

**Final Report**  
**Evaluation of the Alberta Health Technology  
Assessment (HTA) Ambassador Program**

**Prepared for:**

**Calgary Health Region**  
Chronic Pain Centre  
160, 2210 – 2<sup>nd</sup> Street SW  
Calgary, AB T2S 3C3  
Telephone: 403.209.2955

**Prepared by:**

**Barrington Research Group, Inc.**  
420, 1000 Centre Street North  
Calgary, AB T2E 7W6  
Telephone: 403.289.2221  
Fax: 403.276.1171

[www.barringtonresearchgrp.com](http://www.barringtonresearchgrp.com)

**Contact:**

**Gail V. Barrington, PhD, CMC**  
President

**Date:**

March 31, 2005

## Acknowledgements

This report could not have been made possible without the contribution of many people. We would like first to thank each of the health care professionals who took the time to attend the Alberta Health Technology Assessment (HTA) Ambassador Project workshops and complete the pre- and post-workshop surveys. In addition, we would like to thank the HTA Ambassadors and workshop participants who provided feedback through telephone/in-person interviews.

Finally, we would also like to acknowledge the contribution made by HTA Ambassador Program Ambassadors and staff for their valued contributions and support throughout the evaluation. In particular we would like to extend our thanks to:

Dr. Paul Taenzer	Pain Specialist Calgary Health Region Chronic Pain Centre
Christa Harstall	Assistant Director, Technology Assessment Alberta Heritage Foundation for Medical Research
Dr. Saifee Rashiq	Assistant Professor & Director of Division of Pain Medicine University of Alberta Hospital/Capital Health Region
Dr. Pam Barton	Acting Medical Director Calgary Health Region Chronic Pain Centre
Dr. Don Schopflocher	Senior Biostatistician/Team Lead Surveillance Methodology Alberta Health & Wellness
Richard Thornley	Coordinator, Impact Analysis Alberta Heritage Foundation for Medical Research

A special thanks to the administrative team including Margaret Wanke and Tara Schuller of Charis Management and Donna Angus (DA Communications).

Finally, sincere thanks is extended to our team at Barrington Research Group.

Gail V. Barrington, PhD, CMC  
Barrington Research Group, Inc.



## Table of Contents

Acknowledgements .....	i
Table of Contents .....	ii
List of Tables .....	iii
Executive Summary .....	1
Chapter 1	Project Overview..... 4
1.0	Background to the Alberta HTA Ambassador Program..... 4
2.0	Evaluation Overview ..... 5
3.0	Evaluation Methodology ..... 7
3.1	Literature Review ..... 7
3.2	Document Review ..... 7
3.3	Pre-/ Post-Workshop Ambassador Interviews ..... 7
3.4	Pre-/Post-Workshop Participant Surveys ..... 8
3.5	Participant Success Case Interviews..... 8
3.6	On-Site Observation ..... 9
3.7	Consultant Interviews..... 9
4.0	Data Analysis ..... 9
5.0	Evaluation Limitations..... 9
5.1	Literature Review ..... 10
5.2	Document Review ..... 10
5.3	HTA Ambassador Interviews ..... 10
5.4	Pre- and Post-Workshop Participant Surveys ..... 10
5.5	Success Case Interviews..... 10
5.6	Measuring Change in Practice..... 11
Chapter 2	Lessons from the Literature..... 12
1.0	Introduction ..... 12
2.0	Workshop Impact on Practitioner Knowledge, Attitudes and Practice ..... 12
3.0	The Effectiveness of Problem-based Learning on Research Transfer..... 13
4.0	Strategies to Increase Research Transfer..... 13
5.0	Lessons from Evaluation and Organizational Theory..... 14
Chapter 3	Project Implementation Process..... 16
1.0	Development of the Delivery Strategies ..... 16
1.1	The Workshop Process..... 16
1.2	The Evidence-based Content ..... 17
1.3	Action Planning ..... 19
2.0	Workshop Schedule..... 19
3.0	Workshop Participants..... 21
4.0	Participant Workplace Context ..... 23
5.0	Participant Satisfaction with Workshops..... 23
5.1	Satisfaction with the Workshop Process..... 23
5.2	Satisfaction with the Evidence-based Content ..... 25
5.3	Satisfaction with Action Planning ..... 25
6.0	Follow-up Activities ..... 29
6.1	Planned or Actual Dissemination of Workshop Information by Participants..... 29
6.2	Planned or Actual Follow-up With AHFMR's HTA Unit..... 30
6.3	Other Follow-up Activities ..... 31
7.0	Ambassadors' Views ..... 31
7.1	Ambassadors' Expectations..... 31
7.2	Ambassadors' Views on Administrative Supports ..... 32
7.3	Ambassadors' Views on Project Implementation..... 33
Chapter 4	Early Project Outcomes ..... 35
1.0	Change in Participant Knowledge..... 35
2.0	Participant Views on the Achievement of Project Objectives ..... 35
2.1	Participant Views on Achievement of Short-term Outcomes..... 36



2.2	Participant Views on Achievement of Intermediate-term Outcomes .....	36
3.0	Participant Views on the Research Transfer Strategy.....	38
4.0	Suggestions to Improve Future HTA Ambassador Projects.....	39
Chapter 5 –	Summary, Conclusions and Recommendations.....	41
1.0	Summary of Evaluation Evidence.....	41
2.0	Conclusions and Recommendations .....	44
	Recommendation 1.....	45
	Recommendation 2.....	45
	Recommendation 3.....	45
	Recommendation 4.....	45
References	.....	46

## List of Tables

Table 1.	Workshop Participation and Survey Completion (n = 130).....	21
Table 2.	Primary Role of Workshop Participants (n=128) .....	22
Table 3.	Reason for Attending Workshop (n=126).....	22
Table 4.	Participants’ Views on Organizational Support for Sharing Best Evidence.....	23
Table 5.	Participants’ Ability to Influence Colleagues and Administrators.....	23
Table 6.	Participants’ Satisfaction with Workshop Activities.....	24
Table 7.	Participants’ Satisfaction with Workshop Materials .....	24
Table 8.	Participants Satisfaction with Quality of Information.....	25
Table 9.	Participants Satisfaction with Action Planning Component.....	26
Table 10.	Characteristics of Action Plans (n=60) .....	26
Table 11.	Professionals with Whom Workshop Information Was Shared (n=128) .....	29
Table 12.	Summary of Most Frequently Downloaded <i>Evidence in Brief</i> Files from Alberta HTA Ambassador Program Website.....	30
Table 13.	Participant Change on Chronic Pain Knowledge Questions .....	35
Table 14.	Participant Views on Project Achievement of Objectives by Type of Outcome.....	36
Table 15.	Other Chronic Pain Topics Suggested for This Research Transfer Strategy (n=45).....	38
Table 16.	Other Health or Clinical Practice Topics Suggested for this Research Transfer Strategy (n=44).....	39
Table 17.	Evidence of Evaluation Findings by Research Question.....	41



# Executive Summary

A research team from the Calgary and Capital Health Regions, the HTA Unit of the Alberta Heritage Foundation for Medical Research, and Alberta Health and Wellness submitted a proposal to the Canadian Coordinating Office for Health Technology Assessment (CCOHTA) for a grant for \$100,000 to fund a project intended to *Increase HTA Knowledge Transfer Activities in Alberta*. The project was successful and was implemented during the period April 1, 2004 to March 31, 2005.

The Alberta HTA Ambassador Program was designed to explore a strategy to disseminate research information to support research uptake and evidence-based decision making. It was based on a successful strategy developed in Sweden, called the Ambassador Program, and expanded on the Swedish model by incorporating the principles of knowledge brokering. Three Clinical and two Research Ambassadors acted as facilitators as well as content experts. The topic selected for the project was chronic pain management but it was anticipated that experience gained through this project would be applicable to other HTA topics and health care environments in the future. Dissemination strategies included multidisciplinary workshops that used a problem-based learning approach; the development of evidence-based materials on chronic pain management; and support strategies for action planning.

The primary objectives of the Alberta HTA Ambassador Program were to:

1. Serve as a model of research transfer that could be applied to different topic areas.
2. Increase clinician awareness of the best evidence in chronic pain management.
3. Affect clinician attitude and practices for using research evidence in the management of chronic pain.

A program model and a data collection matrix were developed to guide research activities for the project evaluation. Methods included a brief literature review on knowledge transfer, a document review, pre-/ post-workshop interviews with the Ambassadors, on-site observation at three workshops, a pre-/ post-workshop participant survey, and follow-up success case interviews with several workshop participants.

In total, 130 clinicians and administrators attended the 11 HTA Ambassador workshops that were held in eight of the nine health regions in Alberta. Of these 130 attendees, 129 participants (99.2%) completed a pre-workshop survey, and 79 participants (60.8%) completed a post-workshop survey. The evaluation findings are summarized in the following table.

## Summary of Evaluation Findings by Research Question

Research Questions	Evaluation Findings
<b>Project Support/Inputs</b>	
To review the origin and development of the Alberta HTA Ambassador Program.	The Alberta HTA Ambassador Program was based on the successful research transfer strategy developed in the Swedish Ambassador program that resulted in a network of Ambassadors throughout Sweden.  The Alberta Ambassador model adapted the strategy to focus on <i>knowledge brokering</i> .
To determine if adequate project supports were in place.	Generally project supports were adequate. The Ambassadors viewed the Steering and Advisory Committees positively. Project management was considered well done but it was suggested there was too much administration for the size of the grant. Communication demands were extensive; however, not all Ambassadors were equally informed. The overall view was that project demands were great and people gave more than anticipated.
<b>Implementation Process</b>	
To determine the effectiveness of project marketing in soliciting appropriate participants.	130 participants from 8 of 9 health regions attended. Participants were definitely multi-disciplinary as more than 6 categories of health professionals were included. Some Ambassadors wondered if enough physicians and decision makers attended.
To determine if the project was implemented as planned.	There were three delivery strategies. All three changed to some extent over time. <ol style="list-style-type: none"> <li>1. The workshop process changed somewhat based on the pilot session. Most of the changes were logistical. The pre-test of the process strengthened it considerably.</li> <li>2. The evidence-based content changed substantially from an original plan to use existing reports and tech notes to the development of 18 <i>Evidence in Brief</i> one-sheet summaries. Preparation time was extensive and stretched project and human resources considerably. Response to the summaries was extremely positive.</li> <li>3. Action planning was a third component added after the project proposal had been approved. It was the most problematic aspect of the workshops and was not well enough planned and tested in advance.</li> </ol>
To describe the action plans developed by the participants.	Only 52.5% of respondents provided information on action planning conducted at the workshops; 13 respondents were considering developing a multi-disciplinary team to address chronic pain issues; 26 had developed some kind of action plan at the individual, group or regional level; however, some expressed concern about issues associated with the feasibility of



Research Questions	Evaluation Findings
	implementing the plans.
To describe follow-up interventions that resulted from the workshops.	<p>62 of 78 (79.5 %) post-workshop survey respondents reported sharing information with a wide variety of health professionals, as well as some patients. Nursing staff, physicians, physical therapists, administrators were mentioned the most frequently.</p> <p>57 of 66 respondents (85.1%) planned to access the AHFMR website.</p> <p>21 of 66 respondents (31.3%) planned to request Health Technology Assessments from the Unit.</p> <p>The AHFMR Ambassador website was active during the project. In particular over 300 copies of the background document, <i>Generating the Evidence</i> were downloaded and over 500 copies of the <i>Evidence in Brief</i> summaries were downloaded. The most popular were the briefs on Muscle Relaxants, Exercise Therapy, Long-Acting Opioids, and Prolotherapy, all downloaded more than 50 times by March 24, 2005.</p>
<b>Outputs</b>	
To determine the success of the research transfer strategy.	80 respondents to the Post-workshop survey rated the project as an effective way to communicate research, providing a mean rating of 4.2 on a 5-point scale.
To determine what challenges were encountered in project implementation.	<p>The Ambassadors identified four key challenges to project implementation:</p> <ol style="list-style-type: none"> <li>1. Excessive work preparing <i>Evidence in Brief</i> summaries</li> <li>2. Tensions between and among groups of Ambassadors</li> <li>3. Short project timelines</li> <li>4. Cost of the project</li> </ol>
To determine the satisfaction of participants and Ambassadors with the strategy.	Post-workshop respondents rated workshop activities between 4.3 (Ambassador presentation) and 3.9 (informal networking). They rated workshop materials between 4.5 ( <i>Evidence in Brief</i> summaries) to 3.8 (Action planning template). They rated quality of information between 4.4 (Ambassadors as a source) to 3.9 (met personal information needs). Action planning received the lowest mean score at 3.7.
To describe the lessons learned about this research transfer strategy.	<p>Ambassadors viewed the problem-based instructional approach as effective, although each used it in an idiosyncratic way. The interactive approach was effective except for those participants on video-conference.</p> <p>The evidence-based materials were judged to be of excellent quality.</p> <p>The Ambassadors tended to struggle with the action-planning component.</p> <p>Using a six-week post-workshop tool, it was deemed too soon to measure the impact of the project on practice change. This lesson was corroborated by findings in the literature. More study and more time are required to explore the political and contextual issues involved in bridging the gap between research and practice. However, one third of respondents did indicate that their practice in the area of chronic pain management had changed as a result of the workshop.</p>
<b>Short Term Outcomes</b>	
To determine the effectiveness of this research transfer strategy.	Participants' self-reported knowledge about chronic pain management increased on 5 knowledge questions. They rated their increased awareness of best evidence in chronic pain management at 4.3 on a 5-point scale. Their attitude towards the topic of chronic pain management did not change as a result of the workshops, remaining high throughout. 78% of respondents indicated that they had attended because of their need for information on chronic pain management.
To determine if the strategy promoted awareness of the AHFMR HTA Unit and its function.	<p>67 respondents (87.0%) intended to follow up with AHFMR's HTA Unit to access the web (85.1%), download reports (76.1%) or request HTAs (31.3%).</p> <p>Web hits suggested that a number of workshop participants and their colleagues (as well as "outsiders" who may have searched for the topics) had actually accessed the site and downloaded files.</p>
<b>Intermediate Term Outcomes</b>	
To determine if improved strategies for research transfer have been developed.	<p>The workshop process was judged to be very effective in terms of use of Ambassadors, interactive and problem-based learning strategies, and multi-disciplinary instruction groups.</p> <p>The <i>Evidence in Brief</i> summaries were highly rated and provide a project legacy but will have a short shelf life if not continually updated. They are seen as a useful and encouraging innovation and should be explored further.</p> <p>A number of other topics were suggested for an approach similar to the Ambassador Project. The most frequent were headaches, arthritis, fibromyalgia and diabetes.</p>

Research transfer and evidence-based decision making will continue to be areas of concern for both researchers and clinicians because knowledge will continue to grow at exponential rates and health care resources will continue to be stretched. As a result,



ways of bridging the gap between research and practice will continue to be explored and the Alberta HTA Ambassador Program is one such innovative approach. The project has demonstrated its utility as a research transfer strategy; it is only a question of determining how to follow up on this excellent dissemination model.

Study conclusions are organized around the three primary project objectives as follows:

**Does the HTA Ambassador Model serve as a model of research transfer that could be applied to different topic areas?**

1. The HTA Ambassador Model as a research transfer model was well received.
2. The use of content experts as Ambassadors was highly rated.
3. The multi-disciplinary, interactive and problem-based strategies were judged to be effective instructional methods.
4. The Model can be applied to different topics both in the area of chronic pain and other health or clinical practice areas. Several possible topics were suggested.
5. The cost of the project was greater than the grant provided; actual staff time was significantly greater than that projected and project partners supported a number of other unanticipated project costs such as travel and communications.

**Did the HTA Ambassador Model increase clinician awareness of the best evidence in chronic pain management?**

6. The HTA Ambassador workshops did increase clinician awareness of the best evidence in chronic pain management.
7. The Evidence in Brief summaries were an innovative and highly rated research information communication tool.
8. The Evidence in Brief summaries are an unanticipated legacy of the project and will continue to inform those in need of information about chronic pain management in the future.

**Did the HTA Ambassador Model affect clinician attitude and practices for using research evidence in the management of chronic pain?**

9. The HTA Ambassador Model did not affect the attitudes of the participants who attended the workshops. They were already pre-disposed towards the topic of chronic pain management and already had related information needs; hence their selection for an invitation in the first place, and their subsequent decision to attend.
10. The HTA Ambassador Model did increase participants' knowledge about the chronic pain management topics covered in the workshops.
11. The workshops did catalyze some planning in participating regions about possible changes to chronic pain management.
12. It is too soon to measure any real impact on participants' practice areas and practice-based decisions. There are many intervening factors including organizational contexts, levels of influence, resources and the limited elapsed time. However, a positive trend was indicated by one third of respondents who did indicate some practice change as a result of the workshops.

Based on the findings of this evaluation, several recommendations are advanced for consideration.

**Recommendation 1**

The HTA Ambassador Model can be applied to other health and clinical practice topics. The Model has been well developed and could become a routine continuing education strategy for health professionals on HTA topics where there is a demonstrated need for research information.

**Recommendation 2**

The *Evidence in Brief* summaries are an excellent HTA communication tool and can be expanded to other topics and made available on the AHFMR website. They could be developed as a separate but complementary activity in conjunction with each planned cycle of Ambassador-type continuing education for health professionals.

**Recommendation 3**

Some consideration should be given to conducting further follow-up with workshop participants to obtain a longer-term perspective on project impact on knowledge and practice.

**Recommendation 4**

Further thought needs to be given to ways of obtaining the resources required to deliver this effective research transfer strategy, should the decision be made to pursue it further. For example, more partners could be involved such as professional and disease-specific organizations in addition to research foundations and health authorities. The production of research summaries could be funded separately from the delivery process.



# Chapter 1 Project Overview

In the spring of 2004, a team of researchers from the Calgary and Capital Health Regions, the HTA unit of the Alberta Heritage Foundation for Medical Research, and Alberta Health and Wellness submitted a proposal to the Canadian Coordinating Office for Health Technology Assessment (CCOHTA), a non-profit corporation providing evidence-based information on drugs, devices, health care systems and best practices, to fund a project intended to *Increase HTA Knowledge Transfer Activities in Alberta*. The proposal was successful and Dr. Paul Taenzer of the Calgary Health Region, as the identified Principal Investigator, received a grant for \$100,000 for the period April 1, 2004 to March 31, 2005. This report documents the development, implementation and findings of the evaluation of this project.

## 1.0 Background to the Alberta HTA Ambassador Program

In the past, many healthcare decisions were driven principally by values or resources—a process termed *opinion-based decision making*. However, as the pressure on resources has grown and as the demand for transparency on the part of consumers, the media and governments has increased, a transition has begun towards an *evidence-based* approach.<sup>1</sup> The medical research literature is enormous and is constantly evolving. Research methods and study findings are reported inconsistently. The need for health practitioners to stay abreast of this diverse and burgeoning research literature, while critical, is frequently not given adequate attention.

One useful response to this dilemma is the development of Health Technology Assessment (HTA) methodologies, designed to distil the medical research literature into credible information that policy makers and clinicians can use to guide healthcare system change.<sup>2</sup> The HTA Unit of the Alberta Heritage Foundation for Medical Research (AHFMR) has been exploring strategies to disseminate research information effectively in order to support research uptake and evidence-based decision making in the province.

The Alberta HTA Ambassador Program was designed to explore one specific dissemination approach, based on a successful strategy developed in Sweden, called the Ambassador Program. In the Swedish program, the Swedish Council on Technology Assessment in Health Care (SBU) disseminated the results of SBU studies to professionals and policy makers throughout the country through the use of clinical Ambassadors. These Ambassadors initiated and participated in local and regional seminars and conferences across Sweden, and worked to become locally known as opinion leaders for evidence-based medicine (SBU, 2004).<sup>3</sup> As reported on the SBU website, the Swedish project found that:

*The network of Ambassadors is now growing throughout Sweden<sup>4</sup>.*

The Alberta project proposed to adapt and expand this dissemination strategy by developing a new role for the Ambassadors based on the principles of *knowledge brokering*. The Ambassadors would act as facilitators, as well as content experts, by supporting the interaction of researchers, clinicians and decision makers on a particular topic where HTA knowledge would be the most relevant and timely. The topic selected for the project was chronic pain management. It was anticipated that the knowledge gained through the experience of this project would be applicable to other HTA topics and health care environments in the future.

---

<sup>1</sup> Muir Gray, J. A. Evidence-based Healthcare: How to Make Health Policy and Management Decisions. Churchill Livingstone. 2001.pp. 11-12.

<sup>2</sup> Calgary Health Region. A Proposal to Increase HTA Knowledge Transfer Activities in Alberta. (2004).

<sup>3</sup> Swedish Council on Technology Assessment in Health Care (SBU). (n.d.). *The Ambassador Program in Sweden*. Available at: <http://www.sbu.se/www/SubPage.asp?CatID=27&PageID=275>

<sup>4</sup> Ibid.



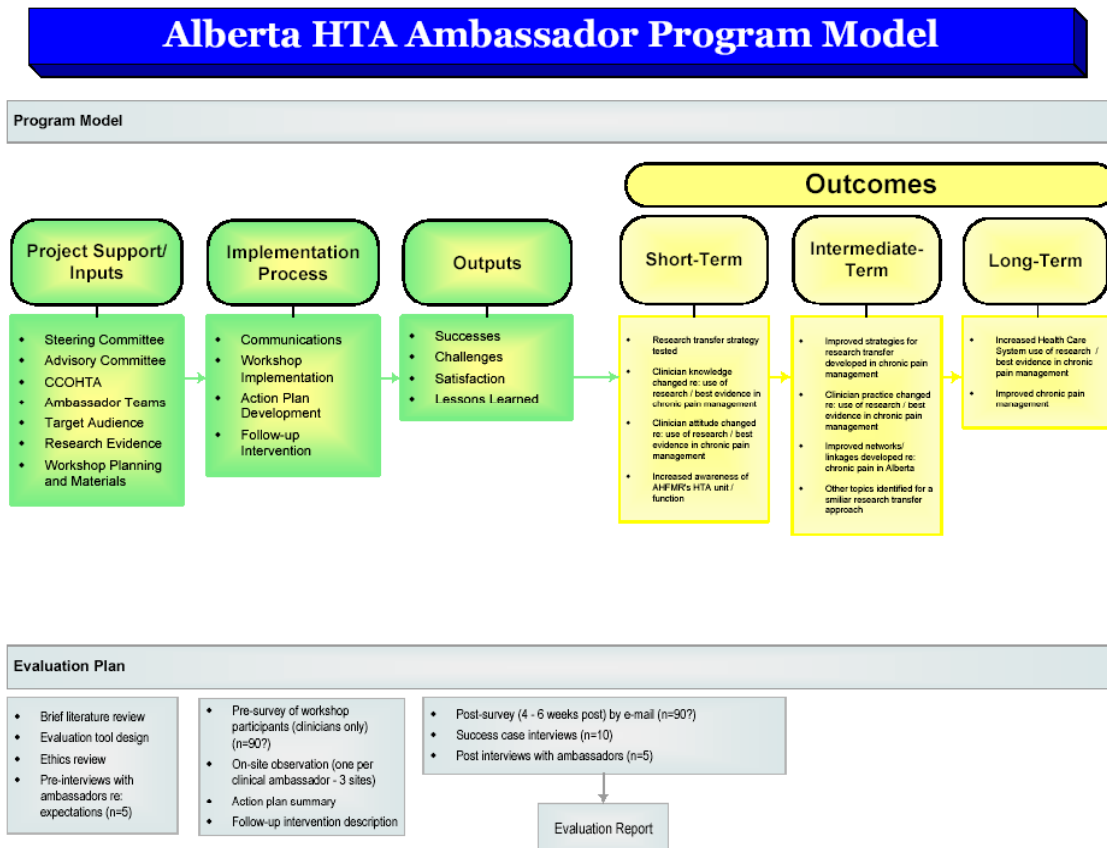
The primary objectives of the Alberta HTA Ambassador Program related to the development and testing of an Ambassador Model that would:

1. Serve as a model of research transfer that could be applied to different topic areas.
2. Increase clinician awareness of the best evidence in chronic pain management.
3. Affect clinician attitude and practices for using research evidence in the management of chronic pain<sup>5</sup>.

During the project, Alberta Ambassadors held 11 workshops on chronic pain management with clinicians and administrators around the province. These workshops were based upon systematic reviews of chronic pain interventions conducted and published by the AHFMR HTA Unit as well as by other HTA agencies and researchers. The Ambassadors identified for the project included three clinical leaders who specialized in chronic pain management and two researchers with expertise in the area of HTA.

## 2.0 Evaluation Overview

An Alberta HTA Ambassador Program Model was developed by the evaluators, based on a review of the project proposal with input from the Program's Steering Committee members. The model clearly delineates the links in the project process, from project supports and inputs, to the implementation process, to project outputs. It also identifies project outcomes including short-, intermediate- and long-term outcomes. The model also provided a thumbnail sketch of the evaluation plan and is presented below.



<sup>5</sup> Calgary Health Region. HTA Ambassador Program Model: Research into Practice. July 16, 2004.

Project supports and inputs include the work of the Steering Committee and the Advisory Committee; CCOHTA's requirements for the project; the Ambassador teams and the target audience as key players; and the development of materials based on the research evidence; and other workshop planning activities.

The implementation process includes workshop communications; the workshops themselves; and the development of action plans and follow-up interventions.

Project outputs include identified successes, challenges, satisfaction levels and lessons learned.

Short-term outcomes include the results of testing of this research transfer strategy; any change in clinicians' knowledge and attitudes about the use of research and best evidence in chronic pain management; and increased awareness about the function of AHFMR's HTA Unit.

Intermediate-term outcomes include improved research transfer strategies in chronic pain management; any change in clinicians' practice regarding the use of research and best evidence in chronic pain management; improved networks and linkages in the area of chronic pain management in Alberta; and the identification of other topics appropriate for a similar transfer approach.

Long-term outcomes include the increased use of research and best evidence in the healthcare system in Alberta; and improved management of chronic pain in that system.

Based upon this model, a Data Collection Matrix was designed to guide the evaluation research activities. Input from the Alberta HTA Ambassador Program Steering and Advisory Committees was incorporated into the Matrix. A copy of the Data Collection Matrix is provided in Appendix 1.

A number of objectives were identified for the evaluation. Due to the short duration of the project, and the fact that post-workshop surveys were completed only six weeks after the delivery of each workshop, intermediate-term outcomes were limited, and no long-term outcomes were included. The objectives were as follows:

#### **Project Support/ Inputs**

- To review the origin and development of the Alberta HTA Ambassador Program.
- To determine if adequate project supports were in place.

#### **Implementation Process**

- To determine the effectiveness of project marketing in soliciting appropriate participants.
- To determine if the project was implemented as planned.
- To describe the action plans developed by the participants.
- To describe follow-up interventions that resulted from the workshops.

#### **Outputs**

- To determine the success of the research transfer strategy.
- To determine what challenges were encountered in project implementation.
- To determine the satisfaction of participants and Ambassadors with the strategy.
- To describe the lessons learned about this research transfer strategy.

#### **Short Term Outcomes**

- To determine the effectiveness of this research transfer strategy.
- To determine if the strategy promoted awareness of the AHFMR HTA Unit and its function.

#### **Intermediate Term Outcomes**

- To determine if improved strategies for research transfer have been developed.



## 3.0 Evaluation Methodology

Several research methods were proposed to evaluate this project and these are described below.

### 3.1 Literature Review

A brief review of the literature was conducted regarding knowledge transfer and continuing medical education. The evaluators reviewed a number of articles provided by AHFMR researchers. In addition, a search was also undertaken using the American National Library of Medicine's search service, PubMed. During the literature review, PubMed was searched for journal articles that matched the following terms:

- Knowledge AND transfer;
- Educating AND physicians/clinicians/practitioners AND research;
- Research AND practice;
- Continuing AND medical AND education; and
- Engage AND physicians/clinicians/practitioners.

### 3.2 Document Review

Members of the Alberta HTA Ambassador Program Steering Committee provided the evaluators with a number of project documents for review. These included:

- Minutes of the Alberta HTA Ambassador Program Advisory Committee;
- Minutes of the Alberta HTA Ambassador Program Steering Committee;
- Informal e-mail correspondence among Steering Committee members;
- The Alberta HTA Ambassador Program Workshop Binder and associated background materials;
- The *Evidence in Brief* summary sheets; and
- Action Plans from each workshop.

### 3.3 Pre-/ Post-Workshop Ambassador Interviews

The Pre- and Post-Workshop Ambassador Interview protocols were designed to obtain:

- Information on the administrative supports in place for the project;
- Insight into the Ambassadors' expectations for the project prior to the workshops (Pre-workshop Survey);
- Information on workshop implementation from the perspective of the Ambassadors; and
- Insight into the success of the strategy from the Ambassadors' perspective (Post-workshop Survey); and
- Suggestions regarding similar future projects.

The protocols were based on the Data Collection Matrix and were revised with input from the Steering Committee. They were submitted to and approved by the Calgary Health Region Conjoint Health Research Ethics Board.

The three Clinical Ambassadors and two Research Ambassadors participated in their pre-workshop interview either by telephone or in person. Their post-workshop interview was conducted by telephone near the completion of the project in order to gain as much perspective on the project as possible. Post-workshop interviews were conducted with seven Ambassadors as two additional Research Ambassadors joined the project part way through to assist with the workload.



The Pre- and Post-workshop Ambassador Interview protocols are provided in Appendices 2 and 3 respectively.

### **3.4 Pre-/Post-Workshop Participant Surveys**

The Pre- and Post-workshop Participant Surveys were designed to gather information on the following topics:

- Participants' expectations for the workshop;
- Participants' knowledge about chronic pain management;
- Participants' satisfaction with the workshops and the knowledge transfer strategy in general;
- Action plans and actual dissemination activities; and
- Suggestions for improvement to the workshops and to the knowledge transfer strategy.

The surveys were based on the Data Collection Matrix and several drafts were developed and circulated to the Ambassador Project Steering Committee for feedback. The chronic pain management knowledge questions were developed by one of the Clinical Ambassadors. The surveys were submitted to and approved by the Calgary Health Region Conjoint Health Research Ethics Board. A close-to-final version of the Pre-workshop Participant Survey was pilot-tested at the Pilot Alberta HTA Ambassador Program Workshop held in Canmore in September 2004 and was revised subsequently based on participant feedback.

The Pre-workshop Participant Survey was sent to participants, along with other workshop materials, prior to the event. Participants were asked to complete the survey in advance and return it at the workshop. Additional blank copies of the survey were also made available at the workshops. The completed surveys were then forwarded to the evaluator.

Approximately six weeks after each workshop, a copy of the Post-workshop Participant Survey was sent to each participant by email, mail, or fax, depending on participant preference. They were given a two-week period to complete and return their surveys. Follow-up calls and e-mail reminders from the evaluator's staff helped to increase the return rate significantly. Post-workshop Surveys were received and entered until February 23, 2005.

Copies of the Pre- and Post-workshop Participant Surveys are provided in Appendices 4 and 5 respectively.

### **3.5 Participant Success Case Interviews**

Following the analysis of the Post-workshop Participant Survey, five participants who reported high levels of satisfaction with their workshop, and five participants who reported lower satisfaction levels were contacted for a brief success case interview.<sup>6</sup> These interviews were designed to:

- Gain an understanding of workshop successes/ areas for improvement;
- Provide information on the development of action plans and follow-up activities; and
- Gain an understanding of the utility of the research transfer strategy.

These telephone interviews were conducted in early February 2005. The Participant Success Case Interview Protocol is provided in Appendix 6.

---

<sup>6</sup> Participant satisfaction was calculated using data from Q. 1, Q. 5, and Q. 8 of the Post-workshop Participant Survey.

### 3.6 On-Site Observation

In addition to the surveys and interviews, the evaluators also conducted on-site observation at three workshops (including the Pilot Workshop). These on-site observations were designed to allow the evaluators to:

- Examine the facilities and supports provided for the workshops;
- Observe participant interaction at the workshops;
- Examine the development of action plans;
- Note any challenges/ successes during workshop implementation; and
- Observe any changes in workshop delivery over time.

The sites chosen for on-site observation consisted of a mix of rural and urban locations. They included the workshops provided for the following HRAs:

- Calgary Health Region (Canmore, September 15, 2004—Pilot Workshop);
- Capital Health Region (Edmonton, November 29, 2004); and
- Chinook Regional Health Authority (Lethbridge, November 30, 2004—Afternoon Workshop).

### 3.7 Consultant Interviews

At the beginning of the evaluation, it was planned that brief interviews would be conducted with the consultants who were hired to manage the project and its communications. The purpose of these interviews was to gain insight into project implementation. However, the emergent nature of the project, the need for evaluator involvement during the start-up and pilot phases, and the extensive follow-up and tracking activities required to obtain a satisfactory response rate for the Post-workshop Participant Survey, all meant that evaluation resources were taxed. It was determined that the Consultant Interviews would not be conducted on the understanding that the Project Manager would indeed be submitting a final report as well.

## 4.0 Data Analysis

Following data collection, quantitative data from the Pre- and Post-workshop Participant Surveys were entered into a Microsoft Excel spreadsheet and transferred to SPSS (Statistical Package for the Social Sciences) for analysis. During the analysis, frequencies, percentages and means were calculated for most responses.

Qualitative data from open-ended items on these surveys, as well as from the Ambassador Pre- and Post-workshop Surveys and the Ambassador Success Case Interviews, were analyzed using traditional content analysis techniques (Krippendorff, 1980). Comments were grouped according to main themes that emerged from the data and through reference to the Data Collection Matrix. Emergent codes were discussed among the evaluation team and adjusted or clarified as necessary.

Findings from both the quantitative and qualitative analyses were then summarized in this report according to the topics identified in the Data Collection Matrix and Logic Model.

## 5.0 Evaluation Limitations

Several limitations are associated with the research methods employed in this study. As a result, the findings presented in this report should be interpreted with these in mind. In many cases, however, the limitations of individual methods are offset by the use of multiple sources of data, multiple methods of data collection, and the use of triangulation methods to validate findings. Limitations that should be noted are outlined on the following page.



## 5.1 Literature Review

The literature review was conducted early in the project development process before the delivery strategy had been finalized. As a result, not all of the identified literature was ultimately relevant to the study. In addition, as most of the information obtained through the literature review was from secondary sources, the quality of the information gathered was contingent on the quality of the reported studies themselves. The evaluators had to rely on the judgment of other researchers, both in terms of the conclusions that were drawn and the information that was included in their reported studies.

## 5.2 Document Review

The Alberta HTA Ambassador Project was deemed to be very resource intensive by all who participated in its development and implementation. In the process of determining the delivery strategy, developing the workshop materials - particularly the *Evidence in Brief* summary sheets, determining communication strategies with the RHAs, planning activities, and managing the Advisory and Steering Committees, an extensive amount of informal documentation was generated. This information was frequently circulated by e-mail and the lists of individuals who were recipients varied depending on the sender, the topic, and a number of other factors. As a result, the evaluators may not have received all appropriate documentation.

## 5.3 HTA Ambassador Interviews

All interviews are retrospective in nature and are, therefore, subject to memory decay. As a result, the accuracy of Ambassador interview data was limited by the evaluators' ability to judge the accuracy and completeness of responses. The small number of individuals involved also meant that some information could not be shared in this report in order to protect their privacy.

## 5.4 Pre- and Post-Workshop Participant Surveys

The Pre-Workshop Participant Survey was completed either prior to a particular workshop or during the workshop itself with the encouragement of the Ambassador team. This close supervision resulted in an almost perfect completion rate and, as a result, selection bias is not an issue. However, the pressures of time may have limited the quality or length of participants' responses.

The Post-Workshop Participant Survey was conducted at the participants' worksites approximately six weeks after the occurrence of the particular workshop they had attended. By this time some memory decay may have happened but general perceptions should have been fairly accurate. It is not possible to say if selection bias was at play—were those who returned their survey likely to have been more or less satisfied with the activity? However, the response rate was over 60% which is considered a satisfactory return rate for a medical professional development activity such as this. As a result, selection bias is limited to some extent.

## 5.5 Success Case Interviews

Participants for the Ambassador Success Case Interviews were randomly selected based on their responses to certain items on the Post-workshop Survey (i.e., either high or low responses). However, because the timeline to complete the evaluation was very tight following the last workshop, the selection process to identify interviewees was completed prior to receiving the last few Post-workshop Survey responses so that the findings could be included in this report. There is no way to determine if those participants who completed a survey, and who were therefore eligible for an interview, were representative of all workshop participants.



## 5.6 Measuring Change in Practice

When attempting to measure any change in practitioner's practice, it is important to note that in order to meet reporting requirements, the Alberta HTA Ambassador Program only had a six-week interval between the actual workshop and the Post-workshop Participant Survey. According to Buckley et al. (2003) this may be insufficient time to observe changes in practice even if the intention is there to do so.

This chapter provided an overview of the Alberta HTA Ambassador Program and its evaluation. It also presented a description of the study design and data collection process, and identified potential limitations. Chapter 2 will present a brief look at some of the lessons that are available in the literature on both research transfer delivery strategies and on issues associated with the organizational context in which that transfer is expected to occur.



## Chapter 2 Lessons from the Literature

### 1.0 Introduction

There are many different strategies for transferring research into practice, as well as different stages of the research transfer and utilization processes. According to Buckley et al (2003),

*Research transfer is a process that involves the communication of research findings from the scientist to decision makers who can utilize this information to make more informed decisions.*

Our brief review of the literature related to the delivery strategy employed in the Alberta HTA Ambassador Program suggests that, generally, findings are mixed about the effectiveness of workshop training interventions in bringing about change in health practitioners' knowledge, attitudes, and practice. However, the strategies employed in this project may well support some positive outcomes.

The topics that were explored in the review included: workshop impact on practitioner knowledge, attitudes and practice; the effectiveness of problem-based learning and research transfer; and strategies to increase research transfer. Finally, some learnings from the social sciences literature, in terms of organizational and evaluation theory, are advanced for consideration to further our understanding of the research transfer process.

### 2.0 Workshop Impact on Practitioner Knowledge, Attitudes and Practice

In a study of the impact on health professionals of a workshop-based training program<sup>7</sup> about adolescent development, Brindis (1986) found that although changes were seen in practitioner attitudes and knowledge following the workshop, few practitioners were able to incorporate workshop material and what they had learned, into their everyday practice. Similarly, when Buckley et al, (2003) evaluated the effects of a research transfer training program,<sup>8</sup> they found that although significant changes were observed in participant's attitude and intention before and after the program, no accompanying significant change occurred in practice, although a trend toward research transfer-related action was noted.

Buckley et al developed a Stages of Change tool that depicts three points along the research transfer continuum:



While it appears that short-term interventions may be able to influence the first two Stages of Change, additional training may be required to influence practice. As these researchers noted, although the training intervention *served to 'sell' the importance of research transfer, [it] did not change practice patterns.*

A variety of obstacles to the effectiveness of research transfer in health services were identified by Haynes and Haines (2004). These include organizational barriers, ineffective continuing education programs, and poor access to best evidence guidelines.

<sup>7</sup> The workshop consisted of a two-day workshop, a six-week interim, and a one-day follow-up training activity.

<sup>8</sup> The training consisted of three two-hour sessions offered over three consecutive weeks in a small group format.

Brindis identified several possible explanations for the inability of the workshop delivery strategy to change practice. These include the short duration of the training program (in this case, six weeks), the lack of follow-up activities, and resistance to change within the practitioners' organization. In addition, Buckley et al (2003) noted that even when the intentions of workshop participants have changed from pre- to post-test, a twelve-week interval may be insufficient to observe an accompanying change in practice.

The Alberta HTA Ambassador Program is based upon the Ambassador Program in Sweden, a delivery strategy that has resulted in positive outcomes. In the Swedish program, SBU disseminates findings from health technology assessments to professionals and policy makers through the use of clinical Ambassadors. Initial evaluation results found that a majority of those physicians who were aware of the program intended to participate in future meetings. They felt that the program was a good method of delivering information about HTA findings. In addition, approximately 50% of individuals who have come into contact with an SBU Ambassador stated that they have been able to apply the information that was provided to their practice (SBU, 2004). The time frame for this transfer to occur was not measured.

It seems possible that the expert-driven Ambassador model may have more impact on participants' knowledge and intention than the more traditional methods of continuing medical education. However, the time frame for this project may be too short to observe a change in practice.

### 3.0 The Effectiveness of Problem-based Learning on Research Transfer

Smits, Verbeek, and de Buissonjé (2002) undertook a review of controlled evaluation studies involving problem-based learning in Continuing Medical Education. They were only able to find six studies that met their inclusion criteria and these were judged to be of varying quality. The researchers found that there was limited or inconsistent evidence to indicate that problem-based learning was more effective than either a) other educational strategies, or b) no intervention at all in terms of increasing physicians' knowledge and performance. They did find, however, some evidence to indicate that interactive educational methods generally are more effective than traditional teaching methods at changing physicians' performance and patients' health. They also found moderate evidence to suggest that problem-based learning led to higher physician satisfaction with the training process.

In a study of on-line continuing medical education, Casebeer et al. (2004) also found that case-based courses were more effective than text-based courses in increasing participants' knowledge.

The Alberta HTA Ambassador Program used both a problem-based and interactive learning model in their brief two-hour workshops. During the workshops, the Ambassadors referred to a case study involving an imaginary patient who had several presenting problems. Workshop participants were then encouraged to propose different treatments for this patient. As each treatment was brought forward, the Ambassadors produced the appropriate *Evidence in Brief* summary sheet that provided an overview of best available evidence on that proposed treatment along with an indication of its effectiveness. During a 45-minute period, a number of treatments were proposed and the evidence was examined for each.

### 4.0 Strategies to Increase Research Transfer

Landry and Birdsell (2003) developed a Research Utilization Index, composed of seven variables, ranging from *I have received research results concerning the areas for which I am responsible to The utilization of research evidence has led to concrete changes in the programs or services provided by my organization.* They found that some of the top sources of research information



used by Alberta health professionals on which they based practice decisions included information from specialists, information from colleagues, and clinical practice guidelines.

Davis et al. (2003) suggest that the most effective training interventions to stimulate research transfer include the following characteristics:

- An active training process;
- Multiple strategies;
- Based on an accurate assessment of learner need; and
- Aimed at overcoming barriers to change.

The intervention should predispose the practitioner to change by increasing knowledge or skills, enable that change to occur by promoting conducive conditions in the practice and elsewhere, and reinforce the change once it is made.

Wehrmann, Shin and Poertner (2002) found that when participants knew what to expect in the training session, such as the completion of a pre-test evaluation instrument, they learned more and were better able to implement what they learned in practice. In addition, they found that the opportunity to apply new learning after the training, and the availability of supervisory and peer support for the application of that new learning, were key factors in the support of research transfer.

Brindis noted three strategies to increase research transfer. These include: 1) Use a team-based training approach; 2) Develop a train-the-trainer model whereby one on-site staff member provides additional short-term and on-going learning experiences to reinforce the training; and, 3) Have multiple workshops that provide an opportunity for the learner to review and reinforce what they had learned and to discuss the problems faced in implementing new behaviours.

The Alberta HTA Ambassador Program employed interactive, team-based, and multiple strategies to stimulate research transfer. The Pre-Workshop Participant Survey may have acted as a pre-test in a minor way as one section was devoted to knowledge about chronic pain management. It may have helped to focus participants' learning. However, due to the brief duration of the project, apart from the action planning activity, no formal follow-up activities were offered and no train-the-trainer dissemination strategy was designed.

## 5.0 Lessons from Evaluation and Organizational Theory

Frère (2004) recently developed a model of Strategic Knowledge Integration that takes into account the external environment, and organizational culture, leadership and infrastructure. She suggests that the creation of a knowledge-sharing culture in an organization is a foundational requirement for effective utilization of organizational knowledge. Thus, if the workshop participants work in a culture that supports knowledge sharing, the dissemination of new information about chronic pain management is likely to be more successful.

In the context of applying evaluation findings to practice, evaluators have looked at the political issues associated with research transfer for many years. As Chelimsky suggested,

*If research is done within a political environment, then researchers [and evaluators] need not only to understand that environment, but also to construct some sort of roadmap or framework that can serve to organize the consideration of political issues within the research process<sup>9</sup>.*

---

<sup>9</sup> Chelimsky, Eleanor. In Carol H. Weiss. Evaluation. Second Edition. Upper Saddle River, NJ. Prentice Hall. 1998. p. 316

The political environment within each of the participating RHAs may well have an impact on the effectiveness of research transfer into practice.

An evaluation theorist who has long looked at the issues associated with disseminating and using evaluation results is Weiss (1998). She has suggested that we may expect too much in terms of research transfer. One issue is the time frame—we may expect too much change to happen right away, but as she states [and read *evaluator* as *researcher/ research disseminator*]:

*...it usually takes a period of time before results come into currency and gain support, and even longer for organizations to mobilize resources for action. In the interim, the organization seeks out other data and advice and stirs them into the pot. Evaluation findings are intermingled with practitioner experience, political know-how, and ideological commitment, and the mélange crystallizes into action when political opportunities open. By that time, the evaluator has long since gone on her way, and people in the organization may lose sight of the findings that started them on the road to reform in the first place<sup>10</sup>.*

Secondly, she suggests that it is important to look at how executives actually use research information, and identifies four main types of use, as follows:

1. Guidance for action;
2. Reinforcement of prior beliefs;
3. Mobilization for support; and
4. Enlightenment.

Her view is that these four types of use are more common than instrumental use for direct action. Enlightenment may in fact be the most effective outcome of the Alberta HTA Ambassador Program if it develops a general increase in understanding about chronic pain management. As Weiss suggests:

*Old myths are punctured, issues previously unrecognized come to the fore. As a result, people think differently. They reorder their priorities, dismiss some earlier concerns as unimportant, begin thinking along different tracks. Although they may not do anything different for a while, the shift in thinking can take time and have important consequences in the eventual actions they take.*

As a result, the true outcomes of this project may not be measured within the time frame of this evaluation although the new learning that results may well be absorbed into professional lore and common wisdom over time.

This chapter provided a brief review of literature related to the use of a workshop as a delivery strategy in affecting health practitioners' knowledge, attitudes and practice. The impact of problem-based learning on research transfer was also explored and some strategies were identified to help increase the transfer process. Finally some important lessons from evaluation and organizational literature were identified. Chapter 3 describes the project implementation process.

---

<sup>10</sup> Weiss, Carol H. Evaluation. Second Edition. Upper Saddle River, NJ. Prentice Hall. 1998. p. 316-317



## Chapter 3 Project Implementation Process

There are a number of topics related to the Alberta HTA Ambassador Program's administrative supports and implementation processes, which are particularly relevant to the evaluation. These are discussed in this chapter. These include the development of the delivery strategies and their change over time; a brief description of the workshop schedule; a description of workshop participants and their workplace context; participant satisfaction; follow up activities; and the Ambassadors' views on project implementation.

### 1.0 Development of the Delivery Strategies

At the outset of the Alberta HTA Ambassador Program, the plan for the delivery strategy was that clinical leaders in chronic pain management would travel to the RHAs and translate the findings of relevant HTA reports into clinically meaningful messages for clinicians and, possibly, for policy makers<sup>11</sup>. The broadly based stakeholder group, the Advisory Committee, and the smaller management group, the Steering Committee, grappled with design and process issues and ultimately came up with a project plan that entailed two main delivery strategies, namely:

- The workshop process; and
- The evidence-based content.

Later, a third strategy, action planning, was added to the list<sup>12</sup>.

The strategies evolved and expanded significantly as Committee members and the Ambassadors worked to clarify the program design. Each of these three strategies is discussed below and significant developmental changes are noted.

#### 1.1 The Workshop Process

While the original plan was to hold a half-day or full-day workshop for each RHA, a key change occurred when a smaller format was developed. The workshops would be of shorter duration, approximately 1.5 hours in length, and would involve six to ten individuals from various disciplines with differing levels of experience in chronic pain management. All were to be loosely defined as *opinion leaders*.

Engaging participants was a two-step process. The RHA Medical Director would be contacted and was then asked to identify someone who could identify local opinion leaders in the area of chronic pain. These individuals would then be invited to attend.

Rather than using a didactic approach, a flexible, interactive process was envisioned, built around a case presentation with subsequent discussion that would relate to participants' information needs.

Once plans were in place, a pilot workshop was held in Canmore, Alberta on September 15, 2004. It was seen as an opportunity to test the planned workshop process as well as the evaluation tools. Sixteen local clinicians attended the workshop as did the complete Ambassador team and the two evaluators. The workshop was videotaped so that Advisory Committee members who could not attend could view it to get a sense of the workshop process.

Overall, the workshop facilitation was judged to be excellent and participants seemed engaged and interested in the problem-based approach. The interactive approach was

<sup>11</sup> Calgary Health Region. HTA Ambassador Program, An Alberta Exploration in Enhancing Health Research Uptake. PowerPoint presentation appended to CCOHTA Steering Committee Terms of Reference. April 13, 2004.

<sup>12</sup> Thornley, Richard. Personal correspondence. June 11, 2004.



seen as a successful way of engaging the diverse members of the group. Generally the participants indicated on their Post-workshop Participant Surveys as being *Very Satisfied* with the workshop and they rated the Ambassador's presentation, the case study, and the interactive approach highly.

The evaluators prepared a report on the workshop pilot and made a number of observations to inform the revision process. Many of these observations related to logistics. For example:

- The workshop was held at 5:30 pm and participants arrived at various times from work or family commitments. This meant that a number of them missed important introductory and contextual information about the purpose of the workshop, the role of AHFMR and the HTA Unit, and the description of the HTA process.
- The rather ragged beginning also made it difficult to administer the Consent Form and the Pre-workshop Participant Survey prior to the workshop getting under way.
- Not enough time was spent on the actual case as it took a while to get the discussion going and the case itself provided too much extraneous information.
- A need was identified to provide some brief information on the Alberta context and why chronic pain management should be a topic of interest.
- The evaluators suggested making the Ambassador Program website address prominent on workshop materials for future reference.
- They also suggested making copies of referenced materials (i.e., reports by AHFMR and Alberta Wellness on chronic pain management) available at the workshops.

An evaluation report of the pilot process was submitted to the Advisory Committee for discussion. The design of the workshop process was revised and most of the identified issues were clearly addressed. A facilitator prop entitled, *Ambassador Workshop Notes and Script*, was developed to standardize the workshop presentation process across the Ambassador team.

## 1.2 The Evidence-based Content

The Clinical Ambassadors and the researchers for the project had previously collaborated on the development of HTA reports that formed the planned content for this research transfer project. In particular, it was planned that the project would disseminate the results of two prevalence studies and two health technology assessments conducted in response to questions arising from practicing clinicians and policy makers in relation to chronic pain management. In addition, in September 2003, Alberta Health & Wellness had sponsored a one-day workshop<sup>13</sup> on the management of chronic pain where it was unanimously agreed that there was a need for effective strategies to disseminate research evidence on the management of chronic pain<sup>14</sup>.

As the Committees and Ambassadors worked together, it was determined to broaden the evidence base to include more specific interventions regarding the treatment of chronic low back pain<sup>15</sup>. The topics identified for research came from several sources. One was a leading rural practitioner who identified topics about which he and his colleagues needed more information. In addition, the Clinical Ambassadors added treatment modalities that they believed the primary care practice community could benefit from. The HTA Unit was then charged with undertaking a literature search to identify systematic reviews on

<sup>13</sup> <http://www.health.gov.ab.ca/public/diseases/pdf/ChronicPainReport.pdf>

<sup>14</sup> Calgary Health Region. A Proposal to Increase HTA Knowledge Transfer Activities in Alberta.

<sup>15</sup> Calgary Health Region. HTA Ambassador Project. Decisions and suggestions to date, including results of the June 11, 2004 Planning Meeting "Work in Progress." Draft: June 17, 2004.



eighteen conservative interventions provided in a community setting and presented as a basket or menu of topics for participant selection based on interest<sup>16</sup>.

The evidence was compiled into what became known as the *one-pagers*, or more formally as the *Evidence in Brief* summaries, one sheet per topic. Ultimately, 18 summaries were produced<sup>17</sup> as follows:

### **Series One**

- Behavioural Therapy
- Exercise Therapy
- Long-acting Opioids
- Massage Therapy
- Muscle Relaxants
- Prolotherapy Injections
- Spinal Manipulative Therapy
- Transcutaneous Electrical Nerve Stimulation (TENS)

### **Series Two**

- Acupuncture
- Antidepressants
- Epidural Steroid Injections
- Non-steroidal Anti-inflammatory Drugs (NSAIDs)

### **Series Three**

- Cannabis or Cannabinoids
- Celecoxib for Rheumatoid Arthritis and Osteoarthritis
- COX-2 Inhibitors (valdecoxib and etoricoxib)
- Gabapentin
- Multidisciplinary Pain Programs
- Trigger Point Injections

The summaries were developed collaboratively through negotiations between the Research Ambassadors (as the two original and two additional researchers became known) and the three Clinical Ambassadors. The Clinical Ambassadors were instrumental in choosing the interventions that best reflected current practice in Alberta. The Clinical Ambassadors also formulated recommendations based on both the research evidence and their own expertise in chronic pain management, and these recommendations were displayed prominently on each summary.

The Research Ambassadors presented a brief summary of relevant results or conclusions and rated the quality of the findings; they also rated the quality of the randomized controlled trials (RCT's) according to standard quality criteria and assessed the quality of the systematic reviews (SR's). This resulted in an overall grading for RCT's and SR's that was described as *Good*, *Average*, or *Poor*.

These summaries became the main teaching tool used in the workshops and were clearly an innovation that emerged out of the project development process.

---

<sup>16</sup> Calgary Health Region. Alberta HTA Ambassador Program, Advisory Committee Meeting April 27, 2004. Minutes. Draft, May 6, 2004.

<sup>17</sup> For information on this process, consult the document, *The Ambassador Program: Generating the Evidence*. Alberta Heritage Foundation for Medical Research. November 2004. It is available on the Ambassador Program web site. [http://www.ahfmr.ab.ca/hta/ambassador/summaries/gathering\\_the\\_evidence.pdf](http://www.ahfmr.ab.ca/hta/ambassador/summaries/gathering_the_evidence.pdf)



At the pilot workshop, the summaries were circulated as each treatment was proposed. Participants indicated that the content was both relevant and meaningful although the different rating scales were seen as somewhat confusing. These were clarified in the revised version of the summaries and a document was produced that explained the scales. This was presented along with the first *Evidence in Brief* summary at each workshop.

### 1.3 Action Planning

As mentioned above, the action planning component was added once the project was under way. Some form of group action plan was seen as something that the Ambassador could facilitate towards the end of each workshop by asking a question such as, *Compared to what you jotted down at the beginning of the session, what would you do differently now?*<sup>18</sup> The plans were seen as a key output of the workshops. It was suggested that the action plans could be posted on a list server or blog.

At the pilot workshop, the action planning activity encountered some problems. More time and structure were required and participants seemed too tired to address it fully at the end of the evening. They needed time to take a break and collect their thoughts. On their Post-workshop Survey, most participants indicated either that no action plan was developed or they left the item out entirely. However, three-quarters of respondents indicated that they planned to share workshop information with others and one third planned to follow up with either the Ambassadors or with other individuals.

The action planning activity was revised and was scheduled to take place after participants were provided with a break. Suggested questions for the Ambassadors to use to prompt discussion and planning included:

*What is the most surprising thing you learned in this session?*  
*As a result of today's workshop, what changes might you make in your practice?*  
*Are there any changes you would like to see other clinicians make?*  
*Are there any changes you would like to see made in your organization or region?*  
*How might you go about encouraging your colleagues to make these changes?*  
*How might you go about encouraging your organization or region to make these changes?*

It was suggested that the Ambassadors use a flip chart to record ideas. These would later be returned to participants as part of the follow-up report.

## 2.0 Workshop Schedule

Following the pilot process, the workshop structure was standardized. There were two Ambassadors at each session, a Clinical Ambassador and a Research Ambassador. While the Clinical Ambassador was the primary facilitator, the Research Ambassador led the discussion of the role of the HTA Unit and explained how the evidence was collected, assessed for quality, and summarized.

Each workshop included the following activities:

1. **Pre-workshop activities:** As participants arrived at the workshop, they were greeted by the Ambassador, offered refreshments, and asked to complete a workshop participant sign-in sheet. (15 minutes)

---

<sup>18</sup> Calgary Health Region. HTA Ambassador Program Model: Research into Practice. Terms of Reference. July 16, 2004.



2. **Welcome, Evaluation, and Continuing Education Credits:** The workshop participants were formally welcomed to the workshop, and provided with some background information on the evaluation and continuing education credits. The pre-workshop evaluation forms were collected. (15 minutes)
3. **Introductions and Background:** The Ambassador(s) introduced themselves and reviewed the material in the workshop workbook. Some background information was provided on the purpose of the workshop and on chronic pain in Alberta, and the participants were also asked to introduce themselves. (10 minutes)
4. **Research Overview:** An overview of the role and background of the AHFMR HTA unit was provided by the Ambassadors. (5 minutes)
5. **Challenges in Chronic Pain Management:** Workshop participants were asked to discuss the challenges they experienced in chronic pain management. (10 minutes)
6. **Case Presentation:** The case presentation was introduced, and workshop participants were asked to identify the presenting problems facing the case individual. (5 minutes)
7. **Case Discussion:** The participants were encouraged to suggest treatments for the case individual. After each treatment was suggested, the Ambassador presented the research related to the treatment (if available), handed out an evidence summary sheet and discussed the research evidence and its implications for practice. (45-60 minutes)
8. **Introduction to Action Plan:** The Ambassadors were presented with two options for the action plan. The first option was to have a full group discussion with the workshop participants, while the second option involved each participant creating an individual action plan, and then having a group discussion. The Ambassador chose one action plan option and presented it to the group prior to the break. (2 minutes)
9. **Break:** Participants were provided with a short break. (10 minutes)
10. **Action Plan:** Participants were asked to discuss what they had learned at the workshop, and suggest how it might impact their practice. Participants were asked to think about what changes they would like to make in their personal practice, as well as what changes they would like to see amongst colleagues/within their organization and how they might facilitate these changes. (20 minutes)
11. **Wrap-up:** The Ambassador thanked the participants for coming to the workshop, and referred them to the AHFMR website. Participants were also reminded of the post-workshop evaluation survey.

The information presented in the following sections of the report is based on the analysis of information provided by participants on their Pre- and Post-workshop Surveys and by the Ambassadors in their Pre- and Post-workshop Interviews.



### 3.0 Workshop Participants

Table 1 provides a summary of the workshop dates and locations and indicates the number of pre- and post-workshop surveys completed by participants at each location.

**Table 1. Workshop Participation and Survey Completion (n = 130)**

Workshop Date	Workshop Location	Number of Attendees	Number (%) of Pre-Workshop Surveys Completed	Number (%) of Post-Workshop Surveys Completed
Oct. 14/04	East Central Health Region (Viking)	12	12 (100%)	7 (58.3%)
Oct. 28/04	Peace Country Health Region (Grande Prairie)	8	8 (100%)	7 (87.5%)
Nov. 2/04	Palliser Health Region (Medicine Hat)	8	8 (100%)	4 (50.0%)
Nov. 17/04	Calgary Health Region (Calgary)	18	18 (100%)	13 (72.2%)
Nov. 25/04	David Thompson Regional Health Authority (Red Deer)	17	16 (94.1%)	12 (70.6%)
Nov. 29/04	Capital Health Region (Edmonton)	11	11 (100%)	7 (63.6%)
Nov. 30/04 Afternoon	Chinook Regional Health Authority (Lethbridge)	14	14 (100%)	9 (64.2%)
Nov. 30/04 Evening	Chinook Regional Health Authority (Lethbridge)	9	9 (100%)	4 (44.4%)
Dec. 7/04	Calgary Health Region (Calgary)	5	5 (100%)	3 (60.0%)
Dec. 14/04 Morning	Aspen Health Region (Barrhead)	14	14 (100%)	7 (50.0%)
Dec. 14/04 Afternoon	Aspen Health Region (Barrhead)	14	14 (100%)	6 (42.8%)
<b>Total</b>		<b>130</b>	<b>129 (99.2%)</b>	<b>79 (60.8%)</b>

In total, 130 clinicians and administrators attended the 11 HTA Ambassador workshops. Of these 130 attendees, 129 participants (99.2%) completed a Pre-workshop Survey,<sup>19</sup> and 79 participants (60.8%) completed a Post-workshop Survey. Eight of the nine Alberta Health Regions held workshops prior to the end of the study period. Two workshops were held in each of the following centres: Lethbridge, Calgary, and Barrhead. Other centres requested additional workshops but they could not be accommodated in the project schedule.

A description of participants' primary role is presented in Table 2.

<sup>19</sup> One participant at the Red Deer workshop (Nov. 25/04) completed only a post-workshop survey.

**Table 2. Primary Role of Workshop Participants (n=128)**

Role	Frequency (%) of Respondents
Nurse	34 (26.6%)
Physician	27 (21.2%)
Physical/Occupational Therapy	23 (18.0%)
Administrator	20 (15.6%)
Pharmacist	12 (9.2%)
Psychologist/Mental Health/Social Work	9 (7.0%)
Other	3 (3.1%)
<b>Total</b>	<b>128 (100%)</b>

Just over one-quarter of the workshop participants were nurses (26.6%), while about one-fifth of participants (21.1%) were physicians. In addition, 18.0% of participants were involved primarily in physical/ occupational therapy and 15.6% were administrators. There were also three respondents who reported another primary role and these included medical assistant, educator, and researcher. Of the 130 participants, role information was not available for two participants.

Approximately 86.5% of workshop participants reported that they have contact with patients who experience chronic pain. When asked how many chronic pain patients they encountered during a three-month period, their responses ranged from 1 to 1,000, with a median of 20.

The participants also provided information about why they had chosen to attend the HTA Ambassador workshop. This information is summarized in Table 3.

**Table 3. Reason for Attending Workshop (n=126)**

Comment	Frequency (%) of Responses
My need for information on chronic pain management	98 (77.8%)
My interest in the issue of applying best evidence	94 (74.6%)
Opportunity to network	37 (29.4%)
Expertise of the Ambassadors	33 (26.2%)
To receive continuing education credit	18 (14.3%)
Other reason	18 (14.3%)
Involvement of AHFMR as a sponsor	6 (4.8%)

The most frequent reason for attending the workshop was to gather information on chronic pain management (reported by 77.8% of respondents). In addition, 74.6% of respondents reported attending to gather information on best evidence, while 29.4% attended because of the opportunity to network, and 26.2% attended because of the expertise of the Ambassadors. In

addition, 18 participants attended for a variety of other miscellaneous reasons not identified in the table above.

## 4.0 Participant Workplace Context

Participants were asked to consider the context of their workplace by rating the willingness of the organization or environment in which they worked to support the sharing of best evidence or new research information. Participants rated their organization on a scale of 1 to 5, where 1 = *Not at all* and 5 = *A great deal*. This information is summarized in Table 4.

**Table 4. Participants' Views on Organizational Support for Sharing Best Evidence**

Item	N	Mean Rating	Frequency (%) of Responses				
			Not at all 1	2	3	4	A great deal 5
Leadership encourages the use of knowledge and new information to improve services and programs.	120	3.8	-	13 (10.8%)	26 (21.7%)	51 (42.5%)	30 (25.0%)
There is a culture of sharing knowledge and new research information.	121	3.6	1 (0.8%)	17 (14.0%)	41 (33.9%)	38 (31.4%)	24 (19.8%)
There is appropriate infrastructure to support sharing knowledge and new information.	122	3.1	2 (1.6%)	25 (20.5%)	56 (45.9%)	32 (26.2%)	7 (5.7%)

Participants reported a reasonable level of organizational support for the sharing of best evidence. Their responses ranged from 3.1 for infrastructure being in place to support sharing knowledge and information to 3.8 for encouragement from leadership to use knowledge and new information to improve services and programs.

Participants also considered their ability to influence colleagues and administrators and rated that influence. Their ratings are presented in Table 5.

**Table 5. Participants' Ability to Influence Colleagues and Administrators**

Ability to Influence:	N	I have no ability to influence	I have limited ability to influence	I have some ability to influence	I have a great deal of ability to influence
Colleagues	127	5 (3.9%)	25 (19.7%)	84 (66.1%)	13 (10.2%)
Administrators	128	13 (10.2%)	38 (29.7%)	67 (52.3%)	10 (7.8%)

Overall, 76.3% of workshop participants reported having some ability or a great deal of ability to influence colleagues, while 60.1% reported having some or a great deal of ability to influence administrators.

## 5.0 Participant Satisfaction with Workshops

In their Post-workshop Survey, participants provided information on their satisfaction with a number of aspects of the Ambassador HTA Program workshops. This information is summarized according to the three key delivery strategies.

### 5.1 Satisfaction with the Workshop Process

Participants rated their satisfaction with workshop activities on a scale of 1 to 5 (where 1=*Not at all satisfied* and 5=*Very satisfied*). Their responses are summarized in Table 6.



**Table 6. Participants' Satisfaction with Workshop Activities**

Item	N	Mean Rating	Frequency (%) of Responses				
			Not At All Satisfied 1	2	3	4	Very Satisfied 5
Presentation by Ambassador	81	4.3	-	-	11 (13.6%)	37 (45.7%)	33 (40.7%)
Interactive approach	80	4.2	-	3 (3.8%)	11 (13.8%)	33 (41.3%)	33 (41.3%)
Case study	77	4.1	1 (1.3%)	3 (3.9%)	12 (15.6%)	32 (41.6%)	29 (37.7%)
Length of the workshop	68	4.0	1 (1.4%)	6 (8.3%)	7 (9.7%)	35 (48.6%)	23 (31.9%)
Informal networking	77	3.9	2 (2.6%)	2 (2.6%)	20 (26.0%)	30 (39.0%)	23 (29.9%)

The participants who replied to these items appeared to be quite satisfied with workshop activities. The average satisfaction rating ranged between 3.9 for informal networking to 4.2 for both the presentation by the Ambassador and the interactive approach.

Pharmacists tended to be more satisfied with the workshop activities than respondents from other occupations. In addition, participants who attended the Red Deer workshop tended to report a higher level of satisfaction than other respondents, while participants who attended the workshops in Calgary and Medicine Hat workshops tended to report lower satisfaction levels.<sup>20</sup>

The Post-Workshop Survey also asked participants to rate their satisfaction with a number of workshop materials on a scale of 1 to 5 (where 1=*Not at all satisfied* and 5=*Very satisfied*). Their responses are summarized in Table 7.

**Table 7. Participants' Satisfaction with Workshop Materials**

Item	N	Mean Rating	Frequency (%) of Responses				
			Not At All Satisfied 1	2	3	4	Very Satisfied 5
One-page summaries	81	4.5	-	1 (1.2%)	5 (6.2%)	25 (30.9%)	50 (61.7%)
Resource list	80	4.4	-	1 (1.3%)	4 (5.0%)	36 (45.0%)	39 (48.8%)
Workbook	73	4.3	-	-	10 (13.7%)	31 (42.5%)	32 (43.8%)
Presentation materials	81	4.2	-	-	12 (14.8%)	37 (45.7%)	32 (39.5%)
Case Studies	78	4.0	-	3 (3.8%)	18 (23.1%)	30 (38.5%)	27 (34.6%)
Action planning template	74	3.8	1 (1.4%)	1 (1.4%)	26 (35.1%)	29 (39.2%)	17 (23.0%)

<sup>20</sup> These differences were statistically significant (P<.05) based on a Mann-Whitney U test.

Overall, participants appeared to be *Very Satisfied* with the workshop materials. On average ratings ranged from 3.8 for the action-planning template to 4.5 for the one-page summaries. Pharmacists again tended to report higher levels of satisfaction than other respondents. In particular, they reported a significantly higher level of satisfaction with the workbook, the one-page summaries and the presentation materials. By contrast, physicians reported a lower level of satisfaction with the presentation materials.<sup>21</sup>

## 5.2 Satisfaction with the Evidence-based Content

Participants also provided feedback on the quality of the information they received at the workshops. The Post-workshop Survey asked participants to rate the extent that they agreed or disagreed with a number of statements on a scale of 1 to 5 (where 1=*Not at all Satisfied* and 5=*Very Satisfied*). This information is summarized in Table 8.

**Table 8. Participants Satisfaction with Quality of Information**

Item	N	Mean Rating	Frequency (%) of Responses				
			Not At All Satisfied 1	2	3	4	Very Satisfied 5
The Ambassadors are a source of knowledge I respect	79	4.4	-	-	6 (7.6%)	34 (43.0%)	39 (49.4%)
The content of the workshop was relevant for my local organization/ environment (e.g., hospital, health clinic)	73	4.3	-	3 (3.8%)	8 (10.0%)	34 (42.5%)	35 (43.8%)
The material was presented in a type of language that held meaning for me	81	4.3	-	-	7 (8.6%)	41 (50.6%)	33 (40.7%)
The content of the presentation was relevant for my practice	79	4.1	-	5 (6.3%)	10 (12.7%)	34 (43.0%)	30 (38.0%)
The workshop met my information needs	81	3.9	3 (3.7%)	3 (3.7%)	18 (22.2%)	35 (43.2%)	22 (27.2%)

Participants reported a high level of satisfaction with the quality of the information provided at the workshops. In particular, when asked if the Ambassadors are a source of knowledge they respected, participants provided an average of rating of 4.4. The material was seen as relevant and meaningful. Generally, participants were moderately satisfied that the workshop met their information needs.

## 5.3 Satisfaction with Action Planning

Participants also provided feedback on their satisfaction with the action planning component of the workshop. The Post-workshop Survey asked participants to rate their satisfaction regarding the action planning on a scale of 1 to 5 (where 1=*Not at all Satisfied* and 5=*Very Satisfied*). This information is summarized in Table 9.

<sup>21</sup> These differences were statistically significant (P<.05) based on a Mann-Whitney U test.

**Table 9. Participants Satisfaction with Action Planning Component**

Item	N	Mean Rating	Frequency (%) of Responses				
			Not At All Satisfied 1	2	3	4	Very Satisfied 5
Action planning	76	3.7	1 (1.3%)	6 (7.9%)	22 (28.9%)	33 (43.4%)	14 (18.4%)

General satisfaction with the action-planning component was moderately high but lower than satisfaction levels with other aspects of the workshop. The Post-workshop Survey also asked participants to describe the action plan developed at the workshop. Of the participants who completed the post-workshop survey, 60 (or 74.0% of post-survey respondents) answered this question. They provided a total of 84 comments regarding their action plans, which are summarized in Table 10 below.

**Table 10. Characteristics of Action Plans (n=60)**

Comment	Frequency	% of Responses
No appropriate action plan was developed	18	30.0%
Developing a multidisciplinary team to address chronic pain	13	21.6%
Regional level plan	8	13.3%
Group level plan	8	13.3%
Individual level plan	10	16.6%
Formation of interest group or discussion group	7	11.7%
Distribution of information to other stakeholders	5	8.3%
Working toward future development of chronic pain clinic	4	6.7%
Uncertain regarding outcome of action plan	4	6.7%
No collaboration on action plan	2	3.3%
Other comments	6	10.0%

Nearly one-third of responses (18 individuals or 30.0% of respondents) reported that no action plan had been developed. Some of these participants noted that there was not enough time at their workshop to develop an action plan, while others reported that the action plan was not relevant to them. Participant comments included:

*Unfortunately, due to time constraints at the workshop, no plan developed.*

*Did not really apply to my organization; therefore its purpose was lost on me. I did not take detailed notes, nor was it appropriate for implementation at my site.*

*There wasn't an action plan developed. The theme of the workshop seemed to be that most of what we do to try to help our patients is not supported by the evidence, yet we are encouraged to continue doing it. I have not seen any changes in practice based on this workshop.*

On the other hand, a number of participants reported that an action plan had been developed at their workshop. Over one fifth of respondents (13 individuals or 21.6%) noted that their action plan involved the development of a multidisciplinary team to address chronic pain management. Some comments made by these participants were:

*We are developing a multidisciplinary team to do case reviews of difficult patients and develop a referral network within our community's health professionals.*

*I believe . . . [an individual] has taken a leadership role in organizing a forum for discussion of this subject at the end of January. The meeting is multidisciplinary and is an open invitation to the Health Region.*

*[Our action plan] emphasized [a] multidisciplinary approach to assessment and implementing interventions.*

In addition, 26 individuals (43.3% of those responding to question regarding action plans) noted that an action plan had been developed at their workshop at some level, whether individual, group, and/or regional. Examples of participant comments were:

*At [the] individual level, I planned to share the information with other co-workers and act as a resource to other health professionals as needed.*

*We are going to meet informally on a regular basis on a group and regional basis.*

*[Our] action plan considered all levels (individual, group, regional).*

It should be noted that participants seemed to find the action plan the most difficult stage of the workshop. A number of participants who reported that an action plan had been developed, still expressed concern with the implementation of that plan. For example:

*The action plan was mostly individual and group level. For my part, I have been passing out this information to other allied health professionals and physicians to try to improve the baseline of knowledge in the community. There were not enough practitioners at the workshop (in my opinion) to make the action plan effective.*

*An action plan was e-mailed to me from the [health] centre. It appears to be a summary of some of the comments at the end of the [workshop], but that part of the session was quite rushed. It does not appear to be a collaborative effort of all the*



*participants. There were recommendations for changes in the region, but no plan of action, timelines, or specifics for changing/enhancing practices related to chronic pain.*

These findings are supported by the success case interview data. Only one of the 10 interviewees was able to identify that a concrete group action plan had been developed. This plan involved in a subsequent information meeting within the region. As the participant noted:

*I think the group informally decided that we would get together, and that something needs to continue on. We have set a meeting for next week – an interest group meeting [within our organization]. That is the first follow-up that I have been notified about.*

However, other participants did recall that a plan had been developed, even if it wasn't as formal as they would have liked. For example:

*Very vaguely [I remember an action plan]. There didn't seem to be a huge thrust in that direction. From what I remember, it involved clinicians talking about getting together and networking over chronic pain management.*

*I know that there wasn't a formal [action plan] within our region. There was discussion that we needed better access to chronic pain specialists. But a hard, formal action plan, no.*

In addition, a few participants indicated that they intended personally to take action, although these plans had not yet been implemented. For example:

*Basically my plan to was share the information with our physicians.*

*[My personal plan] was to access the resources (i.e., internet addresses), and make sure that my [information] was up-to-date. I didn't do this, but I know where to go if I need to. The format of the resources was useful.*

It is also easy for action plans to become lost in the shuffle of everyday activities. For example, one participant stated during her interview that they didn't do group or individual action plans as they ran out of time at the workshop. Then later she emailed the evaluators, saying:

*As I was going through my previous email messages, I found a group Action Plan from early December... I had said we did not do one, but I guess I was wrong; even after checking with a colleague before sending my survey.*



## 6.0 Follow-up Activities

### 6.1 Planned or Actual Dissemination of Workshop Information by Participants

Prior to the workshop, 80 of the 129 (62.0%) Pre-workshop Survey respondents indicated that they planned to disseminate the information they received at the workshop to others. Two additional respondents said that they might if an opportunity arose. None indicated that they had no plans to disseminate the workshop information.

The Post-workshop Survey also asked participants if they are planning to, or if they already had, shared information or materials from the workshop with others. Of the 78 participants who responded to this question, 62 (79.5% of respondents) reported that they had already disseminated information. These respondents gave a total of 128 responses. Table 11 summarizes the most frequent types of professionals with whom workshop information was shared.

**Table 11. Professionals with Whom Workshop Information Was Shared (n=128)**

Type of Professional	Frequency	% of Responses
Nursing staff	27	21.1%
Physicians	20	15.6%
Physical Therapists	18	14.1%
Administration	17	13.3%
Patients	16	12.5%
Pharmacists	12	9.4%
Psychologists	6	4.7%
Other professionals	12	9.4%

Respondents identified nursing staff as the most frequently indicated category of recipients (either planned or actual recipients) of workshop information as they were identified by 27 respondents (21.1%). The second category of recipients was the physicians, selected by 20 respondents (15.6%). Thirdly, physical therapists were identified by 18 respondents (14.1%).

In addition, several respondents indicated that they disseminated information to administrators (13.3%) or to patients (12.5%). Other recipients of information included 12 pharmacists (9.4%) and 6 psychologists (4.7%). The “Other” category was comprised of 2 kinesiologists, and a variety of other health professionals including clinical educators, chronic disease network members, dietary or rehabilitation staff, an occupational therapist, and a pharmaceutical representative.

Of the 16 participants who reported no plans to disseminate workshop materials, 13 provided reasons. For example the most frequent reasons included:

- I haven’t needed to or it is not relevant to my position (9 respondents); and
- All my colleagues were at the workshop (3 respondents)

## 6.2 Planned or Actual Follow-up With AHFMR's HTA Unit

The post-workshop survey asked workshop participants if they planned to follow-up in the future with the HTA Unit at AHFMR. Of the 77 participants who responded to this question, 67 (87.0% of respondents) indicated their intention to do so, as follows:

- 57 (85.1%) of these individuals said that they planned to access the Ambassador Program web page;
- 51 (76.1%) respondents said that they planned to download reports or other information; and
- 21 (31.3%) respondents said that they planned to request health technology assessments.

Of the 4 of 10 workshop participants who responded that they did not plan to follow up with the HTA Unit, 3 provided their rationale, as follows:

- Already having sufficient resources and support;
- No time to disseminate the information further; and
- Not applicable to current needs.

The Alberta HTA Ambassador Program website (provided by AHFMR) was set up to share the evidence-based content developed for the workshops. The website has seen considerable activity as is indicated in Table 12.

**Table 12. Summary of Most Frequently Downloaded Evidence in Brief Files from Alberta HTA Ambassador Program Website**

Downloaded File	Frequency	% of Files
Muscle Relaxants	76	15.4%
Exercise Therapy	55	11.1%
Long-Acting Opioids	53	10.7%
Prolotherapy	52	10.5%
Massage	45	9.1%
NSAIDS	37	7.5%
Antidepressants	36	7.3%
Spinal Manipulative Therapy	32	6.5%
Multidiscipline Pain Programs	26	5.3%
Gabapentin	23	4.6%
Behavioural Therapy	21	4.2%
Tens	20	4.0%
Trigger Point Injection	19	3.8%
Total	495	100%

The statistics regarding website downloads were compiled using a report generated by web tracking software. They are based on website visits from the inception of the HTA Ambassador program up to and including March 24, 2005 at 15:28. Of note, the file

“Generating the Evidence” which is an overview of the development of the *Evidence in Brief* summaries was downloaded 345 times.

### 6.3 Other Follow-up Activities

The Post-workshop Survey asked participants if they planned to follow up in the future, either with the Ambassadors or with anyone else who had participated in their workshop. There were 62 respondents to this question. Two-thirds of them (n=41) indicated that they planned to follow-up with other individuals in the future; of the 41, 39.0% (n=16) indicated they would follow up with other participants and 22% (n=9) would follow up with the Ambassadors. In addition, 17% (n=7) planned to form, or had already formed interest groups. Some examples of participant comments were:

*I will continue to network with participants that were at the workshop.*

*Yes, particularly if I need more help with understanding information on evidence sheets or if I have suggestions for other Ambassador projects*

*Yes. We have formed an interest group and hopefully we will meet regularly.*

In addition, 14.5% (n=9) of participants said that they might possibly follow-up with other individuals in the future, while a similar number indicated that they did not intend to follow-up at all. Some examples of these comments include:

*We do not have a multidisciplinary team approach for chronic pain management, therefore it will be hard to take this forward.*

*Maybe, as need arises.*

*Not at this time. [However,] it is beneficial for me as a continuing care social worker to have a general knowledge base regarding chronic pain management.*

## 7.0 Ambassadors' Views

The three Clinical Ambassadors and two Research Ambassadors were interviewed prior to the implementation of the HTA Ambassador workshops in mid-September 2004 to determine their expectations for the project. These five individuals, and two additional Research Ambassadors who were added during the project, were also interviewed at the end of the project period in February—March 2005. The purpose of the Post-workshop Interview was to determine their satisfaction with the project and to identify any challenges, successes, or lessons they had learned from the process. Note that the small number of interviewees, and their knowledge of each other, limits the evaluators' ability to provide actual comments so that individual privacy can be maintained.

### 7.1 Ambassadors' Expectations

In their Pre-workshop Interviews, the Ambassadors were asked, *What are your hopes for this project?* The general themes in their responses included that the project would promote Health Technology Assessment, that it would increase understanding about chronic pain management, and would build on the momentum that had already been initiated around chronic pain management. It is clear from their responses that the



Ambassadors saw the project as one that, if successful, would lead to other innovative projects as well as help to increase awareness of chronic pain management issues. This question elicited responses that reflected the broader, longer-term aspirations of the Ambassadors regarding the development of this field of interest.

A second question in the pre-workshop interview asked Ambassadors, *From your perspective, what will success look like for the HTA Ambassador Project?* The replies to this question were more focused on the workshops themselves and the Ambassadors' comments indicated that success would be measured in terms of the impact of the workshops on the participants. In particular, they hoped that the workshops would result in participants *identifying with the principles* of the project and wanting to see more of this type of dissemination. As well, the Ambassadors identified that better treatment for chronic pain patients would be a success indicator for the project. This would result from being able to *bridge the gap between the researchers and the clinicians*.

## **7.2 Ambassadors' Views on Administrative Supports**

The Ambassadors had a number of views on the project's administrative supports both prior to and after the completion of the workshops, and these views have been compiled and summarized below.

### **Ambassador Project Steering Committee**

The comments received from the Ambassadors regarding the Project Steering Committee were positive and indicated that it had worked quite well. One Ambassador suggested that there was too much involvement on their part in administrative duties.

### **Ambassador Project Advisory Committee**

Again in the case of the Project Advisory Committee, the Ambassadors felt that for the most part it worked well. Typical comments include that it was *very helpful, seemed well done*, and that it was *a real asset*. A few comments indicated that at times people were not available and that there were short timelines involved. A suggestion was made that the Committee could have included more people, particularly more representation from rural areas.

### **Project Management**

The Ambassadors indicated that overall project management was good. Having said this however, it is clear that there were some issues that often occur in a project of this scope. A few of the Ambassadors felt that they had put in more time than they had anticipated and that the project was not always well organized. Some mentioned that some things were *not as timely as they should have been* and that there were *too many emails* to try and manage. It was clear that some Ambassadors were more closely involved in project management than others and hence were better informed about various project processes; others felt more *out of the loop* or commented that the project was *excessively top-heavy*, that too much administration was involved.

### **Communications Management**

In terms of the management of project communications, the Ambassadors' comments were mixed. Some thought that communications were adequate and that it had gone *quite well*; however, some were unclear about the actual communications function and the process that had been employed to invite participants to the workshops. Some wondered if the right people had been invited (i.e., physicians and decision makers) and if the key contacts had been adequately engaged in some regions. Disappointment was expressed that one health region did not participate in the project.



### **Other supports provided by AHFMR or other partners**

In the Pre-workshop Interviews, some of the Ambassadors expressed concern that support was lacking from AHFMR, while others felt that AHFMR went above and beyond all expectations. However, in the Post-workshop Interview, the support from AHFMR was seen by almost all of the Ambassadors as very good. Comments included praise for the AHFMR researchers and the comment was made that *everyone gave more than expected*. Other partners who were identified were the Calgary Health Region, which provided administrative and financial management for the project, and some administrators in the Health Regions who supported the process.

## **7.3 Ambassadors' Views on Project Implementation**

### **Workshop Process**

Most of the Ambassadors were very supportive of the problem-based instructional approach although their comments did indicate that they had used the case idiosyncratically—based on their own instructional styles and medical specialty areas. Most saw the case as a mechanism to stimulate discussion rather than as an exemplar of chronic pain management. The interactive approach was seen as an effective strategy with the exception of the videoconferences; it was felt that face-to-face contact was required to generate a discussion.

### **Evidence-based Materials**

The Ambassadors' feedback regarding the quality of the workshop materials, particularly the *Evidence in Brief* summaries, was universally very positive. Several Ambassadors commented that the materials were of excellent quality, had an overall professional appearance and were well received by the participants. One Ambassador commented that the materials were the *most thoroughly prepared research materials that I have ever seen*. Another comment was, *If HTA is to make it into the clinical world, this is the way to go!*

### **Action Planning**

Some of the Ambassadors commented that they had struggled with the action-planning component of the workshops. They tended to be uncertain if any follow up had occurred and looked to the evaluation to provide that information.

### **Project Success**

Generally, the Ambassadors felt that the project had been implemented as planned. One commented, *It looked very much like the grant we submitted*. Again, however, while generally satisfied, they were waiting to review the evaluation findings before they drew any conclusions about project success.

### **Project Challenges**

The Ambassadors identified four key challenges that they had encountered in implementing the Alberta HTA Ambassador Program. These included the following:

- The excessive amount of work required to develop the *Evidence in Brief* summaries;
- Tensions between the Clinical Ambassadors and the Research Ambassadors, particularly with regard to the development of those summaries; and tensions among the Clinical Ambassadors themselves, based on their differing areas of expertise and associated perspectives;
- The short timelines of the project; and
- The sustainability of such an expensive approach.

This chapter briefly described the development of the Alberta HTA Ambassador Program delivery strategies including the workshop process, the evidence-based content and the action-planning component. An overview of the workshop schedule was also provided. Feedback from workshop



participants was described based on information from both the Pre-workshop and Post-workshop Participant Surveys. Finally, the Ambassadors' views were summarized, based on information provided by them in the Pre-workshop and Post-workshop Ambassador Interviews. Chapter 4 presents some early project outcomes.



## Chapter 4 Early Project Outcomes

### 1.0 Change in Participant Knowledge

To determine the impact of the workshops on participants' knowledge about chronic pain management, a brief list of five knowledge questions was developed by one of the Clinical Ambassadors. In the Pre-workshop Survey, participants were asked to rate their current level of knowledge related to chronic pain management on these five items. In the Post-workshop Survey, participants were asked to rate their level of knowledge "now" on these items, six weeks following their attendance at the workshop. The questions provided a five-point scale (where 1=*Little or no knowledge* and 5=*A great deal of knowledge*). Survey results are presented below in Table 13.

**Table 13. Participant Change on Chronic Pain Knowledge Questions**

Item	N	Mean Rating at Pre-test	Mean Rating at Post-test
Whether physical therapy for chronic pain is better than exercise	71	2.9	3.9*
When I should refer to a multidisciplinary pain center	65	3.1	3.9*
How psychotherapy can help patient chronic low back pain.	74	2.7	3.6*
The evidence for cannabinoid use in chronic pain	74	2.3	3.4*
When I should send my chronic back patients for spinal manipulation.	64	2.4	3.4*

\* p<.001

Participants' level of interest in chronic pain management was the same (4.5) both before and after the workshop and therefore is not reported in the above table. However, substantial changes were seen between the Pre- and Post-workshop measures of the knowledge items. All of the changes in knowledge were statistically significant.<sup>22</sup> Furthermore, the changes occurred across occupations and across locations.

These results are encouraging, as they indicate that the Alberta HTA Ambassador Program appears to have had an effect on participants' knowledge about chronic pain management topics six weeks after they had attended a workshop.

### 2.0 Participant Views on the Achievement of Project Objectives

In the Post-workshop Survey, participants were asked a number of questions about the extent to which the workshop and related follow-up activities had achieved the objectives of the Alberta HTA Ambassador Program. Five project objectives were listed and respondents were provided with a 5-point scale (where 1=*Not at all* and 5=*A great deal*) to rate whether, in their view, the project had achieved its objectives. The objectives have been organized according to the short-term and intermediate-term outcomes that were identified in the HTA Ambassador Project Model. Participant responses are presented in Table 14.

<sup>22</sup> These differences were statistically significant (P<.001) based on a Wilcoxin test.

**Table 14. Participant Views on Project Achievement of Objectives by Type of Outcome**

Item	N	Mean Rating	Frequency (%) of Responses				
			Not at all 1	2	3	4	A great deal 5
<b>Short-term Outcomes</b>							
Increased awareness of best evidence in chronic pain management	80	4.3	1 (1.3%)	2 (2.5%)	8 (10.0%)	32 (40.0%)	37 (46.3%)
Served as an effective way to communicate research	80	4.2	-	3 (3.8%)	12 (15.0%)	32 (40.0%)	33 (41.3%)
Increased knowledge of best evidence in chronic pain management	79	4.1	1 (1.3%)	3 (3.8%)	9 (12.7%)	37 (46.8%)	28 (35.4%)
Changed your attitude about chronic pain management	76	3.1	7 (9.2%)	14 (18.4%)	30 (39.5%)	14 (18.4%)	11 (14.5%)
<b>Intermediate-term Outcomes</b>							
Changed your practice in the area of chronic pain management	67	3.2	6 (9.1%)	6 (9.1%)	31 (47.0%)	17 (25.8%)	6 (9.1%)

### 2.1 Participant Views on Achievement of Short-term Outcomes

Based upon the above table, it appears that respondents found the Alberta HTA Ambassador Program did indeed achieve at least three of its objectives. These results were consistent across occupation and location. In particular, 69 of the 80 respondents (86.3%) rated the project's success highly in terms of increasing awareness of best evidence in chronic pain management. Nearly as many respondents also believed that the project was an effective way to communicate research results. In addition, most respondents (65 or 82.2%) also indicated that the project had increased their knowledge of best evidence in chronic pain management although the views held were somewhat less strong.

It is interesting to see that respondents generally felt that the project had not changed their attitude toward chronic pain management. As reported above, participants' level of interest in chronic pain management did not change between the Pre- and Post-workshop Survey—it was already high before they attended the workshop and remained at a similar level afterwards. This finding suggests that the plan to invite opinion leaders in the area of chronic pain was carried out and that, as a result, participants were likely to have demonstrated an interest in the topic already.

### 2.2 Participant Views on Achievement of Intermediate-term Outcomes

Fewer participants (67 or 83.7%) responded to the more-intermediate term objective related to practice change. The item asked if the project had achieved its objective of changing participants' practice in the area of chronic pain management. Only one-third of respondents (23 or 34.9%) rated the achievement of this objective as moderately high while the largest proportion (31 respondents or 47.0%) provided a more neutral rating of 3 on the five-point scale. Twelve respondents (18.2%) rated the achievement of this objective as low (either 1 or 2 on the 5-point scale). In particular, physical/occupational therapists provided lower scores on this objective. It is important to note that the six-week

interval between the workshop and the completion of the Post-workshop Survey may not have been adequate to implement a change in practice. Further, this finding is consistent with the literature reviewed for this project.

Three respondents were able to identify actual changes they made to their practice and provided the following comments:

*In terms of my practice, I will change one thing, and that is increase the emphasis on return to function, and withdraw hands-on treatment earlier if clients do not take more self-management responsibility.*

*Yes, especially regarding surgical inventions, spinal disorders, and trigger point inventions. I share more information with clients about the outcomes [of these treatments], and that the outcomes may not always be what they want.*

*Bringing the information when dealing with patients is most effective. I provide the initial documentation [from the workshop] plus my own suggestions.*

These findings about practice change are supported by the success case interview data. While most of the participants who were interviewed (n=10) noted that they had become more aware of chronic pain, many indicated that they had experienced difficulty in actually applying what they had learned to their practice. Some participant comments were:

*I haven't made changes to my practice, but best evidence and best practice is more in my mind than it was [before]. I feel it is incredibly difficult to take research that is aimed at a specific case and apply it.*

*I have forwarded [the information] to my physiotherapists, but I can't speak for them. Our future change in practice is to have a clinic.*

*Being a pharmacist I don't have the prescribing rights that a physician does. [However, I think I now offer] better counselling of patients, as a result of the workshop.*

From the participants' perspective, then, the project was very successful in achieving three of its five objectives related to increased awareness, effectiveness of the communication strategy, and increased knowledge; no particular change was evident regarding participants' attitudes towards chronic pain management; and the project had only moderate success in influencing change in practice which was seen to be an intermediate-term outcome. In at least one case, a change in practice may not have been required as one participant indicated that their practice was already based on current research evidence.

### 3.0 Participant Views on the Research Transfer Strategy

Workshop participants also provided their views on the efficacy of the research transfer strategy used in the Alberta HTA Ambassador Project. They were asked if it was a useful way of bridging the gap between research and practice. Of the 79 participants who responded to this question, 78 (98.7%) indicated that that strategy was indeed a useful way of linking research to practice.

In addition, 37 of the 78 respondents provided 45 responses suggesting other chronic pain interventions and conditions besides chronic back low back pain that they felt could be addressed as well. These suggestions are presented in Table 15.

**Table 15. Other Chronic Pain Topics Suggested for This Research Transfer Strategy (n=45)**

Comment	Frequency	% of Responses
Headaches (including tension headaches and migraines)	8	17.8%
Arthritis	4	8.9%
Fibromyalgia	4	8.9%
Alternative therapies (hypnosis, acupuncture, etc.)	4	8.9%
Medications	3	6.7%
Physician awareness and education	3	6.7%
Cancer	3	6.7%
Medication addiction/abuse	3	6.7%
Myofascial pain syndromes	2	4.4%
Geriatric population	2	4.4%
Use of multidisciplinary approach	2	4.4%
Dementia patients	2	4.4%
Soft tissue pain	1	2.2%
Chronic pelvic pain	1	2.2%
Chronic fatigue syndrome	1	2.2%
TMJ dysfunction	1	2.2%
Psychotherapy	1	2.2%

As can be seen from the table above, many diverse topics were suggested that might benefit from this research transfer strategy. The most frequent condition was headaches (including tension headaches and migraines), which was identified by six participants (17.8% of respondents). Other common conditions and interventions included arthritis, fibromyalgia, medications, and alternative therapies (each identified by four participants or 8.9% of respondents.)

In addition, 26 of the 78 respondents gave a total of 44 responses indicating other health or clinical practice topics that they felt could benefit from this research transfer strategy. These topics are summarized below in Table 16.

**Table 16. Other Health or Clinical Practice Topics Suggested for this Research Transfer Strategy (n=44)**

Comment	Frequency	% of Responses
Diabetes	6	13.6%
Any health topic	4	9.1%
Arthritis	3	6.8%
Heart disease	3	6.8%
Lifestyle changes (smoking, weight loss, exercise, etc.)	3	6.8%
Mental illness	3	6.8%
All chronic diseases	2	4.5%
Fibromyalgia	2	4.5%
Asthma	2	4.5%
Wound care and treatment	2	4.5%
Acute pain management	2	4.5%
Other	12	27.3%

Diabetes was the most frequently suggested topic (identified by six respondents or 13.6%). In addition, four respondents (9.1%) noted that any health topic would be useful. As one commented:

*Any health topic would benefit from a systematic review of literature and presentation to health practitioners.*

Participants also suggested such topics such as arthritis and fibromyalgia (which were also suggested in the previous chronic pain management-related item). In addition, a number of unique health topics were identified such as assessment screening for surgery (e.g., effects of anesthetics), the impact of lifestyle changes on health, and the care of stroke patients, among others.

It appeared that many workshop participants saw the Alberta HTA Ambassador Program as an appropriate way to bridge the gap between research and practice in many health and clinical practice areas.

## 4.0 Suggestions to Improve Future HTA Ambassador Projects

Respondents to the Post-workshop Survey provided a number of suggestions to improve future HTA Ambassador projects. The majority of their suggestions can be encapsulated in four themes. These are listed below along with representative comments for each, in no particular order:

### Revise information provided during the sessions

*Information to health professionals must be in an easy to read format.*



**Increase the number of sessions**

*After the workshop, several physicians talked to me wishing they had had the opportunity to participate. Repeating the workshop in the Region may be worth considering.*

**Provide more information to participants prior to session**

*It would have been beneficial to know about the interactive case study format prior to attending the session. We really had very little information on what we were attending.*

**Increase the length of the session to allow for more depth**

*I found the workshop not long enough to have in-depth discussion on the topics presented.*

It should be noted that when asked for suggestions on how to improve the program, several participants used the question to make comments about how much they liked the program as delivered. Below are two examples.

*I think this is a very valuable resource!*

*I enjoyed it very much and especially appreciated the multidisciplinary method.*

This chapter has provided evaluation findings related to early project outcomes. The change to participants' knowledge in the area of chronic pain management was discussed and their views on project goal achievement were presented. Participants' perceptions on the research transfer strategy employed in this project were described, reflecting an almost universal endorsement of the strategy as a useful way to link research and practice. Their suggestions for other topics where this strategy could be employed were summarized as were several suggestions for improvements to future workshops. Chapter 5 provides a summary of the evaluation evidence presented in this report, presents some conclusions based on that evidence, and advances some recommendations for consideration.



# Chapter 5 – Summary, Conclusions and Recommendations

The Alberta HTA Ambassador Program was based on a successful health technology assessment research transfer strategy developed in Sweden. It was designed to test the Ambassador (or expert) model and, using evidence-based materials on chronic pain management and an interactive, problem-based instructional method, deliver research information to multidisciplinary groups of health care providers in Alberta's health regions.

This chapter summarizes the findings of the independent evaluation that was conducted as part of the CCOHTA project grant. It draws some conclusions about the overall achievement of project objectives and advances some recommendations for consideration.

## 1.0 Summary of Evaluation Evidence

The Program had three main objectives, as follows:

1. To serve as a model of research transfer that could be applied to different topic areas;
2. To increase clinician awareness of the best evidence in chronic pain management; and
3. To affect clinician attitude and practices for using research evidence in the management of chronic pain.

This evaluation report has documented many instances of the attainment of these objectives. To summarize our findings, the following table has been developed, based on the key research questions developed in the study's Data Collection Matrix.

**Table 17. Evidence of Evaluation Findings by Research Question**

Research Questions	Evaluation Findings
<b>Project Support/Inputs</b>	
To review the origin and development of the Alberta HTA Ambassador Program.	The Alberta HTA Ambassador Program was based on the successful research transfer strategy developed in the Swedish Ambassador program that resulted in a network of Ambassadors throughout Sweden.  The Alberta Ambassador model adapted the strategy to focus on <i>knowledge brokering</i> .
To determine if adequate project supports were in place.	Generally project supports were adequate. The Ambassadors viewed the Steering and Advisory Committees positively. Project management was considered well done but it was suggested there was too much administration for the size of the grant. Communication demands were extensive; however, not all Ambassadors were equally informed. The overall view was that project demands were great and people gave more than anticipated.
<b>Implementation Process</b>	
To determine the effectiveness of project marketing in soliciting appropriate participants.	130 participants from 8 of 9 health regions attended. Participants were definitely multi-disciplinary as more than 6 categories of health professionals were included. Some Ambassadors wondered if enough physicians and decision makers attended.



Research Questions	Evaluation Findings
To determine if the project was implemented as planned.	<p>There were three delivery strategies. All three changed to some extent over time.</p> <ol style="list-style-type: none"> <li>1. The workshop process changed somewhat based on the pilot session. Most of the changes were logistical. The pre-test of the process strengthened it considerably.</li> <li>2. The evidence-based content changed substantially from an original plan to use existing reports and tech notes to the development of 18 <i>Evidence in Brief</i> one-sheet summaries. Preparation time was extensive and stretched project and human resources considerably. Response to the summaries was extremely positive.</li> <li>3. Action planning was a third component added after the project proposal had been approved. It was the most problematic aspect of the workshops and was not well enough planned and tested in advance.</li> </ol>
To describe the action plans developed by the participants.	<p>Only 52.5% of respondents provided information on action planning conducted at the workshops; 13 respondents were considering developing a multi-disciplinary team to address chronic pain issues; 26 had developed some kind of action plan at the individual, group or regional level; however, some expressed concern about issues associated with the feasibility of implementing the plans.</p>
To describe follow-up interventions that resulted from the workshops.	<p>62 of 78 (79.5 %) post-workshop survey respondents reported sharing information with a wide variety of health professionals, as well as some patients. Nursing staff, physicians, physical therapists, administrators were mentioned the most frequently.</p> <p>57 of 66 respondents (85.1%) planned to access the AHFMR website.</p> <p>21 of 66 respondents (31.3%) planned to request Health Technology Assessments from the Unit.</p> <p>The AHFMR Ambassador website was active during the project. In particular over 300 copies of the background document, <i>Generating the Evidence</i> were downloaded and over 500 copies of the <i>Evidence in Brief</i> summaries were downloaded. The most popular were the briefs on Muscle Relaxants, Exercise Therapy, Long-Acting Opioids, and Prolotherapy, all downloaded more than 50 times by March 24, 2005.</p>
<b>Outputs</b>	
To determine the success of the research transfer strategy.	<p>80 respondents to the Post-workshop survey rated the project as an effective way to communicate research, providing a mean rating of 4.2 on a 5-point scale.</p>



Research Questions	Evaluation Findings
To determine what challenges were encountered in project implementation.	<p>The Ambassadors identified four key challenges to project implementation:</p> <ol style="list-style-type: none"> <li>1. Excessive work preparing <i>Evidence in Brief</i> summaries</li> <li>2. Tensions between and among groups of Ambassadors</li> <li>3. Short project timelines</li> <li>4. Cost of the project</li> </ol>
To determine the satisfaction of participants and Ambassadors with the strategy.	<p>Post-workshop respondents rated workshop activities between 4.3 (Ambassador presentation) and 3.9 (informal networking). They rated workshop materials between 4.5 (<i>Evidence in Brief</i> summaries) to 3.8 (Action planning template). They rated quality of information between 4.4 (Ambassadors as a source) to 3.9 (met personal information needs). Action planning received the lowest mean score at 3.7.</p>
To describe the lessons learned about this research transfer strategy.	<p>Ambassadors viewed the problem-based instructional approach as effective, although each used it in an idiosyncratic way. The interactive approach was effective except for those participants on video-conference.</p> <p>The evidence-based materials were judged to be of excellent quality.</p> <p>The Ambassadors tended to struggle with the action-planning component.</p> <p>Using a six-week post-workshop tool, it was deemed too soon to measure the impact of the project on practice change. This lesson was corroborated by findings in the literature. More study and more time are required to explore the political and contextual issues involved in bridging the gap between research and practice.</p> <p>However, one third of respondents did indicate that the workshop had changed their practice in the area of chronic pain management.</p>
<b>Short Term Outcomes</b>	
To determine the effectiveness of this research transfer strategy.	<p>Participants' self-reported knowledge about chronic pain management increased on 5 knowledge questions. They rated their increased awareness of best evidence in chronic pain management at 4.3 on a 5-point scale. Their attitude towards the topic of chronic pain management did not change as a result of the workshops—it was rated highly at 4.5 both before and after the workshops. 78% of respondents indicated that they had attended because of their need for information on chronic pain management.</p>



Research Questions	Evaluation Findings
To determine if the strategy promoted awareness of the AHFMR HTA Unit and its function.	67 respondents (87.0%) intended to follow up with AHFMR's HTA Unit to access the web (85.1%), download reports (76.1%) or request HTAs (31.3%). Web hits suggested that a number of workshop participants and their colleagues (as well as "outsiders" who may have googled the topics) had actually accessed the site and downloaded files.
<b>Intermediate Term Outcomes</b>	
To determine if improved strategies for research transfer have been developed.	The workshop process was judged to be very effective in terms of use of Ambassadors, interactive and problem-based learning strategies, and multi-disciplinary instruction groups. The <i>Evidence in Brief</i> summaries were highly rated and provide a project legacy, but will have a short shelf life if not continually updated. They are seen as a useful and encouraging innovation and should be explored further. A number of other topics were suggested for an approach similar to the Ambassador Project. The most frequent were headaches, arthritis, fibromyalgia and diabetes.

## 2.0 Conclusions and Recommendations

Research transfer and evidence-based decision making will continue to be areas of concern for both researchers and clinicians because knowledge will continue to grow at exponential rates and health care resources will continue to be stretched. As a result, ways of bridging the gap between research and practice must be explored in new and creative ways. The Alberta HTA Ambassador Program is one such innovative approach. The project has demonstrated its utility as a research transfer strategy; it is only a question of determining how to follow up on this excellent dissemination model.

Based on the information collected in this evaluation, twelve conclusions can be drawn. These are presented according to the original project objectives.

### **Does the HTA Ambassador Model serve as a model of research transfer that could be applied to different topic areas?**

1. The HTA Ambassador Model as a research transfer model was well received.
2. The use of content experts as Ambassadors was highly rated.
3. The multi-disciplinary, interactive and problem-based strategies were judged to be effective instructional methods.
4. The Model can be applied to different topics both in the area of chronic pain and other health or clinical practice areas. Several possible topics were suggested.
5. The cost of the project was greater than the grant provided; actual staff time was significantly greater than that projected and project partners supported a number of other unanticipated project costs such as travel and communications.

### **Did the HTA Ambassador Model increase clinician awareness of the best evidence in chronic pain management?**

6. The HTA Ambassador workshops did increase clinician awareness of the best evidence in chronic pain management.



7. The *Evidence in Brief* summaries were an innovative and highly rated research information communication tool.
8. The *Evidence in Brief* summaries are an unanticipated legacy of the project and will continue to inform those in need of information about chronic pain management in the future.

**Did the HTA Ambassador Model affect clinician attitude and practices for using research evidence in the management of chronic pain?**

9. The HTA Ambassador Model did not affect the attitudes of the participants who attended the workshops. They were already pre-disposed towards the topic of chronic pain management and already had related information needs; hence their selection for an invitation in the first place, and their subsequent decision to attend.
10. The HTA Ambassador Model did increase participants' knowledge about the chronic pain management topics covered in the workshops.
11. The workshops did catalyze some planning in participating regions about possible changes to chronic pain management.
12. It is too soon to measure any real impact on participants' practice areas and practice-based decisions. There are many intervening factors including organizational contexts, levels of influence, resources and the limited elapsed time. However, a positive trend was indicated by one third of respondents who did indicate some practice change as a result of the workshops.

Based on the findings of this evaluation, several recommendations are advanced for consideration.

**Recommendation 1**

The HTA Ambassador Model can be applied to other health and clinical practice topics. The Model has been well developed and could become a routine continuing education strategy for health professionals on HTA topics where there is a demonstrated need for research information.

**Recommendation 2**

The *Evidence in Brief* summaries are an excellent HTA communication tool and can be expanded to other topics and made available on the AHFMR website. They could be developed as a separate but complementary activity in conjunction with each planned cycle of Ambassador-type continuing education for health professionals.

**Recommendation 3**

Some consideration should be given to conducting further follow-up with workshop participants to obtain a longer-term perspective on project impact on knowledge and practice.

**Recommendation 4**

Further thought needs to be given to ways of obtaining the resources required to deliver this effective research transfer strategy, should the decision be made to pursue it further. For example, more partners could be involved such as professional and disease-specific organizations in addition to research foundations and health authorities. The production of research summaries could be funded separately from the delivery process.



## References

- Brindis, C. D. (1986). Development and evaluation of a short-term training design for health professionals. *Mobius*, 6(1), 33-48.
- Buckley, L. L., Goering, P., Parikh, S. V., Butterill, D., & Foo, E. K. H. (2003). Applying a 'stages of change' model to enhance a traditional evaluation of a research transfer course. *Journal of Evaluation in Clinical Practice*, 9(4), 385-390.
- Calgary Health Region. (2004). *A Proposal to Increase HTA Knowledge Transfer Activities in Alberta* (Proposal). Calgary.
- Calgary Health Region. (2004). *HTA Ambassador Project: Decisions and suggestions to Date, Including Results of the June 11, 2004 Planning Meeting "Work in Progress"*. Calgary.
- Calgary Health Region. (2004). *Alberta HTA Ambassador Program, Advisory Committee Meeting Minutes. April 27, 2004*. Calgary.
- Calgary Health Region. (2004). HTA Ambassador Program: An Alberta Exploration in Enhancing Health Research Uptake. PowerPoint presentation to Steering Committee. April 13, 2004. Calgary.
- Calgary Health Region. (2004). *HTA Ambassador Program Model: Research Into Practice*. Calgary.
- Casebeer, L., Kristofco, R. E., Strasser, S., Reilly, M., Krishnamoorthy, P., Rab Sheng, S., et al. (2004). Standardizing evaluation of on-line continuing medical education: Physician knowledge, attitudes, and reflection on practice. *Journal of Continuing Education in the Health Professions*, 24(2), 68-75.
- Davis, D., Evans, M., Jadad, A., Perrier, L., Rath, D., Ryan, D., et al. (2003). The case for knowledge translation: Shortening the journey from evidence to effect. *British Medical Journal*, 327(7405), 33-35.
- Frere, D. (2004). Strategic Knowledge Integration Model.
- Haynes, B., & Haines, A. (1998). Barriers and bridges to evidence based clinical practice. *British Medical Journal*, 317(7153), 273-276.
- Krippendorff, K. (1980). *Content Analysis: An Introduction to its Methodology*. London: Sage Publications.
- Landry, R. & Birdsell, J. (2003). Utilization of Health Research Results in Canada.
- Muir Gray, J. A. (2001). *Evidence-based Healthcare: How to Make Health Policy and Management Decisions*. London: Churchill Livingstone.
- Smits, P. B. A., Verbeek, J. H. A. M., & C. D. de Buissoné. (2002). Problem based learning in continuing medical education: a review of controlled evaluation studies. *British Medical Journal*, 324, 153-156.
- Swedish Council on Technology Assessment in Health Care. (n.d.). *The Ambassador Program in Sweden*. Retrieved November, 2004, from <http://www.sbu.se/www/SubPage.asp?CatID=27&PageID=275>



Wehrmann, K. C., Shin, H., & Poertner, J. (2002). Transfer of training: An evaluation study. *Journal of Health Social Policy*, 15(3-4), 23-37.

Weiss, C. H. (1998). *Evaluation: Methods for Studying Programs and Policy* (Second ed.). Upper Saddle River, New Jersey: Prentice Hall.

