



School of Rehabilitation Science
MSc(PT) Program

Research & Evidence Based Practice
Abstracts

2013

**MSc Physiotherapy Program
Presentation Schedule for Research Day
McMaster University, MIP Room 1 - Tuesday, July 23 2013**

	9:00 -9:10	WELCOME
1	9:10-9:25	Physical Activity and Cancer: A Study on the Barriers and Facilitators to Exercise During Cancer Treatment Students: Nafeesa Amlani, Christian de Milleville, Stephanie Fernandez, Jenna Franklin Supervisors: Dana Lawson and Jenna Smith
2	9:25-9:40	Evaluating Participant Satisfaction in a Community-based Exercise Program for People with Cancer Students: Christina Nowak, Julie Paul, Nicole Petis, Kristen Thompson Supervisor: Oren Cheifetz
3	9:40-9:55	The Reliability of the Cumulative Occupational Physical Load (COPL) Tool in Healthy Adults Students: Samantha Austin, Emily LeBlanc, Patrick Milne Supervisor: Dr. Monica Maly
4	9:55-10:10	An Exploration of the Change in Roles for Occupational Therapy Assistants/Physiotherapy Assistants in a New Patient Care Model Students: William Bateman, January Muhlbeier, Suad Musse, Laura Peters Supervisors: Lisa Brice-Leddy and Debbie Park
5	10:10-10:25	Evaluating the Intra-rater Reliability, Inter-rater Reliability, Test-retest Reliability, and Construct Validity of Sensation Testing on the Foot and Leg using the Semmes-Weinstein Monofilament Test Students: Rebecca Armstrong, Jordan Mackonka, Oliver McKay, Andra Schonfeld, Kaley Veerman Supervisor: Dr. Michael Pierrynowski
	10:25-10:40	BREAK
6	10: 40-10:55	Test-retest Reliability, Predictive Validity, and Discriminant Validity of the Two-minute Walk Test in Children in Cerebral Palsy. Students: Jacqueline Nixon. Lauren Powell, Rachel Snaidero Supervisor: Dr. Virginia Wright
7	10:55-11:10	Internal Models of Motor Control and Developmental Coordination Disorder Students: Christine Hui, Laura Kennedy, Emily Newton Supervisor: Dr. Vickie Galea
8	11:10-11:25	Systematic Review of Classification Systems Used to Identify and Treat Acute and Chronic Cervical Spine Disorders Students: Andrew Howie, Sean Lenhardt, Geoff Strong, Danny Yee Supervisor: Dr. Lina Santaguida
9	11:25-11:40	Assessing the Knowledge, Skills and Comfort Levels of Occupational Therapists, Physiotherapists, and Nurses in Managing Patients with Pelvic Fractures Students: Erica Reynolds and Christine Thomas Supervisor: Angela Coates
10	11:40-11:55	Manual Therapy and Exercise for Neck Pain: A Systematic Review Update Students: Alex Gurba, Sarah Kolbuc, Paul Sahota, Jeff Slemon Supervisors: Anita Gross and Jordan Miller
	11:55-12:45	LUNCH

11	12:45-1:00	Acupuncture for the Alleviation of Lateral Elbow Epicondyle Pain: A Systematic Review Students: Christina Dzieduszycki and Cora Tomowich Supervisor: Enoch Ho
12	1:00-1:15	Community-based Exercise Programmes for Chronic Neurological Disease in Thunder Bay, ON: A Programme Evaluation Students: Rebecca Puddicombe, Gemma Ross, Emily Stacey, Allison Stacy, Lauren Wallis Supervisor: Kirsti Reinikka
13	1:15-1:30	Community-based Exercise Programmes for Type 2 Diabetes: A Scoping Review Students: Lauren Edwards and Alana Morrison Supervisor: Kirsti Reinikka
14	1:30-1:45	Examining the Construct Validity of the Clinical Performance Instrument - An Analysis of Three Classes of McMaster Physiotherapy Students in Orthopedic Placements Students: Dan Caterini, Kyle Dertinger, Brian Oderkirk, Mike Penney Supervisors: Sarah Wojkowski and Dr. Pat Miller
15	1:45-2:00	Practical Strategies for Preventing Falls in the Home: Wisdom from Homecare Physiotherapists Students: Keri-Lynn LeBlanc and Amanda Politano Supervisors: Lynne Geddes, Joan Southam and Dr. Pat Miller
	2:00-2:15	BREAK
16	2:15-2:30	Diabetes and Physiotherapy Practice: Attitudes and Beliefs of Physiotherapists in Canada Students: Karly Doehring, Andrew Dupras, Scott Durno, Cathy Pakenham. Supervisors: Bashir Versi and Dr. Vince DePaul
17	2:30-2:45	Determining Suitable Outcomes for Evaluation of a Multidisciplinary Day Therapy Program Students: Matthew Chin-Yee and Brian Ouellette Supervisors: Diana Hatzoglou and Dr. Vince DePaul
18	2:45-3:00	The App World: Are Students and Professors Ready? Student: Scott Whynot Supervisor: Christy Taberner
19	3:00-3:15	Rehabilitation Care of an Individual with Extreme Morbid Obesity and Mobility Dysfunction within an Inpatient Hospital: A Case Study Students: Will Guan and Edwin Poon Supervisors: Jennifer Lee and Dr. Vince DePaul
20	3:15-3:30	What do Healthcare Professionals Identify as the Supportive Care Needs of Men with Prostate Cancer? Students: Brittany Murphy and Victoria Payne Supervisors: Dr. Nancy Carter and Dr. Pat Miller
	3:30	CLOSING REMARKS

Physical Activity and Cancer: A Study on the Barriers and Facilitators to Exercise During Cancer Treatment

Students: Nafeesa Amlani, Christian de Milleville, Stephanie Fernandez, Jenna Franklin

Supervisors: Dana Lawson and Jenna Smith

Purpose: To explore barriers and facilitators to exercise in individuals with various types of cancer in Ontario who are currently receiving or who have undergone treatment.

Method: Purposive sampling was used to recruit individuals living in Ontario with a current or previous diagnosis of any type of cancer and who were either undergoing or have received treatment for cancer. This was a cross-sectional study using an online survey for quantitative and qualitative data collection. Percentages and themes were obtained from the available data.

Results: Data were collected from 30 participants. The majority (63.3%) reported infrequent, low intensity physical activity during treatment, which was lower than pre- and post-treatment levels. Primary barriers to physical activity during treatment included fatigue, physical symptoms and unawareness of programs. Primary facilitators were previous positive experience with exercise, desire to maintain engagement in exercise and accessibility. More than 80% did not recall receiving education on the importance of exercise from a healthcare professional.

Conclusions: This study has revealed the barriers and facilitators to physical activity for those receiving cancer-related treatment in Ontario. The findings may encourage healthcare professionals, including physiotherapists, to provide education on the importance of physical activity and strategies to reduce the identified barriers.

Keywords: cancer, physical activity, exercise, barriers, facilitators

Evaluating Participant Satisfaction in a Community-based Exercise Program for People with Cancer

Students: Christina Nowak, Julie Paul, Nicole Petis, Kristen Thompson

Supervisor: Oren Cheifetz

Purpose: The CanWell program is a 12 week exercise program that is offered to persons at any stage of their cancer diagnosis. Enrollment in structured exercise programs has led to decreases in symptoms of cancer-related treatments and improvements in quality of life. To date, there is no research that has primarily investigated feedback surveys to assess participant satisfaction. The purpose of this study was to analyze the results of a participant satisfaction survey to analyze feedback on the strengths and weaknesses of the CanWell program.

Methods: Upon study completion, persons were asked to complete the YMCA participant satisfaction survey that had been modified for the CanWell program. The survey included areas for qualitative assessment of components of the program and opportunities to provide comments related to the strengths and weaknesses. Data was analyzed and comments were collated to identify key themes.

Results: The majority of participants felt that exercise was important and 88% felt confident that exercise would be a regular part of their life upon completing the program. The presence of a healthcare professional was considered important, while the awareness of educational sessions is an area requiring attention. Common barriers to adherence were identified on a personal and program level.

Conclusions: The results of this study provides clinicians with a framework of strengths and weaknesses of this exercise program that may allow for the creation of a client-centred model that incorporates the specific needs of persons with cancer.

The Reliability of the Cumulative Occupational Physical Load (COPL) Tool in Healthy Adults

Students: Samantha Austin, Emily LeBlanc, Patrick Milne

Supervisor: Dr. Monica Maly

Purpose: The purpose of this study was to investigate the reliability of the Cumulative Occupational Physical Load (COPL) Tool in healthy adults.

Method: A convenience sample of healthy adults over the age of 30 was recruited. A cross-sectional, reliability study design was implemented, which included a guided interview according to the COPL Tool protocol. Two raters, who were randomly allocated to interview order and blinded to one another, completed the interviews.

Results: A total of 15 participants (6 men, 9 women, mean age 46.8 years) were recruited and met the inclusion criteria for this study. Complete data was obtained from all 15 participants. The COPL Tool was found to have a moderate level of reliability, ICC= 0.90 (95% CI 0.73-0.96). The SEM of the tool was found to be 34 points (95% CI 25-53). The mean difference in COPL scores was 11 ± 48 between visits and 21 ± 45 between raters on Bland-Altman plots.

Conclusions: The COPL Tool has the potential to be used to establish risk factors for knee OA progression in future research. Furthermore, the COPL Tool may prove to have clinical utility for establishing preventative measures in the workplace.

An Exploration of the Change in Roles for Occupational Therapy Assistants/Physiotherapy Assistants in a New Patient Care Model

Students: William Bateman, January Muhlbeier, Suad Musse, Laura Peters

Supervisors: Lisa Brice-Leddy and Debbie Park

The purpose of this study was to describe the experiences of occupational therapy/physiotherapy assistants (OTA/PTA) after the recent implementation of a collaborative care model. A tertiary care facility in South-Western Ontario introduced a new patient care model whereby the OTA/PTAs became the primary therapy providers for physiotherapy (PT) and occupational therapy (OT) services. The current study employed an exploratory descriptive case study design to evaluate the evolution of the OTA/PTAs' role. Using semi-structured interviews of 6 OTA/PTAs, an open coded method identified three themes relevant to changes in their role: increased independence, greater connection to the inter-professional team, and a greater connection to the patient. With increased independence, OTA/PTAs were required to rely more on their own judgement and clinical skills. The OTA/PTAs felt they needed strong clinical reasoning, communication skills and greater collaboration as a result of an increased connection to the inter-professional team. Finally, OTA/PTAs reported having more consistent contact with patients than any other individual healthcare team member. This study provided important insight into the changing role of OTA/PTAs within a given collaborative care model. Future research should explore the experiences of physiotherapists and occupational therapists in working in this new model.

Evaluating the Intra-rater Reliability, Inter-rater Reliability, Test-retest Reliability, and Construct Validity of Sensation Testing on the Foot and Leg using the Semmes-Weinstein Monofilament Test

Students: Rebecca Armstrong, Jordan Mackonka, Oliver McKay, Andra Schonfeld, Kaley Veerman

Supervisor: Dr. Michael Pierrynowski

Purpose: To determine the reliability and known group validity of the Semmes-Weinstein Monofilament Test (SWMT) of cutaneous sensation in a healthy population.

Methods: Healthy volunteers were recruited from McMaster University from January to February 2013. Using the SWMT, groups of three raters assessed cutaneous sensation at five sites on the dominant leg and foot, across six time points, for each volunteer. Inter-rater, test-retest, and intra-rater reliabilities were estimated using Kendall's W. Known group differences between the heel and arch, and between pre-barefoot and post-barefoot running conditions were determined using the Mann-Whitney U test. Probability (p) values ≤ 0.05 were considered statistically significant.

Results: Sixteen volunteers were recruited to participate in this study. Kendall's W for inter-rater reliability was 0.56, for test-retest reliability was 0.70, and for intra-rater reliability was 0.61. The SWMT was able to differentiate between the heel and the arch ($p < 0.001$), and between pre-bare and post-bare running conditions ($p < 0.001$).

Conclusion: The SWMT is a valid measure of cutaneous sensation for the leg and foot, and exhibits moderate inter-rater, test-retest, and intra-rater reliability in healthy volunteers. These findings support the use of the SWMT in healthy populations for both clinical and research purposes.

Test-retest Reliability, Predictive Validity, and Discriminant Validity of the Two-minute Walk Test in Children in Cerebral Palsy.

Students: Jacqueline Nixon. Lauren Powell, Rachel Snaidero

Supervisor: Dr. Virginia Wright

Purpose: To determine the test-retest reliability, predictive and discriminative validity of the two-minute walk test (2MWT) compared to the six-minute walk test (6MWT) in 31 ambulatory children with cerebral palsy (CP).

Method: Data collected in a previous study by Thompson et al. (2008) were used. Fifteen males and 16 females with varying forms of CP participated in the study (mean age 9 years 5 months). The retest interval ranged from 4-31 days (mean 10.6 d).

Results: The 2MWT ICC was 0.95 across all participants, with ICCs >0.90 in GMFCS Levels I and III and 0.63 in GMFCS Level II. Bland-Altman analyses indicated bias towards higher 2MWT retest distances in GMFCS Level I. Strong associations ($r > 0.93$) were found across all participants when comparing the 2- and 6MWT. Correlation coefficients ranged from $r = 0.73$ for GMFCS Level II to $r = 0.98$ for GMFCS Level III. 2MWT distances differed significantly between GMFCS Levels I and II, and between GMFCS Levels I and III.

Conclusion: The study provides evidence that the 2MWT could replace the 6MWT for children in GMFCS Levels I and III, but further research is needed to investigate the 2MWT in GMFCS Level II.

Keywords: Two-minute walk test, six-minute walk test, cerebral palsy, reliability, validity

Internal Models of Motor Control and Developmental Coordination Disorder

Students: Christine Hui, Laura Kennedy, Emily Newton

Supervisor: Dr. Vickie Galea

Purpose: To explore the existence or lack thereof of forward internal modeling in school-aged children with Developmental Coordination Disorder (DCD).

Methods: Children aged 5 - 12 years with DCD were invited to participate in this study, which involved completing a visuo-motor aiming task through a joystick computer game. Participants were required to move a joystick and aim a cursor towards a virtual target on a computer screen while various perturbations to the cursor were applied. Errors and slope constants, time to correction (TTC), and percent target hits (% hits) were compared to age-matched controls.

Results: On average over all trials, children with DCD showed increased errors, decreased adaptation, slower time to correction, and similar percent target hits compared to their respective age-matched controls.

Conclusions: Children with DCD may exhibit limited abilities to form internal models of motor control. Therefore, typical strategies to target motor control may not be as effective in this population and this study warrants further research into alternative motor learning approaches.

Key Words: Developmental Coordination Disorder; incoordination; motor skills; motor pathways

Acknowledgments: The authors thank Dr. Vickie Galea, Blue Balloon Health Services, Children's Developmental Rehabilitation Program, and previous researchers for their support during this study.

Systematic Review of Classification Systems Used to Identify and Treat Acute and Chronic Cervical Spine Disorders

Students: Andrew Howie, Sean Lenhardt, Geoff Strong, Danny Yee

Supervisor: Dr. Lina Santaguida

Purpose: A scoping review aimed at gaining a better understanding of the breadth of knowledge for treatment-based classification systems involving neck pain. To date, the breadth of treatment-based classification systems for neck pain is limited.

Methods: A systematic search was performed using MEDLINE; Embase, CINAHL and Psychinfo for literature published from 1990 to January 2013. Studies were eligible after three levels of screening on DistillerSR[®] if they included neck pain and other pre-determined inclusion criterion. Treatment-based subgroup classifications were selected based on designs appropriate to test differences between groups.

Results: Sixteen articles met the inclusion criteria for treatment-based classifications of the neck. Three studies were categorized using treatment subgroup design criteria, seven were reliability/validity studies, and six were treatment subgroups that could not be classified into the previous criteria.

Conclusions: Currently, most of the research appears to be conducted towards manual therapy and the McKenzie treatment system. Future research should be focused on validating all proposed treatment classification systems for neck pain.

Assessing the Knowledge, Skills and Comfort Levels of Occupational Therapists, Physiotherapists, and Nurses in Managing Patients with Pelvic Fractures

Students: Erica Reynolds and Christine Thomas

Supervisor: Angela Coates

Purpose: The purpose of this project was to identify current knowledge, practices and comfort levels of allied health care clinicians and nurses working at Hamilton Health Sciences (HHS), Hamilton General Hospital and community hospitals in the HHS Trauma Program catchment area in managing patients with traumatic pelvic fractures (TPFs).

Methods: One hundred and eighty-five individuals responded to a survey that was distributed to rehabilitation, medicine and surgical wards of all community hospitals in the HHS Trauma Program catchment area. This survey is the quantitative portion of a two-part mixed methods study.

Results: Results showed that few respondents in both the community and hospital settings currently use a systematic approach to mobilization and that access to specialized equipment is more readily available at teaching facilities. It was also found that the top barriers to mobilization exist outside the control of OTs, PTs, and nurses.

Conclusion: Future research using a qualitative approach is required to gain a more thorough understanding of current mobilization practices and to attain insights into practices that health care workers believe to be most influential for fostering positive patient outcomes in order to develop a clinical care pathway that will standardize rehabilitation across all settings.

Manual Therapy and Exercise for Neck Pain: A Systematic Review Update

Students: Alex Gurba, Sarah Kolbuc, Paul Sahota, Jeff Slemon

Supervisors: Anita Gross and Jordan Miller

Manual therapy is commonly used in conjunction with exercise in the treatment of neck pain. This update to the cervical group systematic review assesses the efficacy of manual therapy in combination with exercise in improving, pain, function/disability, global perceived effect, quality of life (QoL) and patient satisfaction for adults with neck pain with or without cervicogenic headache or radiculopathy. Computerized searches were updated to June 2013 and included bibliographic databases without language restrictions for medical, chiropractic, and allied health literature. At least two reviewers independently conducted data abstraction, risk of bias and methodological quality assessment. Pooled relative risk and standardized mean differences were calculated when possible. Of the 24 trials included, 33.3% (8/24) had a low risk of bias. Moderate quality evidence indicate that mobilization or manipulation and exercise improve outcomes of pain in populations with acute WAD at immediate post treatment or at short-term follow-up when compared to traditional or general practitioner care. Benefit was also identified for outcomes of pain and quality of life at long-term follow-up in patients with non-specific neck pain when compared to patients receiving primarily manual therapy as a single intervention. Specific implications for clinical practice and future research recommendations are made.

Acupuncture for the Alleviation of Lateral Elbow Epicondyle Pain: A Systematic Review

Students: Christina Dzieduszycki and Cora Tomowich

Supervisor: Enoch Ho

Purpose: Lateral epicondylitis (LE) is a painful and debilitating condition that limits capacity to operate at normal functioning. Acupuncture (AP) has become increasingly popular as a concurrent or independent treatment of this condition. The purpose of this review is to appraise current research related to AP, and evaluate its ability to reduce LE pain and improve functioning.

Methods: A comprehensive search strategy was created and applied to online databases, including, Medline, AMED, CINAHL, EMBASE, and Cochrane Database of Randomized Controlled Trials. Randomized and quasi-randomized controlled trials written and published in English were appraised by independent reviewers for quality and bias using the PEDro scale and the Cochrane Library Assessment of Risk of Bias, respectively. Four studies met the inclusion criteria and were compared using methodology, outcome measures, and intervention approach.

Results: Study quality was rated as moderate to high and all suggested that AP was more effective than control treatment in relieving short-term LE pain.

Conclusions: There is moderate to high evidence suggesting that AP is effective in the temporary relief of LE pain. There is no evidence provided by this review to show that AP is effective in reducing disability or restoring normal functioning to people experiencing this condition.

Community-based Exercise Programmes for Chronic Neurological Disease in Thunder Bay, ON: A Programme Evaluation

Students: Rebecca Puddicombe, Gemma Ross, Emily Stacey, Allison Stacy, Lauren Wallis

Supervisor: Kirsti Reinikka

Purpose: To review the current outcome measures (OMs) used by community-based programmes that target individuals with stroke, multiple sclerosis (MS) and Parkinson disease (PD). This data will be used to make recommendations regarding a comprehensive evaluation strategy for the community-based stroke, MS, and PD exercise programme currently being provided in Thunder Bay, Ontario.

Methods: Four electronic databases were searched. A list of the OMs used in each study was compiled. Five reviewers independently analyzed and recommended measures based on psychometrics, feasibility and overall utility in a community setting. The minimum agreement value for inclusion of an OM was 70%.

Results: 44 studies met inclusion criteria, in which 33 OMs were used multiple times. Recommendations for evaluation of the community-based programme included five OMs for stroke, four for MS and three for PD.

Conclusion: Despite a lack of consistency in OMs used for community-based exercise programmes in this population, it is important to determine a way to objectively assess the efficacy of the programmes. Using the recommended OMs in the Thunder Bay programme will provide a credible and reliable way to provide rationale for continued support of the programme. Further research is necessary to support the conclusions drawn from this review.

Community-based Exercise Programmes for Type 2 Diabetes: A Scoping Review

Students: Lauren Edwards and Alana Morrison

Supervisor: Kirsti Reinikka

Purpose: This scoping review aimed to outline the available literature regarding community-based exercise programs for adults with type two diabetes mellitus (T2D), along with descriptions of existing community programs to create a recommendation for the development of a program in Thunder Bay, Ontario.

Methods: A literature search regarding community-based exercise programs for T2D was conducted. Existing community-based programs for this population were contacted and provided with a questionnaire. Six peer-reviewed articles were analyzed and four existing community-based programs provided information. One community program was observed on-site. Recommendations were developed based on the above.

Results: Literature demonstrates that community-based exercise programs are effective for achieving glucose control in adults with T2D. The reviewed existing programs reveal the feasibility of providing this service. Recommendations for a program in Thunder Bay, Ontario were developed based on the literature, existing programs and the American College of Sports Medicine guidelines.

Conclusion: Community-based exercise programs provide support to adults with T2D to better self-manage their condition, as well as to prevent the costly secondary complications of T2D. Clinically, more programs need to be made available for rehabilitation professionals to better support their clients with T2D as they transition from outpatient to community-based care.

Key Words: type 2 diabetes mellitus; exercise, physical; community

Competing Interests: The authors report no competing interests.

Acknowledgements: The authors wish to thank Kirsti Reinikka for her review of this manuscript and supervision through this research process. Further, the authors wish to thank all of the community-based exercise programs that participated in this review. A special thank you to the Sweet Success program in Mississauga, ON for inviting the authors to observe their program on-site.

Examining the Construct Validity of the Clinical Performance Instrument - An Analysis of Three Classes of McMaster Physiotherapy Students in Orthopaedic Placements

Students: Dan Caterini, Kyle Dertinger, Brian Oderkirk, Mike Penney

Supervisors: Sarah Wojkowski and Dr. Pat Miller

Purpose: The primary purpose was to assess the construct validity of the Physical Therapy - Clinical Performance Instrument (PT-CPI), and to explore the effect of second orthopaedic placement and student score on the PT-CPI. A secondary purpose of the study was to assess the inter-rater reliability of four raters measuring a Visual Analog Scale (VAS) line in the PT-CPI.

Methods: A convenience sample of PT-CPIs were selected from McMaster Master of Science (MSc(PT)) graduating classes of 2009 and 2010. A Latin-square design was used to determine the inter-rater reliability between four assessors. A 1-tailed paired t-test was used to assess construct validity, and a Spearman correlation coefficient (95% CI) was used to estimate the extent to which a relationship exists between PT-CPI scores and in what unit the second orthopaedic placement occurred.

Results: There was excellent inter-rater reliability between the raters' measurement of the VAS line (ICC = 0.98). Scores on competencies 1, 10, 11, 12, 13 and 14 of the PT-CPI significantly increased from the first to the second orthopaedic placement ($p < 0.006$). A positive correlation between scores and placement timing was found for four competencies.

Conclusions: The PT-CPI demonstrated evidence of validity in orthopaedic settings across 6 competencies.

Practical Strategies for Preventing Falls in the Home: Wisdom from Homecare Physiotherapists

Students: Keri-Lynn LeBlanc and Amanda Politano

Supervisors: Lynne Geddes, Joan Southam and Dr. Pat Miller

Purpose: To gain insight into the different strategies homecare physiotherapists use when working with clients who are reluctant to adopt falls prevention recommendations.

Methods: A qualitative design was utilized to perform a secondary analysis of semi-structured interviews and focus groups of experienced homecare physiotherapists working in Ontario.

Results: Two male and seventeen female homecare physiotherapists from across Ontario participated in four focus groups and two interviews. Six themes emerged from the data: i) establish the therapeutic relationship in the homecare context, ii) utilize meaningful strategies, iii) try a variety of approaches, iv) make changes gradually, v) involve others, and vi) accept that the client can live at risk.

Conclusions: Various strategies were described by participants when attempting to encourage clients to follow evidence-based falls prevention recommendations. The uniqueness of the individual and the home environment must be taken into consideration when applying these strategies. Incorporating motivational interviewing and models of behaviour change in the homecare setting may facilitate the effectiveness of the suggested strategies.

Diabetes and Physiotherapy Practice: Attitudes and Beliefs of Physiotherapists in Canada

Students: Karly Doehring, Andrew Dupras, Scott Durno, Cathy Pakenham.

Supervisors: Bashir Versi and Dr. Vince DePaul

Purpose: To investigate the knowledge, attitudes and current practices of Canadian physiotherapists in the prevention and management of diabetes.

Methods: A web-based questionnaire was conducted over a three-week period in 2013. Participants were recruited through the Canadian Physiotherapy Association's email newsletter. The questionnaire contained 40 items, developed within four domains: demographic and educational background, attitudes and beliefs, current practice, and diabetes knowledge. Questions were based on the International Classification and Functioning Core Set for Diabetes and the Canadian Diabetes Association clinical practice guidelines.

Results: A total of 221 physiotherapists responded to the survey. Almost half (47.5%) of respondents felt that their entry-level physiotherapy education inadequately prepared them to assess and treat persons with diabetes but only 7.6% of those respondents had pursued further diabetes-specific education. 69% of all respondents reported providing counsel to patients about diabetes prevention or management and 40.7% report treating patients specifically for diabetes-related complications. When looking at knowledge and confidence of respondents together, this study found that high levels of confidence did not correlate with high levels of knowledge.

Conclusions: Further diabetes education should be added to academic physiotherapy curriculum and similar information in the form of a module for currently practicing physiotherapists could be beneficial.

Determining Suitable Outcomes for Evaluation of a Multidisciplinary Day Therapy Program

Students: Matthew Chin-Yee and Brian Ouellette

Supervisors: Diana Hatzoglou and Dr. Vince DePaul

Purpose: To 1) describe an interdisciplinary day therapy program (DTP) staff's perceptions of program goals, 2) recommend outcome measures (OMs), and 3) identify barriers and facilitators to implementation.

Method: Utilizing a knowledge translation framework (20) the steps of problem identification; knowledge identification, review and selection; and barrier assessment and knowledge adaptation were completed by a questionnaire for DTP employees; a selection of potential OMs from the literature; and a focus group addressing OM preference and foreseeable barriers and facilitators.

Results: The questionnaire revealed a general consensus on core DTP goals. The modified Reintegration to Normal Living Index (mRNL) and the Patient Generated Index (PGI) were selected from the literature as possible OMs. Participants of the focus group preferred the mRNL due to ease of administration and psychometrics. Primary barriers to implementation included time required for administration, and a lack of formal administrative protocols. Facilitators consisted of redefining and creating new roles, while modifying current assessment tools to incorporate OMs.

Conclusion: DTP staff perceived community reintegration as an essential goal to the program. Currently, there is a lack of OMs to assess that goal in an interdisciplinary setting. However, there are available alternatives (mRNL and PGI) with barriers and facilitators to implementation.

Key words: interdisciplinary health team; knowledge translation; outcome assessment; program effectiveness; reintegration.

The App World: Are Students and Professors Ready?

Student: Scott Whynot

Supervisor: Christy Taberner

Mobile learning (mLearning) is a new method of learning whereby students use a mobile device such as an mp3 player or phone to engage in learning activities. The mobility and lightweight of these devices allows for learning to be performed in a variety of locations at a variety of times. Furthermore, the multimedia and learner interaction possibilities will interest learners of diverse learning styles. In this paper, a scoping review was conducted to address the question: "Do the benefits of mLearning outweigh the challenges to implementation?" This question was specifically targeted towards healthcare education. In total, 26 papers were included in the review. General themes emerged from these papers regarding both the benefits of mLearning as well as the challenges to implementation. The results of the review were used to guide the development of a survey that will be used in future research to assess the perceptions of mLearning and the readiness to adopt mLearning among healthcare educators at McMaster University and Mohawk College. It was concluded that the benefits of mobile learning greatly outweigh any challenges to implementation and that the use of mLearning at McMaster University and Mohawk College should be increased.

Rehabilitation Care of an Individual with Extreme Morbid Obesity and Mobility Dysfunction within an Inpatient Hospital: A Case Study

Students: Will Guan and Edwin Poon

Supervisors: Jennifer Lee and Dr. Vince DePaul

Purpose: The purpose of this case report is to examine the experiences faced by one patient with morbid obesity and his rehabilitative therapists during his inpatient stay at a large urban teaching hospital. The objective will be to reconstruct the inpatient journey of said patient as well as therapists involved in his care during hospitalization.

Method: To ensure completeness of the information collected, the following techniques was employed: (i) focus group meeting with therapists involved with his care, (ii) interview with patient, and (iii) chart review of hospital record.

Results: Findings revealed that barriers and challenges faced by said bariatric patient generally falls within three categories: staff/patient-therapist communication, equipments-related issues, as well as environmental and system barriers.

Conclusion: In summary, current research on the experiences of bariatric patients in an inpatient environment is limited. Findings from this case report have shown that both patients and healthcare personnel involved in the circle of care experience many difficulties during the patient's hospitalization. The results found in this case report highlights several areas where occupational and physical therapist's care for bariatric patients was challenged and will hopefully guide future studies in the quest for improving bariatric patient care.

What do Healthcare Professionals Identify as the Supportive Care Needs of Men with Prostate Cancer?

Students: Brittany Murphy and Victoria Payne

Supervisors: Dr. Nancy Carter and Dr. Pat Miller

Purpose: To examine healthcare professionals' (HCPs) perceptions of the supportive care needs of men with advanced prostate cancer (APC).

Research Approach: Qualitative descriptive study.

Participants: HCPs currently working at healthcare facilities treating prostate cancer.

Methodologic Approach: Interviews/focus groups.

Findings: HCPs identified four themes related to men's supportive care needs: pain/symptom management, information, emotional, and practical assistance needs. HCPs emphasized issues related to pain, urinary incontinence (UI) and fatigue. They also reported that men continuously ask for more information related to treatment, side effects and prognosis. HCPs identified a variety of barriers in meeting supportive care needs: lack of management strategies, ineffective knowledge transference, the common "stoic and old school" nature of men in this population and men's hesitancy towards accepting in-home services.

Conclusions: To improve both patient care and the transition towards cancer survivorship, healthcare systems need to implement interprofessional teams with clearly defined professional and specialized roles in prostate cancer to treat pain, UI and fatigue.

Knowledge Translation: 1) Men with APC experience significant unmet supportive care needs; 2) HCPs identified similar unmet needs as previously reported by men with APC and their families; 3) Interdisciplinary teams with role specialization could be implemented to meet these supportive care needs.