

Physical Therapy Knowledge Broker Report Year 6 September 2014 to October 2015

PURPOSE OF THE DOCUMENT:

The purpose of this document is to provide the Steering Committee / funding partners with a report on the outcomes of year six for the Physical Therapy Knowledge Broker position.



Physical Therapy Knowledge Broker Report Year 6	Submitted by: Alison M Hoens
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1. PROGRESS ON GOALS & DELIVERABLES

Goal 1: Establish a web presence for the PT knowledge brokering initiative

- Develop and maintain a web page for KT within the UBC Department of Physical Therapy and PABC websites with links to funding partners. The page will host documentation from projects associated with the PT KB role, KT resources for clinicians /decision-makers / researchers, and links to other pertinent KT sites.

The PT KB will develop the webpage by Sept 2009 and maintain the web page for the duration of the appointment. The funding partners will provide access to the required resources to update and maintain the websites.

Both UBC Department of Physical Therapy and PABC websites house PT KB web pages (established Aug 2009). Notification of updates to content on the web pages is provided by e-blasts from the PABC CEO and librarian and newsletters from both the UBC Dept of PT and PABC.

Reach

PABC website: Total number of hits Sept 30 2014 to Sept 30 2015 = **9143**

PABC	Sept 1/09 Dec 8/09	Jan 1/10 Sept 10/10	Apr 1/11 Sept 21/11	Sept 30/11 Sept 30/12	Sept 30/12 Sept 30/13	Sept 30/13 Sept 30/14	Sept 30/14 Sept 30/15
Avg # of hits/month	61	133	141.6	203.6	515.8	1174.5	761.9

Key message: There was a **35% reduction** in views this past year; the first reduction noted. The drop is most likely due to the fact that there was only one new resource posted during year 6 – the electrophysical agent lecture series. The completion of the Move More Sit Less Toolkit is anticipated to trigger a spike in 2016 views.

UBC website

UBC	April 1/13-Sept 30/13	Sept 30/13 - Sept 20/14	Sept 30/14-Sept 30/15
PT KT pages	Total =3,300 Avg # hits/month =136	Total = 9632 Avg # hits/month = 802.7	Total = 12,988 Avg # hits/month = 1082

Key message: **26% increase** in views between the previous and current year. This increase is likely due to traffic driven from international websites such as Physiopedia, British Journal of Sports Medicine, and Bone & Joint Canada. Another potential driver is the social media strategy of targeted tweets highlighting the resources.

Of note this year was the lack of engagement by Physiopedia members with the feedback buttons provided on the PT KB pages of the website.

Next steps

Continue to add and update content and promote via newsletter articles, e-blasts and social media

Goal 2: Facilitate PT clinician / researcher partnerships in BC

- Identify PT clinicians and researchers for potential clinician / researcher partnerships
- Link PT clinicians and researchers for integrated KT and end-of-grant KT collaboration opportunities

The PTKB will develop (by Oct 2009) and maintain a directory of clinicians and researchers with interest and capacity for partnerships and link members for potential collaborations. The funding partners will assist in circulating the call for directory membership and communicating with the PT KB all potential projects for collaboration.

The online research collaboration registry (developed May 2010; updated Feb 2011, Nov 2013 & Dec 2014 and is **now auto-updated** with each new registration). Currently 136 PTs across BC registered themselves as researchers, decision-makers and/or clinicians in various practice areas (e.g. orthopaedics). The registry has been used to (1) facilitate research partnerships (2) identify clinical questions for MPT student research projects and (3) develop special interest groups (e.g. Cancer Interest Network).

Key Message: The registry was accessed 137 and 23 times respectively from the UBC and PABC website during the past year. It was used to invite partnerships in 2 research projects undertaken by faculty in UBC Dept of PT.

Partnerships (provincial & national)

The following table presents the number of participants within each partner group.

Partner Group	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Clinicians	71	87	102	161	169
Researchers	22	32	38	60	64
Decision makers	11	23	23	40	40
Students	11	24	30	31	40
Patients			5	35	40

Key message. Despite 'lack of time' being the most frequently reported factor by health care providers that prevent participation in research or enhanced practice activities, 169 clinicians engage, persist and/or re-engage in PT KB projects. Drop out of partners is rare. Patient engagement has been particularly fruitful in enhancing the applicability and meaningfulness of outputs.

Next steps

Continue to work with UBC Dept of PT faculty, VCHRI, PHCRI, PABC and Practice Leaders in Health Authorities to identify opportunities for clinician, researcher, student, patient & decision-maker collaborations.

Goal 3: Enhance access to evidence-based learning resources and knowledge products for PTs in BC

- Identify existing and develop new learning resources and on-line guides to assist clinicians in acquiring, appraising, synthesizing and applying knowledge into practice
- Provide on-line access to the learning resources, guides and other knowledge products

Developed, disseminated, and supported the implementation of the following evidence-based resources:

Resource	Purpose	Apr-Sept 2011	Sept 2011-Sept 2012	Sept 2012 - Sept 2013	Sept 2013-Sept 2014	Sept 2014-Sept 2015
EPA lecture series <i>*new PABC only</i>	Update on the current state of evidence and practice for electrophysical agents					61
Lymphedema <i>PABC only</i>	BC PT Lymphedema services; Evidence-informed practices				117 PABC	41 PABC
Deep Vein Thrombosis <i>PABC only</i>	Evidence-informed practices for management of DVT				53 PABC	40 PABC
Use of the Canadian C-spine Rule	Toolkit of resources to support appropriate use of x-ray for patients after cervical spine trauma				405 UBC 579 PABC	485 UBC 217 PABC 1850 You-

						Tube 3,456 Physio Pedia
Arthritis referral to PT for Physicians <i>PABC only</i>	Decision-tree & information for physicians re approp referral to PT for patients with arthritis				901 PABC	611 PABC
Arthritis resources for PTs <i>PABC only</i>	Recommended resources for PTs managing patients with arthritis					91 PABC
Arthritis referral to PT for Pharmacists <i>PABC only</i>	Decision-tree & information for pharmacists re approp referral to PT for patients with arthritis				118 PABC	472 PABC
Cryotherapy: Why, When & How	Decision-making tool to guide safe and effective application of cryotherapy to manage pain, inflammation, edema and swelling		58	148	368 PABC 1166 Physio pedia	103 PABC *na UBC 801 Physio pedia
Electro physical Agents CIs and Precautions	Decision-making tool to guide safe application of electrophysical agents	UT Press ~1 K mailed - 1620 views - 822 print orders (113 in USA) - 157 orders	UT Press: views 1, 987 downloads 986 purchased 1383 purchased PABC: 102	238 PABC	564 PABC	417 PABC Na Physio pedia
SAFEMOB	Decision-making tool to guide safe mobilization of acutely ill patients in addition to an inventory of supporting resources and a webinar	87	77	104	548 UBC 35 PABC 771 Physio pedia	537 UBC 42 PABC 1176 Physio pedia
Skin & Wound – Use of electrical stimulation and ultrasound to promote wound healing	Array of resources to support care of wounds including a recorded lecture, practical demonstration, list of required equipment, guide to the application of electrical stimulation, references & links to additional resources	97	164	133	375 UBC 7 PABC	649 UBC 26 PABC
Outcome measures for	Toolkit of resources to support use of	75	75	122	623 UBC	1124 UBC

Total Joint Arthroplasty	outcome measures in the continuum of total knee and hip arthroplasty including recommended measures, 1 page summaries; discharge letter templates & online modules				970 PABC	181 PABC 900 Physio pedia
Inventory of databases for outcome measures	Links to databases for rehabilitation-related outcome measures	NA	79	182	370 PABC	370 PABC
Safe Handling of Patients <i>PABC only</i>	A series of 'alerts' & inventory of resources with key information to guide safe handling of patients in acute care settings	209	52	87	1,239 PABC	124 PABC
Achilles Tendinopathy Toolkit	Toolkit provided an array of synthesized and translated evidence to support management of Tennis Elbow		1102 PABC 2,054 from 43 countries Physio pedia NA BJSM	510 PABC 16,000 from 45 countries Physio pedia 84 BJSM	2138 UBC 1435 PABC 11,412 Physio pedia	1881 UBC 762 PABC 20,930 Physio Pedia 111 BJSM
Lateral Epicondyle Tendinopathy Toolkit	Toolkit provided an array of synthesized and translated evidence to support management of Tennis Elbow			191 PABC 2065, 18 countries Physio pedia 45 BJSM	4374 UBC 1166 PABC 9,530 Physio pedia	4730 UBC 1477 PABC 11,313 Physio Pedia 87 BJSM
Exercise in Acute Exacerbation of COPD	Summary of the project providing support for safe & effective ex in AECOPD		76	88	212 UBC 32 PABC	222 UBC 41 PABC
Botox and spasticity: management algorithm and inventory of outcome measures	Algorithm for evidence-informed practice for management of spasticity; Inventory of appropriate outcome measures to evaluate effectiveness of Botox		99	98	27 PABC	42 PABC
Guidelines re provision of wheelchairs for progressive neuromus disease	Practice guideline for provision of wheelchairs in progressive neuromuscular disease		50	79	308 UBC 74 PABC	238 UBC 9 PABC
FEATHERS	Summary of the project sing robotics and gaming to				191 UBC 23	164 UBC 10

	support rehab in cerebral palsy and stroke				PABC	PABC
Research Collaboration Registry	Database of PTs in BC who wish to be contacted for potential involvement as researchers, decision-makers or clinicians in specific areas of practice		45	59	21	137 UBC 23 PABC
Overview of the PT KB position	Outline of the PT KB position (role, scope, activities)		126	126		1506 UBC
KB Annual Reports	Annual reports				160 UBC	84 UBC 0 PABC
KT Resources	Links to key KT resources				185 UBC	103 UBC

The perceived value of these resources has been reflected in invitations by Physiopedia to provide both a commentary and undertake an interview about the activities, outputs and outcomes of the PT KB role. Here are the links:

<https://www.youtube.com/watch?v=ovmTiS6MznQ> and <http://www.physiospot.com/?p=20330>
<http://www.physiospot.com/2015/01/28/the-more-we-share-the-more-we-know/>

Key messages:

- 23 resources have been developed over the 6 years of the position.
- The **resources have collectively been viewed this year ~58,000 times** for a total of approximately **164,000 times locally, nationally and internationally.**
- The two **tendinopathy toolkits have collectively been accessed over 85,000 times since posted**
- It is striking that many of the resources continue to generate interest despite that they were developed and disseminated several years ago. For example, the Tendinopathy Toolkits received **33,000 views** this year.
- It is important to recognize that these metrics reflect only those that can be tracked through website analytics – it is possible that there has been informal sharing of these resources after downloading.
- These **metrics reflect outcomes but not impact.** Whilst acknowledging that it is challenging to measure true change in practice (ideally involving an RCT with randomized exposure and non-exposure to the resource), a more intermediary, yet feasible, metric is to assess possible impact on practice. Accordingly, this year a team, facilitated by the PT KB, completed a 2 year evaluation of the effect of the Achilles Tendinopathy Toolkit. The survey included vignettes of hypothetical case histories. The manuscript, **recently accepted for publication, reported that those familiar with the toolkit are twice as likely to use the recommended evidence-informed strategies to manage this condition.**

Provision of Journal clubs via webinars for PABC members.

For 2016-2016, the webinar series focuses on physical activity across the lifespan: (1) Child’s Play: Physical Activity in children with Cerebral Palsy or obesity (2) Tween Knees; Anterior Cruciate Ligament injury/reconstruction and Patellofemoral Pain in teenagers and (3) Tech Talk: using technology for enhancing rehab in stroke.

For 2014-2015, the webinar series incorporated a partnership with BC Pharmacy Association for 1) management of acute inflammation and for 2) bone health as well as 2 PT researchers for 3) concussion assessment and management.

Date	Topic	Partner(s)	Attendees/ Registrants	Views of recordings
Nov	Putting out fires –	Dr S Bhatti	64/112	98

2014	Management of Acute Inflammation	BC Pharm Assoc		
Feb 2015	Better Bones – the pharmacological and non-pharmacological management to enhance bone health	Dr S Bhatti BC Pharm Assoc	46/89	333
March 2015	Dings in the Brain: What brain imaging can tell PTs about concussion	Dr N Virji-Babul Dr M Borich	70/124	353

Previous webinars

Date	Topic	Partner(s)	Initial Views of recording	Views of recordings Sept '14-'15
July 2014	The Tip of the Iceberg: the icing controversy	Nadine Plotnikoff	1,599	240
April 2014	OM #3: Outcome Measurement for Total Joint Arthroplasty	Dr M Westby	633	34
March 2014	Sticking your neck out: Canadian Cspine Rule	Cspine Rule Task Force	152	47
Feb 2014	OM #2 Outcome Measurement for Shoulder Dysfunction	C Bennett	437	53
Nov 2013	OM #1: How to Find, Select, Apply, & Interpret Outcome Measures	Dr Vanessa Noonan	463	41
June 2013	Closed vs Open Kinetic Chain Exercise	N Plotnikoff	438	37
April 2013	Kinesiotaping	P Martin	509	25
Feb 2013	Frozen Shoulder	D Seigel	2270	49
May 2012	Mobilization and manipulation for cervical pain	C Kennedy	NA	NA
Mar 2012	Effectiveness of orthotics for patella-femoral pain	Dr M Hunt	NA	10
Jan 2011	Tennis elbow	Dr A Scott	NA	19
Nov 2011	Effectiveness of therapeutic ultrasound for soft tissue pathology of the shoulder	Dr J Anthony	NA	43
May 2011	Effectiveness of Low level LASER for Achilles Tendinopathy	Dr J Anthony	NA	15
Mar 2011	Hip Protectors: Effectiveness for reducing hip fracture	Dr T Liu Ambrose	NA	8
Aug 2010	Effectiveness of mobilizations for knee OA	No partner	NA	10

Each journal club is bookended by a pre and post webinar questionnaire. Of note, one of the most enlightening aspects of the postwebinar questionnaire is the question asking participants to state 3 key things that they learned – frequently, I learn the most from this section. Finally, throughout the webinar there are a series of polling questions to enable interaction with participants. The following table provides a sample of the evaluations of the webinars presented in 2014/2015:

	% reporting that in comparison to prewebinar, feel more confident in knowledge & application	% reporting they will change practice & provided specific examples of how to do so
Putting out fires – Management of Acute Inflammation	100%	93%
Better Bones – the pharmacological and non-pharmacological management to enhance bone health	100%%	89%
Dings in the Brain: What brain imaging can tell PTs about concussion	92%	61%

Sample quotes from webinar attendees:

- “Great job! Loved learning more about pharmacist amazing knowledge on the world of meds and how to help us navigate this, when it's not our knowledge base”
- “Just a wealth of information provided for resources to explore on my own”.
- “It was clear, the power point was loaded with links to resources and the presenters were extremely knowledgeable”
- “The right length of time, addresses a topic for our growing demographic of older adults, and it was FREE :)”
- “Evidence based information in a concise presentation with good clinical reasoning”
- “Well rounded discussion that provided the research and then tied it into practice”

Key message:

- *The ‘big question’ is “Do these sessions assist in changing practice?”* Although we cannot currently accurately measure this there is evidence that ‘intent’ to change practice is predictive of 40% of actual change in practice (Groth, 2011). The results of the post-webinar questionnaires for the first 2 webinars (demonstrating that 100% of respondents intend to change practice” together with 93% and 89% of respondents indicating specifically how they would do so, is in line with the literature indicating significant potential effectiveness of these sessions to elicit change in practice. The less impressive results for the third webinar reflect the fact that this session focused on neuroimaging for concussion – this is not part of the scope of practice of PTs but the membership indicated that it was important background knowledge for them when they are educating their patients.

Next steps

- Continue to develop, post and ‘market’ learning opportunities and resources that enhance knowledge and build skills for evidence-informed practice.

Goal 4: Identify and facilitate a KT initiative for each of the funding partners

- Identify and facilitate an achievable project that is relevant for PT practice for each funding partner
- Ensure representation from all relevant funding partners for each KT initiative
- Ensure that the selected projects are congruent with the CIHR framework for knowledge translation

The PT KB will facilitate the collaboration between partners for development of resources/tools, implementation of resources/tools and the evaluation of the effectiveness of the interventions. The funding partners will ensure that there is assistance with resources (personnel, meeting rooms, technical support).

Project & Partners	Objectives	Status
SAVE BC Study to Avoid cardiovascular Events in BC PHC, PHCRI, VCH	To develop and implement a program with the overall goal to identify, manage and longitudinally follow patients with extremely premature arterosclerotic disease, their first degree relatives and spouses to better understand the factors	Initiated Patient Partners recruitment & orientation Drafted evidence based and theory informed KT plan

	and implement interventions to reduce risk in high risk individuals..	Recruitment in process
<p>Arthritis Partnerships at Work: Web-enabled interventions for Canadians with arthritis to support productivity and health at work</p> <p>UBC Dept of PT, Arthritis Research Canada</p>	To develop a multi-stakeholder partnership with workers with arthritis, insurance providers, health benefit plan managers, employers, workplace health and safety, clinicians, and researchers, for the purpose of jointly developing, testing and implementing e-interventions aimed at supporting workers with arthritis and musculoskeletal conditions in their goal to remain employed and lead healthy and productive lives at work	Initial stages of development
<p>PEIRS Patient engagement in research scale</p> <p>UBC Dept of PT, Arthritis Research Center</p>	Development and validation of a tool to evaluate patient engagement in research	PI (Postdoc Clayton Hamilton) currently developing the research team and refining the proposal
<p>eQUIP Effective Quality Indicator Implementation for Patients</p> <p>PHC, VCH</p>	To develop innovative quality indicator tools that empower patients to actively engage in the rehabilitation process and make informed decisions about their options during their knee and hip replacement journey. The long-term goal is to improve the patient experience and overall quality, consistency and outcomes of total joint arthroplasty care.	Awaiting result of application for funding
<p>Assessing recovery from concussion with exertion testing (ARCET)</p> <p>UBC Dept of PT, UBC, Harvard</p>	To (1) more precisely characterize recovery from concussion, (2) clarify the mechanisms underlying exertion intolerance after concussion, and (3) develop a novel biomarker for concussion in patients who pass conventional clinical tests.	Securing funding
<p>Walk10Blocks</p> <p>UBC Dept of PT, Alzheimers Society, Canadian Association of Retired Persons, Arthritis Consumer Experts</p>	<p>A collaborative project to develop an app to encourage the general public to walk to improve cognitive and joint health</p> <p>This work is funded by ICON. The project is led by Cheryl Koehn, a patient leader.</p>	Currently revising app based on results of beta-testing of prototype.
<p>Physical Activity Support Kit Initiative (PASKI) Move More. Sit Less</p> <p><i>KB led project</i></p> <p>Partners: PABC, UBC Dept of PT, VCHRI, PHCRI, Physical Activity Line of BC, Patient Voices, Fraser Health</p>	<p>To create a repository of resources to facilitate physical activity and reduce sedentary time in persons living with chronic disease</p> <p>104 healthcare providers, patients, decision-makers, students and researchers are participating in a Core Committee, Working groups in clusters of disease categories, and an Advisory Committee.</p>	<p>Several working groups have completed identifying, cataloguing and evaluating resources and these recommended resources are being vetted by Advisory Group members.</p> <p>MPT students analyzing patient survey and writing key messages for website.</p> <p>Website design complete & initiating the loading of resources.</p>
<p>West coast Interprofessional Clinical Knowledge Evidence</p>	To develop and evaluate the outcomes for five web-based, interactive modules to teach students the steps of evidence-informed	All 5 WICKED modules are complete & available on UBC Connect.

<p>Disseminator (WICKED)</p> <p>UBC PT, OT, Family Practice</p>	<p>health care.</p>	<p>OT and PT students & Family Practice residents are using the modules. Evaluation::pre-module attitude survey, pre-module Fresno test, End of module survey data for modules 1 and 2; interviews with OT instructors</p>
<p>Monitor OA</p> <p>UBC Dept of PT, ARC, MPAP</p>	<p>To determine whether a model involving 1) the use of Fitbit® Flex™, a commercially available physical activity tracker, 2) a group education session, and 3) remote coaching by a PT can improve physical activity and reduce sedentary time in pts with knee OA</p>	<p>RCT in process</p>
<p>SuPER: Supporting Patient care with Electronic Resources (SuPER):</p> <p>UBC Dept of PT, Arthritis Research Canada, Boston University</p>	<p>To develop and test an online decision aid for patients considering biologic therapy for rheumatoid arthritis</p>	<p>Online decision aid developed and beta-tested. RCT in process.</p>
<p>Improving Cognitive & Joint health Network (ICON)</p> <p>Partners: UBC Dept of PT, ARC, School of Interactive Art & Technology (SIAT), Grand NCE Center for Digital Media, QxMD, KinDuct, Laval, U of Alberta</p>	<p>Knowledge translation based initiatives (KT tools) to optimize mobility independence in older adults using digital technologies</p> <p>Personal role: Member of Executive Committee – KT Core Facility Co-leader and a member of the Knowledge User Advisory</p>	<p>Initial projects underway (see Walk 10 Blocks above)</p>
<p>Electrophysical Agents (EPA) Indications</p> <p><i>KB led project</i></p> <p>Partners: PABC, UBC Dept of PT, EPA experts from across Canada</p>	<p>To provide Physiotherapists with an evidence-informed clinical decision-making aid for use of electrophysical agents (eg. Laser, Ultrasound, TENS etc)</p> <p>Team of experts Team recruited from Ottawa, U of Manitoba, U of Toronto, U of Western Ontario & UBC</p>	<p>Submitted manuscript guiding the use of neuromuscular electrical stimulation for neurological, musculoskeletal and critical care populations.</p>
<p>ANSWER 2</p> <p>Partners: Dr. Linda Li Arthritis Research Center UBC VGH/VCH Grand NCE</p>	<p>Funded by a CIHR Catalyst Grant for eHealth Innovations, this project is an extension of the successful ANSWER decision aid tool to help patients who have rheumatoid arthritis (RA) decide whether to proceed with medication treatment using “biologics” (genetically engineered proteins) as recommended by their doctors.</p> <p>ANSWER-2 is integrated into an online RA Patient Passport that tracks patients’ health status and allows them to communicate this information with their health professionals.</p>	<p>ANSWER-2 online decision aid completed and usability tests completed. RCT in process.</p>

<p>Prospective Surveillance of Arm Morbidity post Breast Cancer surgery</p> <p>Partners: Dr. K Campbell (UBC Dept of PT) PHC, PHCRI, VCHRI Fraser Health BC Cancer Research Institute Simon Fraser University</p>	<p>To 1) improve the quality of research to inform a change in practice with a proactive PT monitoring program to reduce arm morbidity 2) quantify the cost of delivering the intervention and possible cost-savings to the health care system 3) understand the local barriers and facilitators to a change in clinical practice from the point of view of decisions makers, clinicians & patients.</p>	<p>RCT complete and manuscript submitted</p> <p>Next steps: - KT plan: workshop and online handbook</p>
<p>Total joint arthroplasty: Enhancing utilization of outcome measurement (TJAOM)</p> <p><i>KB led project</i></p> <p>- Partners: UBC Dept of PT, PABC, VCH, PHC</p>	<p>3 synergistic projects with the following objectives: (1) To establish a baseline of current utilization of outcome measurement (OM) in TJA care (2) To document clinician identified barriers and solutions to use of OM in TJA care (3) To develop learning resources and tools necessary to facilitate use of OM in TJA care (4) To disseminate, implement, and evaluate the uptake of the learning resources and tools using the information from objectives #1 and #2 in conjunction with evidence from implementation science</p>	<p>Toolkit complete. Online modules finished and reviewed externally.</p> <p>First manuscript published. Second manuscript in process.</p> <p>Dissemination plan developed. Presenting at STEP UP & CPA Congress and BC PT Provincial Practice Forum</p>
<p>AECOPD project</p> <p>UBC Dept. of PT PHCRI VCHRI PABC University of Toronto University of Saskatchewan CESEI QxMD VCH PT Fraserhealth PT</p>	<p>Given that SAFEMOB could not adequately address the needs for safe and effective exercise prescription for Acute Exacerbation of Chronic Obstructive Pulmonary Disease (AECOPD), the AECOPD project grew from the SAFEMOB project. The AECOPD team, under the direction of Dr. Pat Camp, successfully secured funding from the Canadian Institute of Health Research Knowledge Synthesis Grant for the initial phase of this project and recently received funding from PHCRI for KT implementation.</p>	<p>Tool developed and usability testing completed. App and online learning modules in development.</p>
<p>Tendinopathy Toolkits</p> <p><i>KB led projects</i></p> <p>Partners: UBC Dept. of PT VCHRI, PHCRI PABC</p>	<p>Tendinopathy Task force developed decision-making tools to support evidence-informed practice in management of Achilles and Lateral epicondyle tendinopathy.</p>	<p>Both toolkits were updated this year with the findings from recent literature. Evaluation of outcomes of Achilles toolkit completed and manuscript in press.</p>
<p>Cervical Spine Trauma: Use of Canadian Cervical Spine Rules</p> <p><i>KB led project</i></p> <p>Partners:</p>	<p>The overarching goal of this project was to ensure appropriate referral to a medical doctor for imaging (X-ray), BC PTs of patients with acute neck pain secondary to trauma. Specifically, PTs knowledge and current practice in the management of acute neck pain in relation to the Canadian Cervical Spine Rule (C-Spine Rule) was</p>	<p>- Completed. Supporting resources (video, decision support tools, template of letters to physicians) disseminated. Manuscript being submitted.</p>

<p>Dr. Linda Li & ARC UBC Dept .of PT PABC VCHRI PHCRI</p>	<p>assessed and the results used to identify the need for, and inform the design of, learning resources and tools to increase awareness and/or use of the C-Spine Rule in clinical practice</p>	<p>Supported through participation in the "Foundations of KT Course (VCHRI/MSFHR)</p>
<p>FEATHERS Functional Engagement in Assisted Therapy through Exercise Robotics</p> <p>Partners: UBC Mechanical Engineering, Physical Therapy, Occupational Science and Occupational Therapy, Kinesiology BC Center for Abilities, Abilities Neurological Rehabilitation</p>	<p>Funding provided by the Peter Wall Solutions Initiative.</p> <p>To develop social gaming programs, supported by upper-limb robotics, that will enable and motivate children with cerebral palsy, and older adults after stroke, to practice their home exercises.</p>	<p>Multiple manuscripts published Prototype developed and tested Clinical trials completed.</p>
<p>Seating GAWG: Seating Guideline Adaptation Working Group for provision of wheelchairs in progressive neuromuscular disease</p> <p>- Partners: BCC&W, Sunnyhill Hospital, GF Strong, UBC Dept of PT, UBC Dept of Occupational Science & Occupational Therapy, VCH</p>	<p>(1) Appraise the 2006 UK guideline using the AGREE instrument (2) Evaluate, synthesize and incorporate evidence from an updated comprehensive literature review and local consensus. (3) Incorporate information appropriate for specific progressive neuromuscular diseases. (4) Ensure the update guideline reflects the needs and practice environment of BC therapists.</p>	<p>Completed The guideline has been appraised, updated and adapted to the BC context and disseminated May 2014.</p>
<p>SAFEMOB Safe mobilization of the acutely ill patient</p> <p><i>KB led project</i></p> <p>Partners: UBC Dept of PT, PABC, VCH, PHC</p>	<p>(1) To develop a concise tool which guides physiotherapy clinicians in evidence-informed-decision-making (EIDM) relevant to the safe mobilization of the acutely ill patient.</p>	<p>Completed. Supporting resources were also developed, disseminated and posted. A recorded webinar providing case histories demonstrating how to utilize the resource is also posted. Shared nationally & internationally.</p>
<p>Enhancing physiotherapy best practice in issues of skin & wound care</p> <p><i>KB led project</i></p> <p>- Partners: PABC, VCH, PHC, PT Skin & Wound Care Committee,</p>	<p>(1) To increase the awareness of BC PTs regarding the role of PTs in the prevention, assessment & management of skin & wound care issues. (2) To increase the number of BC PTs who undertake a basic risk assessment and utilize basic interventions for prevention & management of skin & wound care issues. (3) To provide information to BC PTs on where to find guidance on and training in</p>	<p>Completed. An array of resources (lectures, practical demonstrations, handouts, equipment list, reference list) has been developed and posted on the PABC website.</p>

Interdisciplinary Skin & Wound Care Committee; UBC Dept of Occupational Science & Occupational Therapy	advanced assessment and intervention techniques.	
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Key messages

- This year has seen an increase in the percentage of interdisciplinary projects and the addition of projects which are out of the scope of physical therapy practice. This change is a result of an increasing role for the PT KB in PHCRI and VCHRI. In addition, there is an emphasis on patient engagement and the use of technology which have precipitated the need for and acquisition of additional training in these areas.

Goal 5: Provide progress reports and a year-end report to the funding partners

- Intermittent email updates on the progress on each of the goals
- Coordinate a meeting of funding partners in December 2009 providing a progress report and opportunity for discussion
- Provide a year-end report detailing the successes achieved in the inaugural PT KB position and recommendations for the future growth of the role

The PT KB will provide all documentation to funding partners with sufficient opportunity to review prior to meetings and will revise, within 2 weeks of receipt of revisions requested by the funding partners.

Email updates of the progress on the goals are communicated intermittently to the Steering Committee. Updates are also provided annually on the PABC and UBC Dept of PT websites. The 6 Month report was submitted December 9 2009, Year 1 report September 13, 2010, Year 2 report October 20 2011, Year 3 April 4 2013, Year 4 April 2 2014, and Year 5 April 4 2015.

Next steps

Continue intermittent email updates and annual report. Due to increased demands, reduce websites updates to annually.

2. ADDITIONAL ACTIVITIES / DELIVERABLES

In addition to activities related to fulfilling the above-stated goals, the following activities and key events have been undertaken / occurred:

Meetings with Steering Committee

- Annual review

Needs Assessment

- Undertook a needs assessment in Year 1 for clinicians, academics and faculty & posted executive summary & results. Results informed Action Plan.
- Call for proposals in Spring 2011 and Fall 2014.

Activities for The UBC Department of PT

- Continuing Professional Development for Physical Therapists Collaborative
- Member: Dept. of PT Clinical Faculty Appointments, Reappointments and Promotions Committee
- Assist faculty in knowledge translation components of grant applications and development of knowledge translation plans
- Member – WICKED: West coast Inter-professional Clinical Knowledge Evidence Disseminator
- Member – Continuing Professional Development Advisory Group
- Member – UBC FOM Revenue Generating Committee
- Attendance (intermittent) at Faculty meetings
- Submission of articles for newsletters twice per year
- Panel discussion re clinician participation in research

- Support & mentorship for new UBC Continuing Professional Development PT Coordinator position

Activities for PABC

- Submission of articles for quarterly newsletters
- Assist PABC Knowledge Broker task force members in writing articles for newsletters
- Assist PABC members with requests for and interpretation of evidence for practice
- Assist PABC staff with specific requests for information from PABC members
- Assist PABC librarian with selection of resources for monthly member emails and for the website
- Develop curriculum, coordinate presenters and co-present webinar journal clubs
- Present at PABC Practice Forum: "The art and science of helping patients to be more active" with Dr Linda Li and David Troughton

Activities for VCHRI & PHCRI

- Co-prepared KT presentation at PHC/PHCRI Leaders Forum and facilitated breakout session
- Presented at VCHRI/MSFHR Foundations of KT course
- Facilitating development of KT Innovation Hub vision with PHCRI, PHC, VCHRI, MSFHR, BC SPOR Support Unit
- PHCRI Research Leaders monthly meetings
- KT & Community Engagement for VCHRI
- Member of Healthcare Education and Research Rounds (HEARR) Action Team
- Subject Matter Expert (SME) for Cerner/CST electronic medical record project
- Update synthesis of evidence and best practice for use of incentive spirometry
- Update synthesis of evidence and guide for best practice for secretion removal techniques
- Consultant for PHCRI KT issues
- Consultant for VCHRI KT issues
- Present at VCH/PHC STEP UP PT Education & Research Day "Device vs Ice: use of ice bag vs cooling/compression device post total knee replacement".
- Mentor and advisor for PHCRI and VCHRI Research Challenge projects
- Co-lead PHC KT Community of Practice with 3 components: (1) KT concept (2) Brag & Steal (3) Share & Solve
- Updated resources re use of incentive spirometry and secretion removal techniques in PHC
- Developed resources to support evidence-informed mobility and respiratory interventions for surgical patients
- Provided consultation for KT component of Alzheimer grant submission & MSFHR Scholar award for Dr M DeMarco

Presentations

- Vancouver Canucks Medical Staff: Update on electrophysical agents
- Chair: Consumer Panel at Arthritis Alliance Canada conference: Consumer action in Canadian Osteoarthritis Research: from study participants to knowledge transfer agents. Oct 22 (25 minutes)
- Dissemination for policy and practice change HSCI 825 SFU Oct 7 (2 hrs)
- VCH Physiotherapy: Do all patients with cervical spine trauma need an xray?
- PHCRI Research Challenge workshop: Knowledge Translation
- PHCRI Research Challenge workshop: Knowledge Translation
- STEP UP 2015: Intermittent ice bag vs consistent cooling with a device post total knee replacement
- BC Physiotherapy Practice Forum 2015 The art and science of helping patients to be more active. Co-presented with Dr Linda Li and Mr Dave Troughton
- VCHRI/MSFHR KT course: Canadian Cervical Spine Rule project

Professional Development

- Practicing Knowledge Translation Course (Sept 2014-March 2015) – Li Ka Shing Institute/Sick Kids, Toronto
- Why are so many patients dissatisfied with knee replacement surgery? Reflections & results from a multiphase mixed methods study in BC. S Bryant
- The Behavior Change Wheel: KT Canada Rounds S. Michie
- JOSPT Webinar: New Clinical Findings in Knee Osteoarthritis

- Planning Your Social Media Strategy for Knowledge Translation
- KT Canada webinar: Social media – a key tool for knowledge mobilization
- Dr Wilfred Peter – Animated Arthritis Questionnaire
- KT Canada webinar: “Evaluation of behavior change interventions to increase the use of pneumatic otoscopy in family medicine: a pilot randomized trial”
- A tale of KT in the ICU Dr D Cook
- What’s up Doc? Communicating with doctors
- ARHP Research Webinar Nothing About Us Without Us: Engaging Patients in Rheumatology Research”
- Sedentary behavior C2E2
- The Psychology of Resilience and the Associations with Chronic Pain. Webinar. Canadian Institute for the relief of Pain and Disability
- World Congress of Physiotherapy: Why electrophysical agents (EPA) should substitute for simple analgesia in selected clinical applications
- Wearable technologies & their impact on optimal aging KT Canada
- E-learning: Basics in design of online learning materials
- Subsequent Entry Biologics Facts. Arthritis Consumer Experts
- Mary Pack Arthritis Program Education Day
- CPA webinar: Writing Qualitative Research for Publication
- KT Canada Webinar: Dissemination and Implementation
- How can we help our patients in pain to exercise?
- Weight bearing as tolerated – Bone & Joint Canada webinar
- STEP UP. VCH/PHC Education & Research Day
- BC KT Community of Practice: Evaluating Research Impact
- Research Skills update UBC Dept of Family Practice
- The Social Network: Using Twitter to Translate and Disseminate Evidence
- How do knowledge brokers facilitate KT initiatives in health-related settings?. Public Health Ontario
- End of Grant KT Course, KT Canada

Other

- Member: MSFHR KT Training Program Advisory Group
- Co-Chair: Arthritis Patient Advisory Board – Arthritis Research Canada
- Physical Literacy Initiative Bone & Joint Canada
- Patient Panel for Patient Role in Research: Arthritis Alliance Canada
- Informed Western University MPT student research project

Reviewer

- Canadian Respiratory Journal
- British Medical Journal Case Reports
- Physiotherapy Canada
- Canadian Journal of Sports Medicine
- Physician and Sports Medicine
- Physical Therapy
- Canadian Journal of Rehabilitation

Publications

Year 6: 11 (5 published, 1 in press, 3 submitted, 2 in process)
Year 5: 13 (4 published, 4 in press, 2 submitted, 3 in process)
Year 4: 11 (6 published, 1 in press, 2 submitted, 2 in process)
Year 3: 10 (3 published; 1 in press; 4 submitted; 2 in process)
Year 2: 5 (4 published; 1 submitted)
Year 1: None

Published (peer-reviewed)

Dean E, Greig A, Murphy S, Roots R, Nemhard N, Rankin A, Bainbridge L, Anthony J, **Hoens AM**, Garland J. Raising the Priority of Lifestyle-related Non-communicable Diseases in Physical Therapy Curricula.

Physical Therapy. Epub ahead of print Dec 17.

Barber CE, Marshall D, Alvarez N, Mancini GBJ, Lacaille D, Keeling S, Avina-Zubieta JA, Khodyakov, Marshall D, Barnaby C, Faris P, Smith A, Noormohamed, R, Fans P, Smith A, , Hazelwood G, Martin LO, Esdaile J, and **The Quality Indicator International Panel**. Development of Cardiovascular Quality Indicators (QIs) for Rheumatoid Arthritis (RA): Results from an International Expert Panel Using a Novel Online Process. *The Journal of Rheumatology*. 2015;42;1548-1555

Camp PG, Reid WD, Chung F, Kirkham A, Brooks D, Goodridge D, Marciniuk DD, **Hoens, AM**. A Clinical Decision-Making Tool for Safe and Effective Prescription of Exercise in Acute Exacerbation of Chronic Lung Disease: Results from an Interdisciplinary Delphi Survey and Focus Groups. *Physical Therapy*. 2015 Oct;95(10):1387-96. doi: 10.2522/ptj.20140542. Epub 2015 Apr 16, doi:10.2522/ptj.20140542.

Lam M, Tatla S, Lohse K, **Hoens AM**, Miller K, Holsti L, Virji-Babul N, Van der Loos M. Perceptions of Technology and its Use for Therapeutic Application for Individuals with Hemiparesis: Findings from Adult and Paediatric Focus Groups. *JMIR Rehabil Assist Technol JMIR Rehabil Assist Technol* 2015;2(1):e1 doi:10.2196/rehab.3484.

Shadgan B, Pakravan AH, **Hoens A**, Reid WD. Effects of local cold spray on subcutaneous and intramuscular blood flow and oxygenation. *Journal of Athletic Training*. 2015;50(8):800–805. doi: 10.4085/1062-6050-50.6.02.

In press

Glegg S, **Hoens AM**. The role domains of knowledge brokering: A model for the healthcare setting. *Journal of Neurologic Physiotherapy*. In press. See video abstract: https://youtu.be/udp8JNu_tL4

Submitted

Ezzat A, Schneeberg A, Huisman ES, White LD, Kennedy C, Levesque LA, Scott A, **Hoens AM**. A cross-sectional evaluation examining the use of the Achilles Tendinopathy Toolkit by Physiotherapists in British Columbia, Canada.

Hung S, Rafn BS, **Hoens AM**, McNeely ML, Sing C, Kwa W, Dingee C, McKeivitt EC, Kuusk U, Goldsmith CH, Campbell KL. Cost Description Analysis of a Prospective Surveillance Program for Arm Morbidity after Breast Cancer Surgery.

Dhillon S, Sima CA, Cheng J, Kirkham AR, Horii C, McKnight B, Petts K, **Hoens A**, Lynd PJ, Monillas R, Cook W, Camp PG. Can a home-based exercise program in community-dwelling older adults improve mobility and balance. *Clinical Rehabilitation*

In process

Hoens AM, Belot M, Kennedy C, Li LC, Does every patient after cervical spine trauma need an X-ray? Description of the process undertaken for a knowledge translation project to support evidence-informed practice for physiotherapists. *Physiotherapy Canada*

Westby MD, Langford D, Longstaff S, Sweeney P, Field R, **Hoens AM**. Use of a knowledge translation plan to address practice factors influencing physiotherapists' use of outcome measures in total joint arthroplasty

Key messages:

- One manuscript proposed a new model for knowledge brokering in the healthcare setting. A video abstract was also created to highlight the key messages https://youtu.be/udp8JNu_tL4
- Total number of citations for all publications = 118
- ResearchGate score: 21.79 “higher than 72.5% of members”

3. RESEARCH GRANT ACTIVITY

Year 6: 8/20 grant applications successful (awaiting results on 5); Total funding \$282,670

Year 5: 3/15 grant applications successful (awaiting results on 4): Total funding: \$83,501.60

Year 4: 1/6 grant applications successful*: Total funding: \$6,000 *awaiting results on 4/6 * subsequent to the 2012/2013 report, 3 grants that were awaiting results were subsequently successful in achieving funding totaling \$847,196

Year 3: 2/10 grant applications successful: Total funding: \$441,991
 Year 2: 2/7 grant applications successful: Total funding secured = \$370,000
 Year 1: 3/7 grant applications successful; Total funding secured = \$374,319

Funding Agency	Title	PI	PT KB Role	\$	RESULT
Sciences and Humanities Research Council of Canada Partnership Development Grants	Arthritis Partnerships at Work: Web-enabled interventions for Canadians with arthritis to support productivity and health at work	Dr D Lecaille	Co-applicant	150K	Awaiting result
VCHRI/PHCRI Innovation & Knowledge Translation	Effective Quality Indicator Implementation for Patients and Total Joint Replacement Rehabilitation (EQUIP-TJR)	Dr M Westby	Co-investigator	50 K	Awaiting result
CIHR	OPERAS – an On-demand Program to Empower Active Self-management for community dwelling seniors to improve functional independence	Dr L Li	Co-investigator	200 K	Awaiting result
CIHR Partnerships for Health System Improvement PHSI	SAVE BC: an initiative to improve the care of patients with extremely premature cardiovascular disease and their family members	Dr L Brunham Dr S Pimstone	Co-investigator	400 K	Awaiting result
Heart & Stroke Foundation	SAVE BC: an initiative to improve the care of patients with extremely premature cardiovascular disease and their family Members	Dr L Brunham Dr S Pimstone	Co-investigator	100 K	Awaiting result
CHRP	Beyond Dissemination: A knowledge translation study to implement and evaluate a tool to support safe and effective activity in AECOPD	Dr C Camp	Co-investigator	25 K	Not funded
College of Physicians and Surgeons of BC	WICKED “Improving the assessment of evidence informed health care competence: A five step approach”	Dr A Greig	Co-applicant	6 K	Funded
UBC TLEF	Improving the assessment of evidence-based health care competencies	Dr A Greig	Co-applicant	21540	Funded
UBC TLEF	WICKED: West Coast Interprofessional Clinical Knowledge Evidence Disseminator Year 3	Dr A Greig	Co-investigator	33 K	Funded
CIHR KTA	EPIC: Ethics, Professionalism, and Interactive Communication: An E-health Ethics Toolkit for Health Professionals	Dr C Backman L Heppell Dr Li	Co-investigator	170 K	Not funded
CIHR (via ICON)	Walk 10 Blocks: a public awareness campaign to facilitate physical activity (app)	C Koehn, E kayfetz, J Stewart	Co-investigator	25 K	Funded
PHCRI Research Challenge	USE IT? Examining use of lower limb prostheses in older adults post amputation following	C Budzinski	Mentor	4 K	Funded

	inpatient rehab at Holy Family Hospital				
Brain Canada	ARCET: Accessing recovery from concussion with exertion testing	N Silverberg	KT consultant	356 K	Not funded
CCSRI Innovation Operating Grant	Understanding the potential of exercise to treat chemo brain	Dr K Campbell	KT consultant	200 K	Not funded
Canadian Breast Cancer Foundation BC/ Yukon Community Health Grant	Taking action: Improving physical activity support and resources for breast cancer survivors in BC	Dr K Campbell	Co-investigator	50 K	Not funded
VCHRI Innovation & Translational Research Awards Competition	Monitor -OA Improving physical activity using an online monitoring tool: a new model of osteoarthritis care	Dr L Li	Co-investigator	50 K	Funded
CIHR eHiPP	OPERAS – an On-demand Program to Empower Active Self-management for community dwelling seniors to improve functional independence	Dr L Li	Co-investigator	750 K	Not funded
CIHR	LungFIT: a smartphone system for pulmonary rehabilitation	Dr P Camp	KT support	92 K	Funded
CIORA	SuPER: Supporting Patient care with Electronic Resources (SuPER): Effectiveness of an online decision aid for patients considering biologic therapy for rheumatoid arthritis	Dr L Li	Co-investigator	51130	Funded
CIHR Foundation Scheme		Dr N Bansback	KB support		Not funded

Key messages

- 40% of grant applications submitted this year were funded to a total of \$283,000

4. Key Messages from Year 6

1. **Sustained user engagement** with resources
 - Total of ~164,000 views of all resources
 - 34,000 additional views this year and ~85, 000 views total of tendinopathy toolkits
2. **Facilitated updates** of 4 existing resources to incorporate new literature
3. **Enhanced personal KT knowledge, skills, tools and networks** with the completion of a 6 month course in “Practicing Knowledge Translation”
4. **Contributed to the KT literature with a new conceptual model in knowledge brokering**
Video abstract @ https://www.youtube.com/watch?v=udp8JNu_tL4&feature=youtu.be
5. **Published the first evaluation of the outcomes of a PT KB project:** the evaluation of the outcomes of the Achilles Tendinopathy Toolkit which revealed that those who reported familiarity with the toolkit were twice as likely to select recommended interventions

6. **Established traction for the development of a KT Innovation Hub** – aligning development with synergistic initiatives including the Providence rebuild and the development of the BC SPOR Support Unit and Academic Health Sciences Network
7. **Advanced the sustainability of KT in BC** – e.g. BC KT CoP, PHC KT CoP, MSFHR KT pathway
8. **Enhanced personal knowledge, skills and experience in use of technologies** to support KT, support evidence-informed skill development and practice; and patient engagement
 - E.g. WICKED, OPERAS, TJAOM online modules, Walk 10 Blocks app, Move More Sit Less website development
9. **Expanded knowledge, skills, experience in evaluation**
 - E.g. KT tools such as The Consolidated Framework for Implementation Research / Theoretical Domains Framework / logic models; WICKED outcomes
10. **Developed new partnerships**
 - Personalized Medicine Initiative, Pain BC, Osteoporosis Canada
11. **Invited to collaborate on international initiatives**
 - E.g. Physiopedia interview <https://www.youtube.com/watch?v=ovmTiS6MznQ> and shared presentation with international colleagues (IFOMPT)
12. **40% of grant applications submitted were funded for a total of ~\$283,000**

5. *Proposed Priorities for Year 7*

1. **Complete the build of Move More Sit Less Physical Activity Support Kit website**
2. **Strengthen knowledge/ skills in patient engagement in research**
 - E.g. Contribute to development of how-to manual for patient engagement in research (“It IS about us!”), development of Patient Engagement in Research Scale and Patient engagement in outcome measurement (OMERACT)
3. **Use new KT knowledge/skills/ resources/tools/networks acquired from recent KT training to enrich projects such as SAVE BC**
4. **Continue contributions to building and sustaining knowledge translation / knowledge brokering in BC**