successfully addressing all these barriers pushed workshop participants to prioritize the identified barriers within their purview. Table 1 presents the top two barriers by perspective on the issue using participants' language.

Table 1: Top two barriers to implementation by perspective

	Policy	Systems/ Administration	Clinical	Patient/Public
Top #1 Barrier	Lack of referral options	Physician Knowledge	Public and professional acceptance of guideline	Patient perception
Top #2 Barrier	Cost (\$) of implementation	Competing priorities	Health care system and organization	Access to services

The final activity in this component of the KT Framework resulted in consensus on the top four barriers that were most important for an Alberta KT strategy to address. In order of importance to delegates the barriers were:

- Patient Perception (“I need my pain fixed.” “No one cares or understands.”)
- Health Care System and Organization (lack of continuity of care; guideline implementation costs)
- Lack of referral options (such as multi-disciplinary care and access to specialists)
- Public and professional acceptance of guidelines (awareness, credibility, implementation skills).

If successful KT interventions specific to the above barriers were implemented, the following outcomes were identified.

- ↑ appropriate use of imaging and resources (fewer inappropriate spine MRIs being requested; better use of consultative services)
- ↓ wait times (faster access to DI services and subsequent interventions)
- ↑ patient satisfaction/quality of life (reduced work absenteeism; improved patient/health care provider relationship, improved satisfaction with 'the health care system')
- ↑ pain control (pain is understood and managed effectively)
- ↑ health system sustainability
- ↑ alignment of service with best practice

A complete listing of barriers as identified by policy makers, clinicians, system administrators and patients is seen in Appendix C.

Select, Tailor, Implement Interventions

The next step in the Knowledge to Action cycle is developing KT interventions specific to the priority barriers previously identified. The focus should be on interventions where a mature and valid evidence base exists that are a good match for a priority barrier.

What does the literature say?

The literature on interventions employed to promote the use of clinical practice guidelines for LBP is large with variable results. In general, there is insufficient evidence to support definitive decisions concerning which guideline dissemination and implementation strategies are likely to be effective. Broadly there exist two streams of activities: those aimed at the public/patient and those aimed at practitioners.

Public interventions mainly take the form of media campaigns employing television, print, and radio messages focused on changing commonly held beliefs surrounding LBP.¹⁹⁻²¹ The expectation is that education about the limited value of imaging will reduce the pressure on clinicians to order it. Examples of these include:

- Australia's "Back Pain: Don't Take It Lying Down"²¹⁻²³
- Scotland's "Working Backs Project"^{24,25}
- Canada's "Don't Take it Lying Down"²⁶

All led to significant improvements in population beliefs surrounding LBP. Buchbinder²¹ found a clear decline in the number of claims for back pain, rates of days compensated and costs of medical care with significant sustained improvements in beliefs four and a half years after the end of the campaign which was attributed, in part, to an intensive and expensive television media campaign. Waddell²⁵ and Gross²⁶ found that despite changes in beliefs there were no changes in health care utilization or work-related outcomes with the rate of absenteeism due to LBP remaining steady. Gross et al.²⁶ noted these campaigns had limited budgets and did not rely on television as the primary media and speculated that meaningful changes in behaviour may only be possible with larger campaigns.

Other publicly targeted interventions have been tried and evaluated but with varying levels of success and demonstrate moderate to no effect on patient outcomes.²⁷⁻⁴⁰

Patient interventions may utilize decision aids which are tools that can help in shared decision-making. A review of ten systematic reviews⁴¹ on the approach shows they do improve patients' participation in decision making, knowledge of options and agreement between patients' values and subsequent treatment. As in other interventions, barriers to implementation do exist and must be addressed if patient decision aids are to be successful.

Professional and organizational interventions mainly consist of the following:

- Education sessions/workshops for General Practitioners (GPs)^{13,42-47}
- Motivational counselling for GPs⁴²
- Role-playing¹³
- Feedback and reminders^{13,48}
- Changes to LBP management pathways and protocols²⁴
- Information packages^{45,47,49,50}

Most of these interventions were conducted as part of a program of interventions, met with varying levels of success and had modest effects on patient outcomes.

Professional interventions to implement clinical practice guidelines do influence processes and outcomes of care although effects are modest at around 10%.⁵¹ Of note, French⁵² has shown that the distribution of educational materials, educational meetings, and audit and feedback were not consistently effective for changing imaging ordering behaviour for low back pain.

Where to start in Alberta?

Workshop participants proposed several KT interventions for each identified barrier. A consensus exercise identified two broad strategies that resonated with the participants and were seen as having the greatest potential to encourage appropriate use of imaging for LBP:

- Education campaigns for professionals, patients and the public (aimed at increasing understanding of LBP in general and imaging in particular); and
- Development of multi-disciplinary teams (virtual or otherwise) that could diagnose, treat LBP and educate patients and families. The development of these teams would capitalize on the strengths of existing networks in primary and tertiary care.

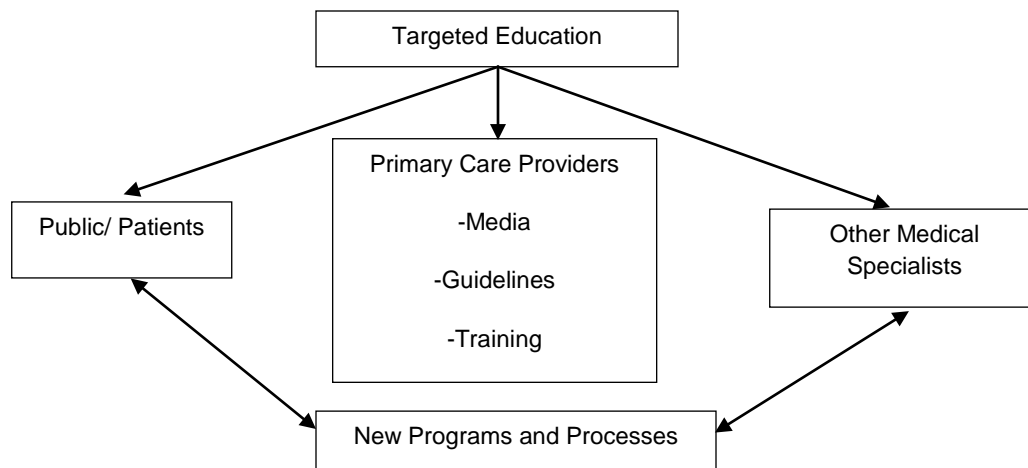
Mass media holds the most promise for effective public education campaigns and any KT strategies proposed should be informed by the examples of successful interventions noted above. Workshop participants had an opportunity to view two YouTube videos on managing LBP (Ambassador Program and Australia) and felt social media of all kinds would be worthy of exploration.

Education campaigns for professionals should be multi-faceted and include patient decision aids and other tools that can be discussed during office visits, integrated into the overall assessment and treatment process, and customized based on clinician knowledge of the patient as part of shared decision making. Some Canadian provinces already use tools developed by the University of Ottawa to identify where, in the clinical pathway, patient decision making is needed. An Alberta strategy

could build upon this and other work.^{53,54} Electronically supported tools for the physician (such as clinical support tools, clinical practice guidelines and other online environments) could also reinforce best practice.

Figure 2 is a visual representation of how participants envisioned the two strategies. It shows how targeted education campaigns to reach the public, patients, primary care providers and specialists will contribute to system change and achievement of the expected health outcomes.

Figure 2: Alberta KT intervention approach



Health systems that use a multi-disciplinary approach streamline the identification, assessment, primary care management and patient self-management and referrals, and provide effective case management including transitions between primary, secondary, and tertiary care. This model is particularly successful for chronic disease management and holds promise for LBP management. Radiologists and other specialists could provide timely telephone/telehealth consultations to build primary care providers’ knowledge and skills in pain assessment and management. The resulting teams could provide a more well-rounded holistic approach that fits the needs of the person with LBP and re-distributes some of the pressure currently put on the primary care physician. In Alberta the focus of activity should be within existing networks such as the Primary Care Networks and new Clinical Networks such as the Bone and Joint Network.

Monitor knowledge use and evaluate outcomes

The impacts of interventions must to be monitored and evaluated to ensure outcomes are being achieved and iterative improvements are developed and tested. What is measured will depend on the behaviours that one wants to change. A multifaceted, systematic approach to monitoring and evaluation is recommended. The evidence regarding specific measurement tools and strategies should be explored as the KT interventions are further refined.

It was suggested that the following be components of monitoring knowledge use:

- Patient satisfaction surveys
- Health related quality of life instruments
- Diagnostic imaging audits asking the questions:
 - What was the diagnosis pre-test?
 - What did the referring physician want to learn from the tests?
 - Did the results change the diagnosis and or treatment?
 - How does a specific practitioner's ordering pattern compare with their peers and with benchmarks?
- Consider measuring patient outcomes and cost effectiveness analysis as trials of interventions for LBP have failed to do so to date.

The development of a unified data collection system across the province in the coming years has the potential for facilitating more effective and efficient monitoring of diagnostic imaging practices and patient outcomes.

Sustain knowledge use

As noted earlier in this report, the Alberta government has a long-term sustainability plan. If the KT strategies identified here are to successfully contribute to more effective, accountable, high quality services accessible to all, the following should be considered:

- Who are the future stakeholders?
- What are the threats to sustainability?
- How can we engage all the relevant stakeholders?

Context changes over time. What worked last year might not in years to come. Workshop participants identified the following trends that may help frame a sustainable Alberta KT strategy:

New generation of physicians who are more likely to use electronic devices and electronically based guidelines. They are less tolerant of clinical uncertainty and therefore will be likely to order more imaging.

New generation of radiologists who are more knowledgeable about DI but have less hands on clinical experience. They work at a time when new tests can show many more incidental findings. Like other new physicians they are less tolerant of clinical uncertainty and will investigate more.

New generation of patients who access more information about health care but whose understanding may be limited. They are more aware of innovation in healthcare and are more demanding. They are less tolerant of clinical uncertainty and will want to be investigated more.

New trends in patient-physician interaction. Patients are less likely to have a long term, well established and trusting relationship with their family doctor and even if they do have a family doctor, they are more likely to involve multiple healthcare providers in their care.

Faster pace of clinical practice. Radiologists are processing more requisitions than ever before with the minimum amount of information provided on the requisition form. As a result, radiologists are less apt to reject or challenge a requisition. Radiologists worldwide now see their role at the front end as ensuring safety, assigning priority and watching out for egregious misuse.

NEXT STEPS

Key Alberta stakeholders in the field of diagnostic imaging for LBP have demonstrated keen interest in addressing the issue of appropriateness and patient treatment processes. Through participation in the workshop a better sense of who the players are emerged as did identification of opinion leaders in the various sectors. A confluence of ideas and approaches was achieved with clarification of what should be considered as next steps.

Future activities should be informed by considerations that were clearly expressed by workshop participants. These considerations are:

- Successful implementation of the guideline for LBP requires a collaborative effort by a broad base of health professionals and organizations.
- All perspectives are important.
- Focus should remain on those recommendations specific to treatment of non-specific, non-malignant LBP in primary care.
- Achieve efficiency through leveraging of resources (people and funding); avoid duplication of effort.
- Leaders for change may emerge outside the public health system.
- External funding exists for developing and evaluating innovative KT interventions (for example, Canada Health Infoway, CIHR).

Ideally three streams of activity would be undertaken immediately. While each has specific scope and outcomes, they can be collaborative and synergistic. The proposed next steps are:

1) LBP Guideline Update

The Ambassador Program will continue to provide administrative support of the process to review and, if needed, update the existing guideline.

- Expanded membership on the review committee will be undertaken.
- Consideration should be given to expanding the scope of the guideline to address the interface between primary care and referral to specialists.
- The first meeting of the review committee will be scheduled for February 2011.

2) Pilot Project Plan

The workshop planning committee will take responsibility for maintaining momentum in the short term.

- Expanded membership will see opinion leaders and champions invited to the table to strengthen linkages.
- Membership will continue to include administrative, clinical and policy leads.
- A meeting will be scheduled for February 2011.

Establish mechanisms for oversight, monitoring and reporting. Immediate issues to address include:

- Who/what is the “right” agency/group to coordinate activities in the longer term?
- Should this be a collaborating body, a network or a steering committee?
- What is the role, if any, of national organizations who have a presence in Alberta (e.g. Canadian Pain Coalition)?
- What are the mechanisms for public/patient engagement?

A formal plan for a pilot project will be developed.

- The pilot will build upon the work described in this report using the Knowledge to Action Framework.
- External sources of funding will be explored.

3) National Opportunities

Efforts are underway for Canadian health care experts to share and collaborate on clinical practice guidelines, evidence-based standards, and best practices that can assist in ensuring that the most appropriate treatments are used to improve patient outcomes. Ontario has been assigned the lead on

this initiative³ which was endorsed in the summer 2010 by the nation's provincial Premiers. There is an opportunity for national linkage and collaboration to leverage ideas and strategies.

³ Note: The initiative (as yet unnamed) was created through the Deputy Ministers approval of the Provincial Territorial Clinical Practice Guideline Working Group's recommendation to establish a targeted strategic initiative, whereby participating PTs agree on the joint development (or selection) and implementation of a defined set of clinical practice guidelines. This was later revised to require the involvement of CIHR. Officials were also directed to develop an implementation plan for PT Deputy Minister review.

APPENDIX A: LIST OF WORKSHOP PARTICIPANTS

Planning Committee

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APPENDIX B: ALBERTA NETWORKS

Primary Care Networks

Primary care networks (PCNs) are voluntary partnerships between groups of local family physicians and Alberta Health Services. Currently 38 PCNs are operating within the province, with over 2.5 million residents informally enrolled with the ~2202 physicians and 425 FTE other health care providers who work within this structure (October 2010). The services provided are based, in part, on the funding available to each PCN.

This network (and supporting infrastructure) has rapidly matured over the past few years and formal structures are now starting to evolve with Alberta PCN physicians and administrative leaders prime for collaboration and partnership opportunities. Being at the front lines of health delivery, PCNs are well positioned to inform the system of the issues impacting the continuum of health services delivery and through their inter-disciplinary teams and knowledge of local needs, be part of solutions.

More information on PCNs is available on their website:

<http://www.albertapci.ca/Pages/default.aspx>.

Clinical Networks

Nine clinical networks⁴ have been identified in Alberta with further networks coming on stream. While still in their early stages, they will address five main goals:

- improve patient outcomes and access;
- improve clinical practices;
- address quality and patient safety issues;
- apply clinical expertise to strategic and service planning; and
- support the teaching and research responsibilities of AHS.

The Bone and Joint Network has been functioning for over a year now though its activities go back a number of years. It is provincial in scope and focused but customized for local circumstances. Patient engagement and strong partnerships every step along the way is critical to their success as they try to standardize care pathways across the province.

The Hip and Knee working group is addressing access and wait times (called Transformational Improvement Program or TIP#2). Current activities include implementing a single clinical pathway

⁴ The nine clinical networks include: Addictions/Mental Health, Bone & Joint, Cancer, Cardiac, Critical Care, Emergency, Pulmonary, Stroke/Neuro, and Surgery.

in 12 hospitals (multidisciplinary teams) to reduce practice variation using a collaborative learning model. The potential for using this program as a vehicle for implementation of guidelines was noted by several participants.

The Spine working group hopes to get underway shortly and will model what has been done in other areas.

Terms of reference for these networks is located here: <http://www.albertahealthservices.ca/hp/if-hp-clin-network-tor.pdf>.

APPENDIX C: BARRIERS AND FACILITATORS TO ACTION

Table 1: Barriers and facilitators to action by perspective (all)

	Policy	Systems/ Administration	Clinical	Patient/Public
Barriers	<ul style="list-style-type: none"> • Compensation and incentives • Lack of standardized ordering and data collection for benchmarking • Lack of engagement across all health care providers • Identification, assessment and triage currently rest on primary care physicians • Access to services • Inconsistent approach and aligned incentives between “natural” versus work-related LBP • Support and leadership from all sections not evident • Desire for early assessment, diagnosis and treatment • Funding for multi-disciplinary programs 	<ul style="list-style-type: none"> • Stakeholder investment into the guideline itself • Financial incentives • Accurate and available data • Practice variation • Physician time • Competing priorities: • Public awareness and understanding of issue and treatment options • Wait times • Consultation component is missing in system • The medicalization of pain is a problem in media, patient perception, etc. 	<ul style="list-style-type: none"> • Acceptance of guideline recommendations across key groups • Continuity of care • Physician skills and experience • Time • Providers do not want to change 	<p>Acute Pain</p> <ul style="list-style-type: none"> • Patients with pain are not able to process/understand information • Therapeutic relationship is missing • Consistency of care • Poor pain control /management • Public misunderstanding of issue and treatment options • Access to services • Misinformation <p>Chronic Pain</p> <ul style="list-style-type: none"> • Condition and medication impacts ability to hear • Continuity of care missing • Poor pain control and management • Holistic approach missing • Long wait times
Facilitators	<ul style="list-style-type: none"> • Appropriate compensation and incentives • standardized data collection: audit & feedback • Stakeholder engagement • Multi-disciplinary teams 	<ul style="list-style-type: none"> • *Single health authority: • Assessment of current practice 	<ul style="list-style-type: none"> • Must be pay off (life easier, etc) • Resources • standard EMR • Patient information & context of how they requisition • Feedback to physician will/may 	<ul style="list-style-type: none"> • Multi-disciplinary pain mgt • Enhanced therapeutic relationship • Education <ul style="list-style-type: none"> ○ Health care professionals ○ Public ○ Employers

	Policy	Systems/ Administration	Clinical	Patient/Public
			change behaviour (knowledge of indicators) <ul style="list-style-type: none"> • Guideline review process • relationship building (primary care provider/specialist/patient) • Public education campaigns • Multi-disciplinary teams • Specialist “consult” • Long term support in community 	<ul style="list-style-type: none"> • Telehealth

Table 2a: Top two barriers by perspective

	Policy	Systems/Admin	Clinical	Patient/Public
Barrier #1	Lack of options for referrals	Physician KT	Acceptance of guideline	Patient perception: I need my pain fixed. No one is helping me. No one cares or understands.
Outcome	↓ # of inappropriate spine MRIs ↓ in waiting times: faster intervention ↑patient satisfaction + faster care	Better managed care ↑ functionality Better access ↑ patient satisfaction	↑ appropriate use of imaging & resources Patient returns to work sooner Pain control ↑ quality of life ↑ PCN: ownership, specialist involvement with PCN team	Pain is understood and treated as a disease by all Canadians. Stop the suffering ↓ work absenteeism ↓ use of inappropriate DI ↑quality of life ↑ patient satisfaction with treatment & patient/health care provider relationship

Table 2b: Top two barriers by perspective

	Policy	Systems/Admin	Clinical	Patient/Public
Barrier #2*	Cost (\$) of implementation	Competing Priorities	Health care system & organization	Access to Services
Outcome	↓ in inappropriate spine MRI ↓ in waiting times ↑patient satisfaction + faster care	Agreement that is a priority, and will have sustained support; Aligns with AHS – TIPS Buy in from external stakeholders to AHS regarding tips. Value partnerships	Sustainability	Multi-disciplinary Coverage/ability to pay Time with health care provider

APPENDIX D: REFERENCES

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APPENDIX E: REFERENCES AND RESOURCES PROVIDED BY SPEAKERS

Alberta's Low Back Pain Guideline:

- http://www.topalbertadoctors.org/informed_practice/cpgs/low_back_pain.html. This is the link to the Low Back Pain guideline and supporting materials posted on the Toward Optimized Practice (TOP) website.

Policy Perspective:

- <http://www.health.alberta.ca/initiatives/vision-2020.html>. Vision 2020 identifies a new direction for Alberta's health system. This is a public health care system that is more effective and accountable and improves the quality of and accessibility to health services. Vision 2020 sets the course for a health system that is geared to the needs of the patient. It recognizes that we all need to take more responsibility for our health and use the health care system in an appropriate way. Vision 2020 is about a stronger, more efficient and sustainable publicly-funded health system provides the direction for Alberta.
- <http://www.health.gov.sk.ca/back-pain>. Spine Assessment & Treatment: Spine pathway for patients with low back pain; Saskatchewan Ministry of Health. (Note: their course will be online in January 2011.)
- http://www.health.gov.on.ca/en/legislation/excellent_care/. *Excellent Care for All Act* (Ontario 2010). The Excellent Care for All Act puts patients first by improving the quality and value of the patient experience through the application of evidence-based health care.
- Iron K, Jaakkimainen L, Rothwell DM, Ping L, Laupacis A. *Investigation of acute lower back pain in Ontario: Are guidelines being followed?* ICES, Toronto, Ontario, 2004.
 - This report examines use of radiology for LBP in Ontario, reviews Ontario-specific and international guidelines for clinical management of LBP, and explores temporal and geographic trends of lumbar spine X-rays, spinal CT, and MRI across the province.
 - Copies are available at : <http://www.ices.on.ca/file/ACFF.pdf>.
- You J, Purdy I, Rothwell DM, Przybysz R, Fang J, Laupacis A. Indications For and Results of Outpatient Computed Tomography and Magnetic Resonance Imaging in Ontario. *Canadian Association of Radiologists Journal* 2008; 9(3):135-43.

System and Admin Perspective:

- <http://www.albertahealthservices.ca/org/org-chart.pdf>; Alberta Health Services organizational chart (updated as of October 15, 2010; accessed November 10, 2010).
- <http://www.albertahealthservices.ca/services.asp?pid=service&rid=3673>. Diagnostic imaging services provided by Alberta Health Services.

Patient/Public Perspective:

- www.BackCareCanada.ca. Website resource regarding back care that is hosted and managed by the Canadian Spine Society. BackCareCanada.ca has been designed for people experiencing a new or recurrent episode of low back and/or leg pain. The goal is to help them better manage their symptoms and to make more informed decisions about seeking treatment.
- <http://www.canadianpaincoalition.ca/>. The Canadian Pain Coalition is a Partnership of pain consumer groups, health professionals who care for people in pain, and scientists studying better ways of treating pain. This partnership began in May 2002 as an initiative of the Canadian Pain Society, which remains an active partner.
 - <http://www.canadianpaincoalition.ca/index.php/en/national-pain-awareness-week/>. Link to posters for the National Pain Awareness Week (November 7 – 13, 2010).
 - <http://prc.canadianpaincoalition.ca/en/>. The Pain Resource Centre is designed to be a centralized resource about pain and pain management for Canadians. The PRC is a place on the web where people can obtain reliable information about pain so that they can help themselves, their clients, their family members, friends, and co-workers.
- <http://www.wcb.ab.ca/providers/medref08.asp>. WCB (Alberta) website and link to 3 year strategy called BackPain campaign (Back Pain: Don't Take it Lying Down)
 - <http://www.backactive.ca/resources.html>. Employer resources related to back pain.

Clinical Perspective:

- www.radiologyinfo.ca. Canadian Association of Radiologist's patient information section.
- [Decisions, Decisions: Family Doctors as Gatekeepers to Prescription Drugs and Diagnostic Imaging in Canada](#), Health Council of Canada, September 2010.

Knowledge Transfer Science and Evaluation:

- <http://www.cihr-irsc.gc.ca/e/39033.html>. CIHR definition of KT; includes resources and tools related to synthesis, dissemination, exchange and application of knowledge.
- www.adapte.org. The ADAPTE Collaboration is an international collaboration of researchers, guideline developers, and guideline implementers who aim to promote the development and use of clinical practice guidelines through the adaptation of existing guidelines. The group's main endeavour is to develop and validate a generic adaptation process that will foster valid and high-quality adapted guidelines as well as the users' sense of ownership of the adapted guideline. The ADAPTE Collaboration is a partner of the G-I-N (Guidelines International Network).
- <http://ktclearinghouse.ca>. KT Basics course and End of Grant KT course offered at this website.
- *Knowledge Translation in Health Care: Moving from Evidence to Practice*. Eds Straus, Tetroe, Graham. Wiley - Blackwell 2009.
- Evidence-based medicine: How to practice and teach it. 4th Edition. Elsevier, 2010.
- www.ohri.ca/decisionaid. The Ottawa Hospital Research Institute (Dr. Annette Connor) has developed patient decision aids (English/French). Patient decision aids are tools that help people become involved in decision making by providing information about the options and outcomes and by clarifying personal values. They are designed to complement, rather than replace, counseling from a health practitioner. They also have a link to a development tool kit that provides information for developers and researchers interested in producing decision aids and other useful resources for those interested in this area.

Primary Care Networks

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- *Patient-Centred Primary Care in Canada: Bring it on Home*. The College of Family Physicians of Canada, Discussion Paper, October 2009.