

# **Continuing Care in the Edmonton Region: A Research Inventory**

Alberta Centre on Aging  
University of Alberta

April 2009

## **ACKNOWLEDGEMENTS**

This inventory was prepared by the Alberta Centre on Aging at the University of Alberta. Kristina Babich, Administrative and Research Coordinator, and Laurel Strain, Director, worked together to compile the document. Colleagues willingly provided information about their own research and the work of their colleagues and students. Their contributions were critical in ensuring that the inventory was as complete as possible. The Research Unit at CapitalCare deserves a special thank you for their patience as we asked questions about the various projects funded by the organization. Funding for the inventory was provided by the four partner organizations that have come together to form the Institute for Continuing Care Education and Research (ICCER). These partners are Alberta Health Services – Capital, CapitalCare, NorQuest College, and the University of Alberta.

Despite efforts to make this inventory as exhaustive as possible, there are projects for which information was not provided and those that may not have come to our attention. Individuals aware of such projects are asked to contact the Alberta Centre on Aging, 305 Campus Tower, University of Alberta, Edmonton, AB T6G 1K8; tel: 780-492-3207; e-mail: [aging@ualberta.ca](mailto:aging@ualberta.ca).

# TABLE OF CONTENTS

ACKNOWLEDGEMENTS .....	i
INDEX OF TABLES .....	iii
INTRODUCTION .....	1
METHODOLOGY.....	1
Terminology and Definitions .....	1
Identification of Research Projects.....	2
Organization of Inventory .....	3
CHARACTERISTICS OF THE PROJECTS.....	5
Funding Sources .....	5
Investigators.....	5
Research Settings.....	5
Topics Studied.....	8
Existing Strengths and Areas for Future Research.....	14
LISTING OF PROJECTS .....	16
PROJECT ABSTRACTS.....	19
INDEX OF INVESTIGATORS.....	115

## INDEX OF TABLES

Table 1. Funding Sources of 55 Projects.....	6
Table 2. Organizational Affiliation in Rank Order by Number of Investigators.....	7
Table 3. Topic Area: Client/Resident Functioning.....	9
Table 4. Topic Area: Services/Care Practices.....	10
Table 5. Topic Area: Environment.....	11
Table 6. Topic Area: Moves to/within Continuing Care.....	11
Table 7. Topic Area: Informal Caregivers/Family.....	12
Table 8. Topic Area: Formal Caregivers/Staff.....	12
Table 9. Topic Area: Satisfaction with Care.....	13
Table 10. Topic Area: Use of MDS-RAI Instrument.....	13
Table 11. Topic Area: Knowledge Translation/Brokering.....	14

# INTRODUCTION

This inventory of research on continuing care in the Edmonton region was prepared by the Alberta Centre on Aging at the request of the Steering Committee of the Institute for Continuing Care Education and Research (ICCER). The objectives of this initiative were:

- 1) To prepare expanded abstracts for continuing care research projects conducted in the Edmonton region from 2005-present or involving ongoing analyses of data collected since 2000;
- 2) To identify topic areas addressed by this research; and,
- 3) To identify existing strengths and areas for future research.

## METHODOLOGY

### Terminology and Definitions

Various terms and definitions of continuing care are found in the existing literature. The following definitions provided parameters for the scope of this inventory.

Continuing Care: Ongoing care for individuals as they age that is provided in settings such as home care, long-term care facilities, supportive living, day hospitals, and day care. It excludes acute and sub-acute care provided in such settings as physicians' offices, hospitals, and sub-acute units. It also excludes situations where individuals are residing in a housing complex where services, but not care, are provided; this would include assisted living complexes where residents receive services such as meals but this is due to a preference rather than a health care need. Issues include but are not exclusive to service delivery, clients' profiles and outcomes, caregiving, and education in continuing care.

Age: All adults who need care; excludes pediatrics.

Research: Both funded and non-funded projects that have specific questions to be answered and go beyond standard clinical care and required data collection. It includes evidence-based, evaluative, and educational research; and Master's level theses and PhD dissertations. The research may be conducted by individuals with/without an affiliation with the ICCER partner organizations.

Time Period: Research conducted from 2005-present or ongoing analyses of data collected since 2000.

Geographical Location: Research conducted in the former Capital Health Region. For ease of discussion, this area is referred to here as the Edmonton region. Edmonton-only results had to be provided, or have the potential to be provided. As a result,



Several other information sources were consulted. The ICCER Steering Committee was asked to identify relevant projects. Lists of the grant recipients of the CapitalCare Foundation Research Grants and Alzheimer Care Research Grants were obtained and final research reports submitted to CapitalCare were reviewed, if available. Similar reviews were conducted of the titles of grants funded by Caritas and by the Glenrose Rehabilitation Foundation. Lists of grants approved by Capital Health were also examined. Depending on the amount and type of information available, researchers identified through these sources were provided with either a request to complete the Fact Sheet or a project abstract for their review.

Online searches of the research literature also were conducted. Relatively few projects were identified through this source as the grey literature and projects in their early stages were unlikely to be online. As well, the specific geographic location often is not specified in journal articles. Finally, Faculty libraries of student theses and dissertations were reviewed for potential projects. If a new project was identified from any of these sources, the researcher was contacted and asked to complete a Fact Sheet.

Overall, extensive tracking was required to obtain the information in the inventory. Often the information initially provided was incomplete, and necessitated subsequent follow-ups so that an abstract was as accurate as possible.

This time-consuming and labour-intensive process yielded **55 research projects** on continuing care in the Edmonton region, conducted from 2005-present or ongoing analyses of data collected since 2000. It is important to note, however, that despite an extensive search, this inventory cannot be considered an exhaustive inventory of the research. Further, no attempts were made to assess the quality or rigor of the research.

### **Organization of Inventory**

The inventory begins with summary charts that provide information on the funding sources, the organizational affiliation of the investigators, and the categorization of the research projects into nine broad topic areas. This is followed by a brief discussion of existing strengths and areas for future research.

A Listing of Projects provides all project titles listed by investigators' names. Abstracts for each project are provided in alphabetical order by the lead investigator's name. Each abstract includes:

- Principal investigator (name and affiliation)
- Co-investigator(s) (name and affiliation)
- Title of project
- Key words
- Funding agency and amount of funding (if provided)
- Time frame
- Purpose
- Setting
- Methods
- Results
- Conclusions
- Journal articles (if any)
- Reports (if any)
- Thesis (if any)
- Presentations (if any)

The report concludes with an index of investigators' names.

# CHARACTERISTICS OF THE PROJECTS

## Funding Sources

The funding sources and amounts of the 55 projects vary widely, from non-funded research to a \$4.7 million grant from the Canadian Institutes of Health Research. Table 1 provides information on funding sources. The total dollar amount is not calculated given the differences in project duration; however, each abstract contains the project-specific funding amount if it was provided.

## Investigators

The 55 research projects ranged from single investigator research to team research lead by a principal investigator. In total, 155 individuals were identified as either a principal investigator or a co-investigator. Most projects had one principal investigator (n=44) although some had two (n=10) or three (n=1) co-principal investigators. Some principal/co-principal investigators lead more than one project.

The investigators were affiliated with various organizations (see Table 2 for the organizations and the number of researchers per organization). Overall, 44% of the investigators were from the University of Alberta. A range of disciplines were represented. Some investigators were decision-making partners on large team initiatives.

## Research Settings

The vast majority of the projects listed in this inventory were conducted in one type of setting only. Most often the setting was long-term care (n=32). Some focused only on home care (n= 3), day programs (n=2), hospice/palliative care (n=2), rehabilitation hospital (n=2), assisted living (n=1), or community-living with some services (n=3). Nine projects involved more than one setting (long-term care and day programs (n=1); long-term care, home care, and assisted living (n=1); long-term care and home care (n=1); long-term care and assisted living (n=2); long-term care and another setting (n=3); and hospice and active treatment centres (n=1)). One project involved a toolkit that could be used across settings.

<b>Table 1</b>	
<b>Funding Sources of 55 Projects</b>	
<b>Name of Agency</b>	<b>n</b>
<b><i>Federal</i></b>	<b>17</b>
Canadian Institutes of Health Research (CIHR)	5
Canadian Health Services Research Foundation (CHSRF)	4
Government of Canada	2
Adult Learning Centre, Canadian Council on Learning	1
Canadian Foundation for Dietetic Research	1
Canadian Nurses Foundation	1
Canadian Occupational Therapy Foundation	1
National Cancer Institute of Canada	1
Social Sciences and Humanities Research Council (SSHRC)	1
<b><i>Provincial</i></b>	<b>13</b>
Alberta Heritage Foundation for Medical Research (AHFMR)	7
Alberta Heritage Foundation for Medical Research (AHFMR) Postdoctoral Fellowship	2
Alberta Cancer Board	1
Alberta Health Services	1
Government of Alberta	1
MSI Foundation	1
<b><i>Local</i></b>	<b>30</b>
Capital Care Foundation	7
Capital Care – Alzheimer Research Grant	4
Capital Care – general	3
Caritas Research Fund	2
Capital Health Quality Office	1
Edmonton Orthopaedic Committee	1
Glenrose Rehabilitation Hospital Clinical Research Fund	1
Good Samaritan Society	1
Knowledge Brokering Group (sub-grants)	4
Royal Alexandra Hospital Foundation	1
University of Alberta (e.g., start-up/establishment funds)	4
University Hospital Foundation	1
<b><i>Industry</i></b>	<b>2</b>
Aventis Pharma	1
CV Technologies	1
<b><i>International</i></b>	<b>1</b>
Alzheimer Association (U.S.)	1
<b><i>Student Awards</i></b>	<b>2</b>
Alberta Association on Gerontology Student Bursary	1
Dr. Peter McCracken Legacy Scholarship	1
<b><i>Non-funded</i></b>	<b>11</b>

Note: The total number of funding sources is 76 as 14 projects had more than one funding source (8 - 2 sources, 5 - 3 sources, 1 - 4 sources).

<b>Table 2</b>	
<b>Organizational Affiliation in Rank Order by Number of Investigators</b>	
<b>Name of Organization</b>	<b>N</b>
<b>University of Alberta</b>	<b>68</b>
Faculty of Medicine & Dentistry	20
Oncology	(11)
Surgery	(4)*
Family Medicine	(3)
Medicine	(2)
Faculty of Nursing	18
Faculty of Rehabilitation Medicine	10
Occupational Therapy	(6)
Physical Therapy	(1)*
Speech Pathology and Audiology	(2)
Rehabilitation Research Centre	(1)
Faculty of Arts	7
Psychology	(5)
Sociology	(2)
Faculty of Pharmacy and Pharmaceutical Sciences	6
School of Public Health	3
Faculty of Agriculture, Life and Environmental Sciences	2
Faculty of Engineering	1
Community-University Partnership for the Study of Children, Youth, and the Family	1
<b>CapitalCare</b>	<b>15**</b>
<b>Canadian Universities outside Alberta</b>	<b>12***</b>
<b>Alberta Health Services/Capital Health</b>	<b>11</b>
<b>Other Alberta Universities</b>	<b>10</b>
University of Calgary	(8)
University of Lethbridge	(1)
Athabasca University	(1)
<b>Glenrose Rehabilitation Hospital</b>	<b>8</b>
<b>Universities outside Canada</b>	<b>6</b>
<b>Good Samaritan Society</b>	<b>5</b>
<b>Alberta Health and Wellness</b>	<b>4</b>
<b>Alberta Health Services/Calgary Health Region</b>	<b>3</b>
<b>Private Consultants</b>	<b>2</b>
<b>Caritas Health Group</b>	<b>1</b>
<b>Cross Cancer Institute</b>	<b>1</b>
<b>Edmonton General Continuing Care Centre</b>	<b>1</b>
<b>Edmonton Regional Palliative Care Program</b>	<b>1</b>
<b>Foothills Medical Centre, Calgary</b>	<b>1</b>
<b>Northern Alberta MS Patient Care and Research Clinic</b>	<b>1</b>
<b>Royal Alexandra Hospital</b>	<b>1</b>
<b>Shepherd's Care Foundation</b>	<b>1**</b>
<b>Youville Home</b>	<b>1</b>
<b>Other organizations outside Alberta</b>	<b>2</b>

\* One individual was affiliated with Surgery for one project and Physical Therapy for another project. S/he is listed here only under Surgery.  
 \*\* Two individuals were affiliated with CapitalCare for some projects and Shepherd's Care Foundation for other projects. They are listed here only under CapitalCare.  
 \*\*\* These include: University of Manitoba - 4; University of Toronto - 3; University of Saskatchewan - 2; Dalhousie University - 1; Simon Fraser University - 1; University of Western Ontario - 1.

The emphasis on long-term care reflects, in part, the availability of research grants through CapitalCare, including the CapitalCare Foundation Grants and the CapitalCare Alzheimer Research Grants. Indeed, 11 of the 55 projects relied on this funding and an additional 3 projects were funded by CapitalCare. The emphasis on long-term care may also be related to terminology. While the request for information included a definition of continuing care, many individuals appear to have equated continuing care with continuing care centres or long-term care facilities. At the same time, it may be that relatively little attention has been given to the continuing care sector beyond long-term care.

### **Topics Studied**

The substantive focus of each project was categorized into broad topic areas, with sub-topics. These include:

- **Client/resident functioning** (dementia/cognition; incontinence; depression; ADLs/physical activity; mobility; falls; hip fractures; eating/food intake/swallowing; hip fractures; pain; comorbidities; other) (Table 3)
- **Services/care practices** (dementia care/cognition; palliative; rehabilitation; recreation; social work; nutrition/feeding/meals/dining; medications; restraint use; patient safety; quality of care; other) (Table 4)
- **Environment** (homelike; dining areas; bedrooms; medication storage; general - physical; general - social) (Table 5)
- **Moves to/within continuing care** (relocation stress; transitions in care; waiting lists) (Table 6)
- **Informal caregivers/family** (education; family-staff relations; family involvement; costs/expenses; knowledge about aging and disease) (Table 7)
- **Formal caregivers/staff** (education; job satisfaction; absenteeism/burnout; availability of staff; work organizational context) (Table 8)
- **Satisfaction with care** (resident/client; family) (Table 9)
- **Use of the Minimum Data Set – Resident Assessment Instrument (MDS-RAI)** (Table 10)
- **Knowledge translation/brokering** (Table 11)

Projects with content related to a particular topic are listed alphabetically by the surname of the lead investigator. Projects can appear in more than one topic area although attempts have been made to list projects according to their primary focus.

Table 3

## Topic Area: Client/Resident Functioning

Investigators	Dementia/ Cognition	Incontinence	Depression	ADLs/ Physical Activity	Mobility	Falls	Hip Fractures	Eating/ Food Intake/ Swallowing	Pain	Comorbidities	Other*
Beaupre, Cinats, et al.							✓			✓	
Beaupre, Johnston, et al.							✓				
Brown	✓								✓		
Chobanuk		✓									
Cleary et al.	✓							✓			
Heller, Dobbs, & Strain	✓										
Hopper, Bayles, & Tomoeda	✓										
Hopper, Cleary, et al.								✓			
Hopper, Van Soest, et al.	✓							✓			
Hunter, Moore, & Voaklander		✓				✓					1
Jurczak	✓										
Mager, Atkins, & Wojcik								✓			
Marin, Wilson, & Steinkey			✓								
Maxwell et al.	✓		✓	✓	✓	✓			✓	✓	
Moore, Hunter, & McGinnis		✓									
Olson, Krachuk, & Quddusi											2
Predy & Stokes											3
Samuel				✓						✓	4
Samuel & Dobbs				✓						✓	4
Sawchuk											5
Van Soest et al.	✓							✓			
Vieira					✓	✓					
Vieira et al.						✓					
Warren, Turpin, & Milke									✓		
Watanabe			✓								
Watanabe et al.											6
Wielandt	✓			✓	✓						

\* Other: 1 Quality of life; 2 Fatigue; 3 Respiratory track infection; 4 Frailty; 5 Physical status in 5 domains; 6 Symptom intensity

Table 4

## Topic Area: Services/Care Practices

Investigators	Dementia Care/ Cognition	Palliative	Rehabilitation	Recreation	Social Work	Nutrition/Meals/ Feeding/Dining	Medications	Restraints Use	Patient Safety	Quality of Care	Other*
Anderson et al.							✓	✓	✓	✓	
Beaupre, Cinats, et al.			✓								
Beaupre, Johnston, et al.			✓								
Chaudhury & Mahmood							✓				
Cleary, Hopper, & Van Soest						✓					
Cleary et al.						✓					
Estabrooks et al.										✓	1
Heller, Dobbs, & Strain				✓							
Hopper, Bayles, & Tomoeda	✓										
Hopper & Cleary						✓					
Hopper, Cleary, et al.						✓					
Hopper, Marcy-Edwards, et al.										✓	
Hopper, Van Soest, et al.						✓					
Jones, Mielke, & Hopper					✓						
Liu et al.										✓	
Mager, Atkins, & Wojcik						✓					
Mallidou									✓	✓	
Marin, Wilson, & Steinkey											2
Maxwell et al.	✓			✓			✓		✓	✓	
Milke et al.								✓			
Miyazaki & Miller											3
Moore, Hunter, & McGinnis											4
Morrish, Beaupre, & Mujumdar			✓								
Predy & Stokes							✓				
Sales											1
Sales, Maxwell, & Teare										✓	
Sales et al.										✓	
Sawchuk		✓									
Simpson et al.							✓				
Vieira											5
Vieira et al.											5
Warren, Turpin, & Milke											6
Wielandt				✓							7
Wilson & Visram							✓				

\* Other: 1 Best practices; 2 Hope intervention; 3 Monitoring; 4 Incontinence care; 5 Falls prevention; 6 Pain intervention; 7 Assistive technologies

Table 5						
Topic Area: Environment						
Investigators	Homelike	Dining Areas	Bedrooms	Medication Storage	General - Physical	General - Social
Chaudhury & Mahmood				✓		
Chuck, Milke, & Beck	✓		✓			
Cleary, Hopper, & Van Soest		✓				
Cleary et al.		✓				
Hopper & Cleary		✓				
Jurczak					✓	✓
Liu et al.	✓	✓	✓		✓	✓
Maisey et al.					✓	✓
Van Soest et al.		✓				

Table 6			
Topic Area: Moves to/within Continuing Care			
Investigators	Relocation Stress	Transitions in Care	Waiting Lists
Hopper, Marcy-Edwards, et al.			✓
Jones, Mielke, & Hopper		✓	
Maisey et al.	✓		
Maxwell et al.	✓		
Strang et al.			✓
Van Soest et al.	✓		
Watanabe	✓		

Table 7					
Topic Area: Informal Caregivers/Family					
Investigators	Education	Family-Staff Relations	Family Involvement	Costs/ Expenses	Knowledge about Aging and Disease
Austin et al.		✓			
Brown & Mitchell	✓				
Jurczak			✓		
Maxwell et al.		✓	✓	✓	
Rust & Kwong See					✓
Strang et al.		✓	✓		

Table 8					
Topic Area: Formal Caregivers/Staff					
Investigators	Education	Job Satisfaction	Absenteeism/ Burnout	Availability of Staff	Work Context
Austin et al.					✓
Cummings & Spiers			✓		✓
Estabrooks, Sales, & Mitchell			✓	✓	✓
Estabrooks et al.					✓
Hopper, Cleary, et al.	✓				
Kinjerski & Skrypnek	✓	✓	✓		✓
Mallidou					✓
McFall & Milke	✓				
Sales	✓				
Sales et al.	✓				

Table 9		
Topic Area: Satisfaction with Care		
Investigators	Residents/Clients	Family
Maxwell et al.	✓	✓
Strang et al.		✓

Table 10	
Topic Area: Use of MDS-RAI Instrument	
Investigators	RAI
Brown	✓
Johnson et al.	✓
Maxwell et al.	✓
Sales	✓
Sales, Maxwell, & Teare	✓
Sales et al.	✓
Watanabe	✓
Wielandt	✓

Table 11	
Topic Area: Knowledge Translation/Brokering	
Investigators	Knowledge Translation /Brokering
Estabrooks et al.	✓
Johnson et al.	✓
Mallidou	✓
Maxwell et al.	✓
Sales	✓
Sales, Maxwell, & Teare	✓
Sales et al.	✓

### Existing Strengths and Areas for Future Research

The breadth of topics studied is evident from these tables. It could be argued that, at the current time, there are no topics where there are specific strengths. Areas of emerging strength may include dementia care, best practices, family-staff relations, family involvement, environmental aspects, and work/organizational context. Many questions remain to be addressed, even within the topics covered by the projects listed in the inventory.

The research emphasis to date has been on long-term care. While organizations such as CapitalCare have encouraged research, researchers need to explore partnerships with other providers to ensure that different organizational cultures are included in the continuing care research in the Edmonton region. Increased research on components of continuing care beyond long-term care is clearly warranted. More specifically, home care appears to be an under-researched area despite a policy emphasis on supporting individuals in the community for as long as possible.

The identification of specific topics for future research needs to take into consideration the state of knowledge in continuing care provincially, nationally, and

internationally. In their 2007-2012 Strategic Plan<sup>1</sup>, the CIHR Institute of Aging (CIHR-IA) confirmed their commitment to continue to support research on healthy and successful aging, the biological mechanisms of aging, cognitive impairment in aging, aging and the maintenance of functional autonomy, and health services and policy relating to older people. In addition, the CIHR-IA announced its intention to focus on five key initiatives: mobility in aging; cognitive impairment; research capacity; knowledge translation; and new alliances. These broad areas are all relevant to continuing care.

The constantly changing health system and local issues create new opportunities for research. Ongoing dialogue between researchers, decision-makers, and practitioners in the Edmonton region is essential to ensure the relevance of the research questions and the use of evidence for decision-making.

Attention now turns to the listing of projects. This is followed by the project abstracts and an index of investigators' names.

---

<sup>1</sup> Canadian Institutes of Health Research. *The Future is AGING: Strategic Plan 2007 to 2012*. Retrieved from <http://www.cihr-irsc.gc.ca/e/34013.html>

## LISTING OF PROJECTS

<b>INVESTIGATORS AND TITLE OF PROJECT</b>		
<b>Abstract Page #</b>	<b>Investigators</b>	<b>Title of Project</b>
19	Anderson et al.	<i>Optimizing quality of care and improving safety for continuing care centre residents with behavioural and psychological symptoms of dementia by reducing physical and chemical restraints</i>
21	Austin et al.	<i>Supporting relationships between family and the healthcare team within traditional continuing care settings: A participatory action research project</i>
24	Beaupre, Cinats, et al.	<i>Does functional recovery in elderly hip fracture patients differ between patients admitted from long-term care and the community?</i>
26	Beaupre, Johnston, et al.	<i>Recovery following hip fracture in geriatric ambulatory patients living in nursing homes (REGAIN)</i>
27	Brown	<i>Establishing the pain profile of non-verbal long-term care residents with dementia: Analysis of archived Resident Assessment Instrument (RAI) 2.0 data</i>
29	Brown & Mitchell	<i>Pain and dementia: Development of an educational workshop toolkit to assist families of patients with dementia to communicate their needs</i>
31	Chaudhury & Mahmood	<i>Role of environmental design on reducing medication and nursing errors in long-term care</i>
32	Chobanuk	<i>A comparison of weekly catheter irrigations</i>
33	Chuck, Milke, & Beck	<i>Shifting from institutional environments to homelike settings: Are they really more like home?</i>
35	Cleary, Hopper, & Van Soest	<i>Using assigned seating plans to facilitate eating in long-term care residents with dementia</i>
36	Cleary et al.	<i>Using the smell of baking bread to facilitate eating in residents with dementia</i>
37	Cummings & Spiers	<i>Quality Work Environment Study (QWEST)</i>
39	Estabrooks, Sales, & Mitchell	<i>Examining the role of context in Alzheimer's care: A pilot project</i>
41	Estabrooks et al.	<i>Translating research in elder care (TREC)</i>
44	Heller, Dobbs, & Strain	<i>Effect of cognitively appropriate videos on quality of life in residents with Alzheimer's Disease</i>
46	Hopper, Bayles, & Tomoeda	<i>Maximizing the function of individuals with Alzheimer Disease through cognitive stimulation</i>
48	Hopper & Cleary	<i>Staff perspectives of family dining in an Alzheimer special care unit</i>
49	Hopper, Cleary, et al.	<i>Knowledge and practice patterns related to eating and swallowing in long-term care</i>
51	Hopper, Marcy-Edwards, et al.	<i>Managing continuity of care for continuing care services</i>
54	Hopper, Van Soest, et al.	<i>Using structured mealtime interaction to maintain or improve eating behaviours in Alzheimer's Disease</i>
57	Hunter, Moore, & Voaklander	<i>Lower urinary tract symptoms, quality of life and fall risk among older women receiving home care</i>
58	Johnson et al.	<i>Evidence and policy in long term care, building a bridge with knowledge brokering</i>
61	Jones, Mielke, & Hopper	<i>Transition of care: Improving continuity from a rehabilitation hospital to home</i>
62	Jurczak	<i>Maintaining family relationships within assisted living facilities for clients with dementia: Effects of the physical and social environment</i>
63	Kinjerski & Skrypnik	<i>Spirit at Work at CapitalCare: Increasing job satisfaction and organizational commitment and reducing turnover and absenteeism</i>
65	Liu et al.	<i>How can CapitalCare balance residents' needs for a homelike environment with caregivers' needs for efficient ways to deliver care?</i>

<b>INVESTIGATORS AND TITLE OF PROJECT</b>		
<b>Abstract Page #</b>	<b>Investigators</b>	<b>Title of Project</b>
66	Mager, Atkins, & Wojcik	<i>Dietary intake in home care clients with chronic wounds</i>
67	Maisey et al.	<i>Impact of environmental change following a move from a traditional continuing care centre to a purpose-built centre: Exploring resident, staff, environmental, and system indicators</i>
69	Mallidou	<i>How context in nursing homes influences resident outcomes</i>
70	Marin, Wilson, & Steinkey	<i>Hope as a technique for reducing depression among continuing care residents</i>
71	Maxwell et al.	<i>Continuing care reform: Implications for the balance and quality of care for frail older Canadians</i>
73	McFall & Milke	<i>Preference of continuing care staff for electronic surveys</i>
75	Milke et al.	<i>A longitudinal evaluation of restraint reduction within a multi-site, multi-model Canadian continuing care organization</i>
77	Miyazaki & Miller	<i>E-Health Edmonton Program – Development and integration of Wireless Wearable Physiological Monitor (WWPM)</i>
81	Moore, Hunter, & McGinnis	<i>Evaluation of weekly bladder irrigations with Suby G (Contisol) or saline versus catheter changes alone in patients with long-term indwelling catheters</i>
83	Morrish, Beaupre, & Mujumdar	<i>Prevalence of osteoporosis care in chronic care institutions</i>
84	Olson, Krachuk, & Quddusi	<i>Fatigue in individuals with advanced cancer in active treatment and palliative settings</i>
86	Predy & Stokes	<i>Safety of COLD-fX when used for prevention of respiratory tract infections in a population requiring continuing care</i>
87	Rust & Kwong See	<i>Caregivers' beliefs about aging and disease</i>
89	Sales	<i>Pilot study to develop quality improvement feedback reports using MDS/RAI data</i>
90	Sales, Maxwell, & Teare	<i>Prioritizing process improvement indicators using MDS/RAI Data</i>
91	Sales et al.	<i>Data for Improvement and Clinical Excellence (DICE) Program: CHSRF REISS Program</i>
93	Samuel	<i>Changes in frailty and complexity in individuals attending a comprehensive day care program (CHOICE)</i>
95	Samuel & Dobbs	<i>Investigating changes in frailty and complexity in individuals attending CHOICE (Comprehensive Home Option for Integrated Care of the Elderly)</i>
96	Sawchuk	<i>The relationship between the referral palliative performance scale score and length of survival in palliative cancer patients referred to a hospice palliative care unit from an acute tertiary care hospital setting</i>
98	Simpson et al.	<i>Characterizing the use of acetylsalicylic acid in a long-term care facility</i>
100	Strang et al.	<i>Coping while waiting placement for caregivers of persons with dementia</i>
103	Van Soest et al.	<i>The effects of relocation stress on the food and fluid intakes of continuing care residents with dementia</i>
104	Vieira	<i>Exploring mobility and falls prevention with older adults in long term care</i>
105	Vieira et al.	<i>Falls prevention initiative at the Glenrose Rehabilitation Hospital</i>

<b>INVESTIGATORS AND TITLE OF PROJECT</b>		
<b>Abstract Page #</b>	<b>Investigators</b>	<b>Title of Project</b>
106	Warren, Turpin, & Milke	<i>Chronic pain in persons with Multiple Sclerosis (MS) residing in continuing care centres of CapitalCare</i>
108	Watanabe	<i>Environmental change and depression in long-term care residents: A study using the Minimum Data Set</i>
110	Watanabe et al.	<i>A multi-centre validation study of two numerical rating scale versions of the Edmonton Symptom Assessment Scale (ESAS) in palliative care patients</i>
112	Wielandt	<i>Identification of characteristics of long term care residents' functional abilities, assistive technology use and activity participation: Analysis of the Resident Assessment Instrument (RAI) 2.0 data</i>
114	Wilson & Visram	<i>A descriptive-comparative study of medication use by seniors prior to and following admission to an inpatient continuing care facility</i>

## PROJECT ABSTRACTS

### Anderson, Leung, Sadowski, & Bourgoin

- Principal Investigator:** Carol Anderson, Capital Health Community Care Services
- Co-Investigators:** Sandra Leung, Capital Health Community Care Services & Capital Health Regional Pharmacy Services  
Cheryl Sadowski (nee Wiens), Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta  
Aimee Bourgoin, Edmonton General Continuing Care Centre
- Title:** *Optimizing quality of care and improving safety for continuing care centre residents with behavioural and psychological symptoms of dementia by reducing physical and chemical restraints*
- Key Words:** Long-term care; restraints; behavioural and psychological symptoms; dementia
- Funding Agency:** Capital Health Quality Office
- Time Frame:** 2004 - 2007
- Purpose:** The purpose of the project was to improve patient safety and quality of care in continuing care centres by reducing the inappropriate use of chemical and physical restraints.
- Setting:** Long-term care facilities
- Methods:** The project involved a baseline and post-intervention (24 months) assessment of psychotherapeutic drug use and physical restraint utilization. The rates of adverse events, including falls and hospitalization, were recorded. In addition, staff questionnaires were used to determine knowledge and attitudes toward restraint use. The intervention involved educational initiatives delivered at the participating sites.
- Results:** Despite an increase in psychiatric diagnoses of 5.1%, the overall use of psychotropic drugs only increased by 0.5% at the end of the intervention. As-needed (PRN) use of antipsychotics was reduced to 6.6%, and as needed benzodiazepines were reduced by 0.8%. The number of reported falls increased by 59%; however, the major injury rate fell from 4.1% to 2.4%. The attitudes of staff appeared to have improved, with regulated health professionals (RN, LPN) relying less on restraints for management of behaviours.
- Conclusions:** It was concluded that the interventions increased awareness of appropriate restraint use and documentation of behavioural issues, resulting in a decline in psychotropic medication use, and a decrease in major injuries resulting from falls.

Continued...

## **Anderson et al. (continued)**

### **Presentations:**

- Moulton, L., Anderson, C., Leung, S., Wiens, C., & Bourgoin, A. (2007, September). *Optimizing quality of care and improving safety for continuing care centre residents with behavioural and psychological symptoms of dementia by reducing physical and chemical restraints*. New Directions in Seniors' Mental Health, The Canadian Coalition of Seniors Mental Health (CCSMH), Mississauga, ON. Published conference proceedings, p. 54.
- Anderson, C., Leung, S., Wiens, C., & Bourgoin, A. (2007, November). *Optimizing quality of care and improving safety for continuing care centre residents with behavioural and psychological symptoms of dementia by reducing physical and chemical restraints*. Spotlight on Research Breakfast: The Glenrose Rehabilitation Hospital, Edmonton, AB. (poster)
- Anderson, C., Wiens, C., & Leung, S. (2006, May). *Reducing physical and chemical restraints in continuing care facilities*. Enhancing Safety in Home, Community, and Long Term Care, Edmonton, AB. (poster)
- Anderson, C., Wiens, C., & Leung, S. (2006, October). *Improving safety for continuing care centre residents by reducing physical and chemical restraints*. Halifax 6: The Canadian Healthcare Safety Symposium, Vancouver, BC. (poster)

**Austin, Strang, Balt, Mitchell, Thompson, & Lants**

<b>Principal Investigator:</b>	<b>Wendy Austin</b> , Faculty of Nursing, University of Alberta
<b>Co-Investigators:</b>	<b>Vicki Strang</b> , Faculty of Nursing, University of Alberta <b>Linda Balt</b> , Capital Health <b>Agnes Mitchell</b> , CapitalCare and Faculty of Nursing, University of Alberta <b>Betty Thompson</b> , CapitalCare <b>G. Helen Lants</b> , MHA Health Care Consultant
<b>Title:</b>	<b><i>Supporting relationships between family and the healthcare team within traditional continuing care settings: A participatory action research project</i></b>
<b>Key Words:</b>	Long-term care; staff and family relationships; expectations of care
<b>Funding Agency:</b>	CapitalCare Foundation (\$20,000)
<b>Time Frame:</b>	2004 - 2007
<b>Purpose:</b>	<p>This study examined the elements of engagement and mutual respect in family-staff relationships, as well as the environmental supports, constraints, and barriers that exist when forming and sustaining these relationships. Five key questions were addressed:</p> <ol style="list-style-type: none"><li>1) How do families/friends and staff engage with one another in establishing and maintaining their relationships?</li><li>2) How is mutual respect expressed, or not expressed, in such relationships?</li><li>3) What do family/friends and staff perceive as helpful or not helpful in forming and maintaining relationships with each other?</li><li>4) What environmental supports, constraints, and barriers exist around these relationships?</li><li>5) What actions need to be taken to support and enhance relationships between family/friends and staff?</li></ol> <p>The study also sought to identify areas for future research and build research capacity within the CapitalCare staff through collaboration with University of Alberta researchers.</p>
<b>Setting:</b>	CapitalCare Dickinsfield, CapitalCare Lynnwood, CapitalCare Grandview
<b>Methods:</b>	<p>The project used a participatory action research (PAR) design. Focus groups were held with families, non-regulated staff (personal care attendants, housekeeping staff, food services staff, physiotherapy aides, etc.), and regulated staff (nurses, physiotherapists, pharmacists, social workers, etc.) at each site. Additional focus groups were held with care managers and physicians. Data were transcribed, coded, and analyzed and contextualized within previous literature and the current status of continuing care in Alberta.</p>

Continued...

## **Austin et al. (continued)**

### **Results:**

Families were aware of the problems the staff faced (e.g., financial cuts, lack of staff/supervision, high turnover) and appreciated the care their loved ones received. They also felt that due to time constraints and inadequate communication, families must take on the role of vigilant advocates for their relatives. It was important to family members to feel part of the health care team, participating in the care of their loved ones. Families looked for evidence of the "respect and good care" of their relatives; smaller, more intimate gestures that staff make such as combing a resident's hair or remembering a family member's names were perceived as signs of good care and resident respect. Non-regulated staff reported that they felt families often had "expectations that seemed unrealistic". They also reported that time constraints and high turn-over meant that they could not make the intimate gestures that families appreciated. These barriers to care required families to take a more active role in the care of their relative (e.g., feeding during meal-times). Regulated staff felt that families' misconceptions of care standards were due to faulty information the families received. They agreed that it was extremely important for families to be included as part of the healthcare team but such inclusion was viewed as not an easy task as conflict within families, time constraints, and information miscommunication hindered the creation of this team-like relationship. Physicians felt a key to supporting their relationship with families was to have a charge nurse who was knowledgeable about all patient situations in the unit and their special needs, and who could provide key information that physicians need to provide care. Care managers reported that, due to a lack of resources, they had to focus on reacting to family complaints/issues rather than performing their role in a proactive way. All participants reported a significant, negative change in family-staff relationships following the healthcare cuts of the 1990s, which have yet to be resolved.

### **Conclusions:**

The authors provide several recommendations and offer strategies for improving these relationships including creating a home-like environment, emphasizing cultural respect, and addressing systemic issues such as laundry loss, communication breakdown, family and staff expectations of care, high turn-over rates, and public awareness about continuing care. The authors also note the incongruity of the "customer service model" utilized by the CapitalCare Group with the reality of providing and receiving long-term care, recommending that the model be substituted with a partnership model.

### **Journal Article:**

Under review

### **Report:**

Austin, W., et al. (2007). *Supporting relationships between family and the healthcare team within traditional continuing care settings: A participatory action research project*. Final Report submitted to CapitalCare, Edmonton, AB.

Continued...

## **Austin et al. (continued)**

### **Presentations:**

- Austin, W. (2007, November). *Supporting relationships between family and the healthcare team in traditional continuing care settings: A participatory action research project*. Senior Staff Forum, CapitalCare, Edmonton, AB.
- Austin, W., et al. (2008, June). *Supporting relationships between family and the healthcare team in traditional continuing care settings: A participatory action research project*. Healthy People for a Healthy World, Bangkok, Thailand.
- Strang, V., et al. (2007, November). *Supporting relationships between family and the healthcare team in traditional continuing care settings: A symposium*. 36<sup>th</sup> Annual Scientific and Educational meeting of the Canadian Association on Gerontology, Calgary, AB. Presentations included:
- Austin, W. (2007, November). *Supporting relationships between family and the healthcare team: The Participatory Action Research process*.
  - Lantz, G. H. (2007, November). *Supporting relationships between family and the healthcare team: Recommendations for change*.
  - Lemermeyer, G. (2007, November). *Supporting relationships between family and the healthcare team: The context of continuing care in Alberta*.
  - Mitchell, A. (2007, November). *Supporting relationships between family and the healthcare team: Results*.
- Vass, K. (2007, October). *Supporting relationships between family and the healthcare team in traditional continuing care settings: A participatory action research project*. Margaret Scott Wright Research Day, Faculty of Nursing, University of Alberta, Edmonton, AB. (poster)

**Beaupre, Cinats, Johnston, Jones, Saunders, Scharfenberger, & Senthilselvan**

**Principal Investigator:** Lauren Beaupre, Department of Surgery, Faculty of Medicine and Dentistry, University of Alberta

**Co-Investigators:** John Cinats, Department of Surgery, Faculty of Medicine and Dentistry, University of Alberta  
C. Allyson Jones, Department of Physical Therapy, Faculty of Rehabilitation Medicine, University of Alberta  
Angela Scharfenberger, Department of Surgery, Faculty of Medicine and Dentistry, University of Alberta  
D. William C. Johnston, Department of Surgery, Faculty of Medicine and Dentistry, University of Alberta  
Ambikaipan Senthilselvan, School of Public Health, University of Alberta  
L. Duncan Saunders, School of Public Health, University of Alberta

**Title:** *Does functional recovery in elderly hip fracture patients differ between patients admitted from long-term care and the community?*

**Key Words:** Hip fractures; functional recovery

**Funding Agencies:** Alberta Heritage Foundation for Medical Research (AHFMR), the University Hospital Foundation, the Royal Alexandra Hospital Foundation, and the Edmonton Orthopaedic Research Committee (>\$100,000 in total)

**Time Frame:** Data from 1999 - 2000, article published in 2007

**Purpose:** The purpose of this study was to compare recovery between patients 6 months following hip fracture, controlling for known prognostic factors and to examine the contribution of residential status, in addition to patient characteristics, to functional recovery.

**Setting:** Patients resided in community settings, retirement home settings (did not require nursing care but may have received assistance with some activities (e.g., bathing)), and long-term care settings (LTC) (nursing care required for basic daily activities)

**Methods:** A population-based inception cohort of 451 hip fracture patients aged  $\geq 65$  admitted to two hospitals in a tertiary health region between July 1999 and September 2000 were enrolled in the study. Participants completed the Modified Barthel Functional Index (MBI) in hospital and via telephone interviews 6 months later. Information was gathered on surgery and rehabilitation timing, length of hospital stay (LOS), and discharge destination. Relative change from prefracture function adjusting for known prognostic factors, and the proportion of participants returning to prefracture function were compared between LTC and community-dwelling residents. A total of 115 LTC residents and 336 community-dwelling residents participated.

Continued...

**Beaupre, Cinats, et al. (continued)**

**Results:** Compared to community-dwelling residents, LTC residents were older, had lower function prefracture, more comorbidities, and increased dementia. Six months postfracture, 22% of LTC and 71% of community-dwelling residents had regained prefracture function. After risk adjustment, LTC residents had 33% lower and community-dwelling residents 12% lower 6 month MBI scores relative to prefracture scores. There was a significant association between residential status and risk-adjusted functional recovery. LTC residents had a median LOS of 4 days less than the LOS for community-dwelling residents. Ten percent of LTC and 70% of community-dwelling residents were discharged to inpatient rehabilitation.

**Conclusions:** Following hip fracture, most LTC residents do not regain prefracture function irrespective of known prognostic factors. Further investigation is needed as to the extent to which personal and environmental characteristics contribute to outcome after hip fracture.

**Journal Article:**

Beaupre, L. A., Cinats, J. G., Jones, C. A., Scharfenberger, A. V., Johnston, D. W. C., Senthilselvan, A., & Saunders, L. D. (2007). Does functional recovery in elderly hip fracture patients differ between patients admitted from long-term care and the community? *Journal of Gerontology*, 62A(10), 1127-1133.

**Beaupre, Johnston, Jones, Mujumdar, & Wilson**

**Principal Investigator:** Lauren Beaupre, Department of Physical Therapy, Faculty of Rehabilitation Medicine, University of Alberta

**Co-Investigators:** D. William C. Johnston, Department of Surgery, University of Alberta  
C. Allyson Jones, Department of Physical Therapy, University of Alberta  
S. Mujumdar, Department of Medicine, University of Alberta  
Donna Wilson, Faculty of Nursing, University of Alberta

**Title:** *Recovery following hip fracture in geriatric ambulatory patients living in nursing homes (REGAIN)*

**Key Words:** Hip fractures; functional recovery

**Funding Agency:** Canadian Institutes of Health Research's Institute of Aging (CIHR-IA) Catalyst Grant (\$49,982)

**Time Frame:** 2007 - 2010

**Purpose:** The purpose of this pilot project is to test the feasibility of performing hip fracture outcome research in continuing care settings. Of interest are the outcomes that should be measured to determine how patients recover after their hip fracture in continuing care, how these outcomes should be measured, and whether there are patient and/or facility characteristics that might improve recovery.

**Setting:** Long-term care facilities in Edmonton

**Methods:** All continuing care residents in the Capital Health region aged  $\geq 65$  who had a hip fracture over a 1 year period starting January 2007 were approached for this study 3-5 days following hip fracture treatment. Follow-up telephone interviews are being completed 2 and 6 months after the hip fracture to determine the rate and pattern of recovery.

**Results:** Not yet available

**Conclusions:** Not yet available

## **Brown**

- Principal Investigator:** Cary A. Brown, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta
- Title:** *Establishing the pain profile of non-verbal long-term care residents with dementia: Analysis of archived Resident Assessment Instrument (RAI) 2.0 data*
- Key Words:** Long-term care; pain; dementia; RAI
- Funding Agency:** Knowledge Brokering Group, *Evidence and policy in long term care, building a bridge with knowledge brokering* (see Johnson et al.)
- Time Frame:** 2007 - 2008, data from 2005 and 2006
- Purpose:** The goals of this project were: 1) to identify a pain profile of all of the residents living in the continuing care facility across two sampling periods, and 2) to compare the pain profile of this sample of residents categorized into two subgroups (intact communication/impaired communication) to determine if there are variations that may highlight the need for alternate management strategies.
- Setting:** A long-term care facility
- Methods:** After manual re-entry of the text formatted data into an SPSS database, a retrospective analysis of the continuing care facility Resident Assessment Instrument (RAI) 2.0 data for the periods December 2005 and December 2006 was carried out. The purpose of the RAI is to assess the health, functional, and psychosocial needs and abilities of long-term care residents. Four types of data are available to form the pain profile of residents: a cognitive performance scale (CPS) score, communication status, pain observation/report, and behavioural indicators. The RAI records a range of cognitive, functional and behavioural indicators and can be used to compute scores on the Cognitive Performance Scale (CPS), which categorizes residents of long-term care facilities into groupings of cognitive impairment based on scores ranging from no deficit to extensive deficit. It also records whether the resident is able to communicate and make himself/herself understood (always, usually, sometimes, rarely/never) and asks the assessor to rate the amount of pain the resident appears to experience, the number of days in the pre-assessment week the resident received analgesic medication as well as any negative behaviours the resident exhibits. Selection of residents was based on those who had lived at the facility across the 12 month period of December 2005-December 2006. Residents were grouped into three categories according to their CPS scores: minimal cognitive deficit, moderate deficit, and extensive deficit. The latter group were further distinguished as 'non-verbal' if they could be understood 'only sometimes/rarely'.

Continued...

## **Brown (continued)**

### **Results:**

The findings reveal that residents with reported pain did not necessarily receive analgesic. Residents with impaired communication were less likely to have their pain rated as moderate/extreme, and they were less likely to receive the range of different medications per week as compared to those with intact communication. Residents unable to communicate also demonstrated a high rate of behaviours considered to be 'flags' for possible pain. Although high in other possible pain-indicating behaviours, residents were recorded as demonstrating very low rates of physically and verbally abusive behaviours.

### **Conclusions:**

The author concludes that retrospective analysis of the RAI data can successfully identify issues congruent with the literature that clearly identifies problems of under-reporting and under-treatment of pain in persons with impaired ability to self-report, and that this analysis provides objective support for current initiatives taking place in CapitalCare that focus on developing guidelines and providing education and skills development to enable staff to better recognize and manage the needs of older persons with pain. Tools like the RAI can help identify the 'flags' for pain and the residents who are potentially at risk for under-diagnosis and treatment. It is argued that the RAI is insufficient in itself and needs to be combined with the pain assessment tools for geriatrics that have been developed and with local, contextually grounded guidelines. Additionally, because pain in this vulnerable population is dependent on careful observation and interpretation of changes in behaviour, both family and care facility staff require education about pain and dementia. An additional area to flag for further attention, based on this analysis, is the apparent discrepancy between the low rates of reported physically and verbally aggressive behaviour and the over-representation of persons with diagnosis of schizophrenia and hemiplegia/post-stroke. Both physical and verbal aggression have been noted in the literature as characteristic of persons with dementia. However, this study revealed a low frequency of reported aggressive behaviours, in comparison to reporting of all other characteristic negative behaviours (like wandering and repetitive movement). The reasons for this discrepancy should be examined to ensure that RAI data truly reflect the absence of aggressive behaviour, as opposed to reflecting a possible staff culture of 'resignation' and non-report. The latter can have serious implications for morale and safety and preclude attention to an addressable problem.

### **Journal Article:**

Under review

### **Presentation:**

Abstract under review

## **Brown & Mitchell**

**Principal Investigator:** Cary A. Brown, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta

**Co-Investigator:** Agnes Mitchell, Faculty of Health & Community Studies, School of Nursing, Grant MacEwan College

**Title:** *Pain and dementia: Development of an educational workshop toolkit to assist families of patients with dementia to communicate their needs*

**Key Words:** Pain; dementia; health literacy; toolkit

**Funding Agency:** Adult Learning Knowledge Centre, Canadian Council on Learning

**Time Frame:** 2007 - 2008

**Purpose:** The goal of this project is to develop a stand-alone *Understanding Pain and Dementia Workshop Toolkit* to help health professionals and community organizations educate family members of people with dementia how to recognise pain in people with dementia and how to use the PAINAD and a pain logbook as effective means of improving relatives' ability to communicate observed pain to staff in continuing care facilities. The target audience is family members of persons with dementia who are unable to reliably self-report and are frequently seniors themselves.

**Setting:** Not applicable

**Methods:** A standardised pain observation tool (PAINAD) has been developed for caregivers of people with dementia who are unable to communicate their own pain. This educational toolkit will form part of a larger study looking at whether family members' use of a standardised pain observation tool will result in families feeling more involved in care and more satisfied with their level of communication with staff. The study assumes that educating families about how people with dementia express pain and teaching skills for improved communication will contribute to improved quality of life for both the person with dementia and their family members. The primary data source is evidence-based literature on older persons' learning and on pain expression in persons with dementia.

**Results:** Field testing of the kit is being organized.

**Conclusions:** Not yet available

**Report:**

Brown, C. A., & Mitchell, A. (2008, Spring). Pain & dementia: Development of an educational workshop toolkit to assist families of patients with dementia to communicate their needs. *AAGMag (Alberta Association of Gerontology Newsletter)*, 25(1).

Continued...

## **Brown & Mitchell (continued)**

### **Presentations:**

- Brown, C. A. (2008, September). *The pain and dementia toolkit: Teaching family members to observe and report pain behaviors*. Health Research Transfer Network of Alberta (RTNA), Banff, AB.
- Brown, C. A., & Mitchell, A. (2008, April). *Pain & dementia: Development of an educational workshop toolkit to assist families of patients with dementia to communicate their needs*. Taking the Pain out of Complex Pain Management Conference, Edmonton, AB. (poster)
- Brown, C. A., & Mitchell, A. (2008, August). *Pain & dementia: Development of an educational workshop toolkit to assist families of patients with dementia to communicate their needs*. International Association for the Study of Pain World Congress (IASP), Glasgow, UK. (poster)

## **Chaudhury & Mahmood**

**Principal Investigator:** **Habib Chaudhury**, Department of Gerontology, Simon Fraser University

**Co-Investigator:** **Atiya Mahmood**, College of Health and Human Sciences, Oregon State University

**Title:** ***Role of environmental design on reducing medication and nursing errors in long-term care***

**Key Words:** Environment; medical and nursing errors

**Funding Agency:** CapitalCare Foundation (\$19,974)

**Time Frame:** 2007 - 2009

**Purpose:** The objectives of this study are: 1) to conduct an in-depth critical review and synthesis of the literature on the effect of environmental variables on medication errors in long-term care environments, 2) to conduct an empirical study at four CapitalCare facilities to examine the role of the physical environment on medication errors in care facilities, and 3) to identify environmental design interventions that will reduce medication errors in long-term care settings. The intent is to make recommendations on physical environmental modifications in the medication storage, distribution, preparation and administration process that may reduce medication errors.

**Setting:** CapitalCare Dickensfield, CapitalCare Norwood, CapitalCare Lynnwood and Kipnes Centre for Veterans

**Methods:** The empirical study included a literature review and synthesis, behavioural and environmental observations, focus groups with nursing and pharmacy staff, and a survey with nursing staff members.

**Results:** Not yet available

**Conclusions:** Not yet available

**Publication:**

Mahmood, A., Chaudhury, H., & Gaumont, A. (in press). Environmental issues related to medication errors in long-term care: Lessons from the literature. *Health Environments Research and Design Journal*.

## **Chobanuk**

- Principal Investigator:** **Janice Chobanuk**, Faculty of Nursing, University of Alberta (Supervisor: Katherine Moore)
- Title:** ***A comparison of weekly catheter irrigations***
- Key Words:** Long-term care; urinary catheter; washout; Contisol; blockage
- Funding Agency:** Non-funded thesis research
- Time Frame:** 2005 - 2006
- Purpose:** The objectives of this pilot study were: 1) to examine recruitment strategies and 2) to test procedures planned for a multicentre randomized controlled trial comparing weekly irrigations with Contisol G to saline irrigations versus insertion of a new urinary catheter.
- Setting:** A long-term care facility in Edmonton
- Methods:** Nine residents were assigned to one of two intervention groups (urine catheter irrigations with Contisol G (n=1) or normal saline (n=3)) or the control group (standard practice (n=5)). Only 4 completed the entire eight-week data collection period (1 in saline group, 3 in no-intervention group); the remaining 4 had met end-point criteria of the pilot. Baseline demographic and clinical data were obtained, including information on catheter history. Catheter interventions began when the resident required an IUC change and continued for eight weeks or until there had been a maximum of three additional IUC changes. The recruitment strategies, study procedures for making group comparisons, dipstick urinalysis testing, descriptions of catheter blockages, incidence of symptomatic urinary tract infections, resident comfort, and costs of medical supplies and nursing time are discussed.
- Results:** The most effective recruitment strategy appeared to be the researcher's weekly visits to the unit. Descriptive statistics were effective in capturing the frequency of catheter blockages, urine characteristics, and the direct costs of nursing time and supplies. Nonexistent or fragmented documentation on the resident's catheter, limited documentation on any type of catheter plan, and the lack of standardization of catheter care in the facility combined to make it difficult to control for other factors that contribute to IUC blockages. Tools to measure comfort and to screen for cognitive alertness were limited because of the residents' functional disabilities.
- Conclusions:** The experiential knowledge gained from this pilot resulted in the refinement of the parent study's protocols (see Moore, K., et al. for parent study) and highlighted many of the challenges other researchers encounter when conducting clinical research with this population in a nonacademic setting.
- Thesis:**  
Chobanuk, J. (2006). *A comparison of weekly catheter irrigations* (Thesis (M.N.)--University of Alberta).

## **Chuck, Milke, & Beck**

- Principal Investigator:** **Anderson Chuck**, PhD Candidate, School of Public Health, University of Alberta (was Student Intern, Department of Psychology, Faculty of Science, University of Alberta at time of data collection; Supervisors: Charles Beck and Doris Milke)
- Co-Investigators:** **Doris Milke**, CapitalCare  
**Charles Beck**, Department of Psychology, University of Alberta
- Title:** ***Shifting from institutional environments to homelike settings: Are they really more like home?***
- Key Words:** Homelike environment; personalization
- Funding Agency:** Non-funded internship research
- Time Frame:** Data collected in 2000 - 2001; article published in 2005
- Purpose:** The objective of this study was to develop an empirical measure of bedroom personalization and characterize the types of items included in a personalized space.
- Setting:** McConnell Place North, CapitalCare Grandview, CapitalCare Dickinsfield
- Methods:** Data were collected in the dementia units of three LTC centres. Bedrooms were categorized into three types based on the Therapeutic Environment Screening Scale (TESS-2+): private-homelike, private-institutional, and ward-institutional. Ten rooms of each type were selected. Families completed a six-item questionnaire that focused on family involvement and staff involvement in bedroom decoration, as well as the resident's attitudes toward the personalization of his/her bedroom. All visible items in the bedrooms, with the exception of items provided by the centre, were recorded under 13-predetermined categories. The number of items per room was divided by each room's available vertical and horizontal surface area to obtain a measure of the relative degree of personalization.
- Results:** Private-institutional rooms had significantly greater vertical and horizontal surface areas available for personalization than either private-homelike or ward-institutional rooms. Vertical surface area was greater in private-homelike rooms than in ward-institutional rooms. However, private-homelike rooms had significantly greater total item densities (for horizontal surfaces) than either private-institutional or ward-institutional rooms. On vertical surfaces, there were significantly higher densities of electronic items in private-homelike rooms than in ward-institutional rooms and higher densities of jewellery in private home-like rooms than in either private-institutional or ward-institutional rooms.

Continued...

## **Chuck, Milke, & Beck (continued)**

**Conclusions:**

The authors conclude that private-homelike rooms are more personalized than are private-institutional or ward-institutional. They argue that this study demonstrates that personalization of a resident's bedroom can be quantified and opens the way for studies of factors contributing to the effect (e.g., facility regulations, family, and staff attitudes) and empirical studies of presumed consequences (e.g., resident satisfaction and improved functioning).

**Journal Article:**

Anderson, C., Milke, D., & Beck, C. (2005). The degree of bedroom personalization in institutional and homelike settings for persons with dementia: A quantitative investigation. *Canadian Journal of Aging, 24*(4), 329-337.

## **Cleary, Hopper, & Van Soest**

- Principal Investigator:** **Stuart Cleary**, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta
- Co-Investigators:** **Tammy Hopper**, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta  
**Deanna Van Soest**, CapitalCare
- Title:** ***Using assigned seating plans to facilitate eating in long-term care residents with dementia***
- Key Words:** Eating; dining room; long-term care; dementia
- Funding Agency:** Non-funded
- Time Frame:** 2006
- Purpose:** To determine if seating plans have an influence on eating behaviours of long-term care residents with dementia.
- Setting:** CapitalCare facilities
- Methods:** A single subject experimental design was used to assess the effects of routine seating on resident intake and time taken to be served meals. A-B-A-B design was used in which A represents three sessions of random seating and B represents three sessions of routine seating. Wash out periods were used between conditions.
- Results:** Positive effects of routine seating were noted on amount of food consumed and time waiting to be served meals.
- Conclusions:** This study provides the basis for mealtime program development and policies for dining room management.
- Journal Article:**  
Cleary, S., Hopper, T., Forseth, M., & Van Soest, D. (2008). Using assigned seating plans to facilitate eating in long-term care residents with dementia. *Canadian Nursing Home*, 19(3), 4-7, 9-10.
- Presentation:**  
Cleary, S., & Van Soest, D. (2007, February). *Effects of environmental modifications on the eating behaviours of long-term care residents with dementia*. CapitalCare People and Progress Conference, Edmonton, AB. (poster)

## Cleary, Van Soest, Milke, & Misiaszek

- Principal Investigator:** **Stuart Cleary**, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta
- Co-Investigators:** **Deanna Van Soest**, CapitalCare  
**Doris Milke**, CapitalCare  
**John Misiaszek**, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta
- Title:** ***Using the smell of baking bread to facilitate eating in residents with dementia***
- Key Words:** Long-term care; smell; eating behaviours; dementia
- Funding Agency:** Non-funded
- Time Frame:** 2007
- Purpose:** The purpose of this project was to assess the effects of the smell of baking bread on the eating behaviours of LTC residents with dementia, specifically on food intake and the level of assistance required to complete meals.
- Setting:** A long-term care facility
- Methods:** Employing a single-subject experimental design, the aroma of baking bread was repeatedly infused into a large communal dining room during meal times over the course of several weeks. Measures included the amount of food consumed, the level of staff assistance required to eat and drink, and the frequency of independent self-feeding. Three residents participated in a baseline phase with no intervention, and an intervention phase during which the intervention was implemented, with each phase repeated once. Each participant was observed and video-taped during the same meal in his typical eating environment over three non-consecutive days.
- Results:** An increase in food intake in grams during the treatment phase was noted for two of the three participants. As staff rarely assisted these residents with feeding, the influence of staff on intake was considered negligible. Two of the three residents exhibited a pattern of an increase in the number of self-feeding events during the first treatment phase, a decrease during the second baseline phase, and an increase again in the second treatment phase.
- Conclusions:** The aroma of baking bread appears to be associated with eating more during mealtimes and to have a modest effect on the frequency of self-feeding. The authors conclude that their results, and those from other studies, may help guide clinical practice related to eating and feeding abilities of residents with dementia, and highlight the importance of the environment.

### **Journal Article:**

Cleary, S., Van Soest, D., Milke, D., & Misiaszek, J. (2008). Using the smell of baking bread to facilitate eating in residents with dementia. *Canadian Nursing Home*, 19(1), 6-13.

## Cummings & Spiers

<b>Principal Investigator:</b>	<b>Greta Cummings</b> , Faculty of Nursing, University of Alberta
<b>Co-Investigator:</b>	<b>Jude Spiers</b> , Faculty of Nursing, University of Alberta
<b>Title:</b>	<b><i>Quality Work Environment Study (QWEST)</i></b>
<b>Key Words:</b>	Work quality; nurse managers
<b>Funding Agency:</b>	Social Sciences and Humanities Research Council (\$147,627)
<b>Time Frame:</b>	2007 - 2010
<b>Purpose:</b>	<p>The focus of this project is on the relationships between nurse manager leadership, features of the nursing work environment, patient safety and nursing work life across three different contexts in the Capital Health region (teaching hospitals, general hospitals, and long-term care). Research questions to be addressed include:</p> <ol style="list-style-type: none"><li>1) How are nursing unit characteristics and nurse manager transformational leadership practices related to nurse perceptions of workplace empowerment, worklife, and cultures of patient safety?</li><li>2) What are the relationships between nurses' core self assessments, worklife, burnout, and job satisfaction?</li><li>3) Is workplace empowerment positively related to unit cultures of patient safety, staff nurse perceptions of quality worklife and negatively related to staff absenteeism?</li><li>4) Are the relationships among transformational leadership practices, nursing worklife and unit-level and individual outcomes the same in tertiary care teaching hospitals, general hospitals and long-term seniors care centres?</li><li>5) What factors influence nurses' and managers' perceptions of leadership, nursing worklife, empowerment, absenteeism and patient safety?</li><li>6) From the three contextual settings and based on the theoretical model developed from phase 1 findings and previous research, what strategies should be considered in each contextual setting to improve outcomes for nurses and patients?</li></ol>
<b>Setting:</b>	Teaching hospitals; general community hospitals; long-term care centres (CapitalCare and Good Samaritan facilities)
<b>Methods:</b>	This cross-sectional study is being conducted in four overlapping phases: study establishment (months 1-7), data collection (months 8-22), analysis (months 10-28), and knowledge translation (months 16-36). A 3-stage approach is used to obtain samples and data in order to link data from nurses to their first-line manager and their work unit. Phase 1 includes interviews with study unit managers and focus groups with staff nurses to gain in-depth knowledge of factors and strategies that contribute to leadership, nursing worklife, unit culture, and reduced absenteeism and that facilitate or hinder their ability to achieve best outcomes for patients.

Continued...

## **Cummings & Spiers (continued)**

**Methods (continued):** In Phase 2, the patient care managers in three contextual healthcare settings will be surveyed. The researchers will then proceed in nursing units where the managers have responded to reduce respondent burden and ensure optimized data linkages within units. Registered nurses (RNs) and licensed practical nurses (LPNs) who report to these managers will be surveyed, and objective indicators of incidence/costs of absenteeism by unit from the health region will be obtained. The target sample size is 180, including 60 in the two tertiary acute care teaching hospitals, 60 in nine general community hospitals, and 60 in CapitalCare and Good Samaritan facilities.

**Results:** Not yet available

**Conclusions:** Not yet available

### **Presentation:**

Lo, E., Short, S., Cummings, G. G., MacGregor, T., Schalk, D., Bijl, M., & Spiers, J. (November 2008). *Quality Work Environment Study (QWEST)*. Social Sciences and Humanities Research Council 30 Year Celebration, University of Alberta, Edmonton, AB. (poster)

## **Estabrooks, Sales, & Mitchell**

<b>Principal Investigator:</b>	<b>Carole Estabrooks</b> , Faculty of Nursing, University of Alberta
<b>Co-Investigators:</b>	<b>Anne Sales</b> , Faculty of Nursing, University of Alberta <b>Agnes Mitchell</b> , Faculty of Health & Community Studies, Grant MacEwan College
<b>Title:</b>	<b><i>Examining the role of context in Alzheimer's care: A pilot project</i></b>
<b>Key Words:</b>	Context; Alzheimer's care; long-term care; health services research
<b>Funding Agency:</b>	Alzheimer Care Research Grant, CapitalCare (\$20,000)
<b>Time Frame:</b>	2007 - 2009
<b>Purpose:</b>	The purpose of this study was to pilot a newly developed survey among primarily nonprofessional caregivers (health care aides and LPNs) of long-term care (LTC) residents with dementia.
<b>Setting:</b>	Four CapitalCare settings (2 residential Alzheimer care centres and 2 secured dementia units)
<b>Methods:</b>	A total of 91 (80.5%) frontline workers (73 healthcare aides and 18 LPNs) completed the paper-based survey and discussed its relevance with a research team member. Staff were split between the residential Alzheimer care centres (56%) and the secured dementia units (44%).
<b>Results:</b>	Early findings showed significant differences between the work environments of the residential Alzheimer care centres and secured dementia units in terms of staff burnout, availability of staffing and time resources, and resident aggression towards staff. Each care manager was provided with a profile of their work environment.
<b>Conclusions:</b>	This study led to changes to the survey instrument before using it in a larger study on work environment and use of information by caregivers in long-term care settings across the prairie provinces (TREC study).
<b>Presentations:</b>	
	Brooker, S., Squires, J., Estabrooks, C. A., Mitchell, A., Connors, A., & Bostrom, A-M. (2008, October). <i>Examining the role of context in Alzheimer's care: A pilot study</i> . Margaret Scott Wright Research Day, Faculty of Nursing, University of Alberta, Edmonton, AB. (poster)
	Connors, A., Estabrooks, C. A., Sales, A., Mitchell, A., Squires, J., Brooker, S., & Milke, D. (2007, October). <i>Modifying the Alberta Context Tool for use in long term care</i> . Margaret Scott Wright Research Day, Faculty of Nursing, University of Alberta, Edmonton, AB.

Continued...

## **Estabrooks, Sales, & Mitchell (continued)**

### **Presentations (continued):**

Estabrooks, C. A., Sales, A., & Mitchell, A. (2008, February). *Examining the role of context in dementia care: A pilot study*. CapitalCare People and Progress Conference, Edmonton, AB. (poster)

Estabrooks, C. A., Sales, A., Mitchell, A., Squires, J., Brooker, S., & Connors, A. (2008, October). *Examining the role of context in two models of Alzheimer's care*. 37<sup>th</sup> Annual Scientific and Educational meeting of the Canadian Association on Gerontology, London, ON.

**Estabrooks, Norton, Cummings, Degner, Dopson, Laschinger, McGilton, Menec, Morgan, Profetto-McGrath, Rycroft-Malone, Sales, Smith, Stewart, & Teare**

**Principal Investigator:** Carole Estabrooks, Faculty of Nursing, University of Alberta

**Co-Investigators:** Peter Norton, Department of Family Medicine, University of Calgary  
Greta Cummings, Faculty of Nursing, University of Alberta  
Lesley Degner, Faculty of Nursing & Department of Family Medicine, University of Manitoba  
Sue Dopson, Oxford Said Business School & Templeton College  
Heather Laschinger, School of Nursing, Faculty of Health Sciences, University of Western Ontario  
Kathy McGilton, Faculty of Nursing, University of Toronto, and Toronto Rehabilitation Hospital  
Verena Menec, Centre on Aging & Department of Community Health Sciences, Faculty of Medicine, University of Manitoba  
Debra Morgan, Rural Health Delivery, Canadian Centre for Health and Safety in Agriculture, University of Saskatchewan  
Joanne Profetto-McGrath, Faculty of Nursing, University of Alberta  
Jo Rycroft-Malone, School of Healthcare Sciences, University of Wales, Bangor, Wales  
Anne Sales, Faculty of Nursing, University of Alberta  
Malcolm Smith, Asper School of Business, University of Manitoba  
Norma Stewart, College of Nursing & Department of Psychology, University of Saskatchewan  
Gary Teare, Health Quality Council of Saskatchewan

**Title:** *Translating research in elder care (TREC)*

**Key Words:** Context; knowledge translation; long-term care; health services research; elder care

**Funding Agency:** Canadian Institutes of Health Research (CIHR) (\$4.7 Million)

**Time Frame:** 2007 - 2012

**Purpose:** This 5-year program of research will examine the role organizational context (i.e., leadership, culture, evaluative mechanisms, and human, material and structural resources) plays in establishing best practice and instituting new evidence-based practice in the long-term care sector of the Canadian prairie provinces (see [www.trecresearch.ca](http://www.trecresearch.ca)). TREC's scientific objective is to develop an empirically-based theory of knowledge translation in long-term care. Three core projects and three pilot projects are planned: Project 1: *Building context – An organizational monitoring program in long term care*; Project 2: *Building context – A case study program in long term care*; Project 3: *Enhanced audit with feedback intervention to improve quality of care*; Pilot Project 1: *Strategic storytelling*; Pilot Project 2: *Supportive supervision*; Pilot Project 3: *Leadership development (macro level)*.

Continued...

### **Estabrooks et al. (continued)**

<b>Setting:</b>	36 long-term care facilities in Alberta, Saskatchewan, and Manitoba
<b>Methods:</b>	Researchers will employ qualitative and quantitative methods in their examination of provinces, regions, facilities, units within facilities, and individuals who receive care or work in facilities.
<b>Results:</b>	Not yet available
<b>Conclusions:</b>	Not yet available

#### **Presentations:**

Deis, K., Bostrom, A-M., Hutchison, A., Estabrooks, C., & Norton, P. (2008, October). *Striving for perfection: Quality control measures in the TREC research program*. Margaret Scott Wright Research Day, Faculty of Nursing, University of Alberta, Edmonton, AB.

Estabrooks, C. A. (2008, January). *Translating Research in Elder Care (TREC)*. Knowledge Brokering Group Interactive Series, Edmonton, AB.

Estabrooks, C. A. (2008, February). *Translating Research in Elder Care – Antecedents and updates*. Alberta Health and Wellness (Hot Topic Series), Edmonton, AB.

Estabrooks, C. A. (2008, April). *Translating Research in Elder Care: Integrated and end of grant KT*. Knowledge Translation in Health Care sponsored by the Faculty of Nursing at the University of Western Ontario, London, ON.

Estabrooks, C. A. (2008, May). *Knowledge utilization: The influence of context on KT in health care settings*. KT Seminar Series. Faculty of Medicine, University of Toronto, ON, Toronto, ON. (videoconference)

Estabrooks, C. A., Cummings, G., Degner, L., Dopson, S., Laschinger, H., McGilton, K., Morgan, D., Norton, P., Profetto-McGrath, J., Rycroft-Malone, J., Sales, A., Smith, M., Stewart, N., Teare, G., & Squires, J. (2007, August). *Translating Research in Elder Care: A five year program of research*. Knowledge Utilization Colloquium, Stockholm, Sweden. (poster)

Estabrooks, C. A., Cummings, G., Profetto-McGrath, J., Sales, A., Squires, J., & Brooker, S. (2007, October). *Translating Research in Elder Care research program*. Margaret Scott Wright Research Day, Faculty of Nursing, University of Alberta, Edmonton, AB. (poster)

Estabrooks, C. A., Morgan, D., Stewart, N., Teare, G., & Cammer, A. (2008, April). *The Translating Research in Elder Care (TREC) program*. Saskatchewan Association of Health Organizations (SAHO) Conference, Regina, SK.

Continued...

## **Estabrooks et al. (continued)**

### **Presentations (continued):**

Estabrooks, C. A., Norton, P., Morgan, D., Sales, A., Smith, M., Birdsell, J., & Huband, B. (2007, November). *Translating Research in Elder Care (TREC): A symposium*. 36<sup>th</sup> Annual Scientific and Educational meeting of the Canadian Association on Gerontology, Calgary, AB. Presentations included:

Birdsell, J., & Huband, B. (2007, November). *Building relationships between decision makers and researchers in long-term care*.

Morgan, D., & Germann, K. (2007, November). *Building context – A case study program in long-term care*.

Norton, P. (2007, November). *Building context – An organizational monitoring system in long-term care*.

Sales, A. (2007, November). *An enhanced audit and feedback intervention in long-term care*.

Smith, M. (2007, November). *Innovative knowledge translation pilots in long-term care*.

Estabrooks, C. A., Sales, A., Norton, P., & Cummings, G. (2008, May). *Translating Research in Elder Care: A 5-year program of research*. 2008 Canadian RAI Conference, Edmonton, AB. (poster)

Estabrooks, C. A., Sales, A. E., Squires, J. E., & Lucarotti, A. J. (2007, February). *Translating Research in Elder Care: A proposed program of research*. CapitalCare People and Progress Conference, Edmonton, AB.

Morgan, D., Estabrooks, C., Norton, P., Stewart, N., Teare, G., Cammer, A., Walls-Ingram, S., & Caulfield, J. (2008, October). *Examining context in long-term care: The Translating Research in Elder Care (TREC) program*. 6<sup>th</sup> International Symposium: Public Health & the Agricultural Rural Ecosystem, Saskatoon, SK.

Zdebliak, M., Squires, J. E., & Estabrooks, C. A. (2008, October). *Interventions to reduce falls in the elderly: A review of reviews*. Margaret Scott Wright Research Day, Faculty of Nursing, University of Alberta, Edmonton, AB.

**Heller, Dobbs, & Strain**

**Co-Principal Investigators:** **Bob Heller**, Centre for Psychology, Athabasca University  
**Bonnie Dobbs**, Department of Family Medicine, Faculty of Medicine and Dentistry, University of Alberta  
**Laurel Strain**, Alberta Centre on Aging, University of Alberta

**Title:** *Effect of cognitively appropriate videos on quality of life in residents with Alzheimer's Disease*

**Key Words:** Alzheimer's disease; cognitive ability; television; long-term care

**Funding Agency:** Alzheimer Care Research Grant, CapitalCare (\$19,774)

**Time Frame:** 2005 - 2007

**Purpose:** This study focused on identifying issues that may occur when implementing a television viewing program for cognitively impaired residents of a long-term care facility. Barriers to effective use of television in long-term care settings may include 'incongruence' between regular TV programming features (e.g. complexity of material, speed of presentation, rapid shifting of story line, topic unfamiliarity) and the cognitive abilities of the residents.

**Setting:** Alzheimer care centre

**Methods:** To examine the effect of programming features on television engagement, 22 female residents of an Alzheimer care centre (average age = 84.1 and average age MMSE score = 15.6) were videotaped as they watched five different types of video programming up to two times each for 10 separate occasions over a two week period.

**Results:** Consistent with the hypothesis, residents spent significantly less time viewing standard television programs (i.e., local news) than the four other types of video programming chosen for improved congruence between programming features and cognitive status. Time spent viewing a program was unrelated to MMSE scores for 4 of the 5 videos. All residents were classified as daily television viewers prior to disease onset and frequency of past television viewing behaviour was unrelated to current viewing times.

**Conclusions:** These preliminary findings provide important empirical evidence that may be helpful to improve the effective use of video programming in long-term care.

**Journal Article:**

Heller, B., Dobbs, B. M., & Strain, L. A. (In press). Video programming for individuals with dementia: Assessing cognitive congruence. *American Journal of Alzheimer's Disease and Other Dementias*.

Continued...

### **Heller, Dobbs, & Strain (continued)**

#### **Report:**

Dobbs, B. M., Heller, B., & Strain, L. A. (2007). *Video programming for individuals with Alzheimer disease: Assessing cognitive congruence*. Final report submitted to CapitalCare, Edmonton, AB.

#### **Presentations:**

Heller, R., Dobbs, B. M., & Strain, L. A. (2007, November). *Video programming for individuals with Alzheimer disease: Assessing cognitive congruence*. 36<sup>th</sup> Annual Scientific and Educational meeting of the Canadian Association on Gerontology, Calgary, AB.

Heller, R., Dobbs, B. M., & Strain, L. A. (2007, November). *Video programming for individuals with Alzheimer disease: Programming features related to engagement*. Annual Scientific meeting of the Gerontological Society of America, San Francisco, CA. Published abstract in *The Gerontologist*, 47(Sp. Iss. 11): 90.

## Hopper, Bayles, & Tomoeda

<b>Principal Investigator:</b>	<b>Tammy Hopper</b> , Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta
<b>Consultants:</b>	<b>Kathryn Bayles</b> , Department of Speech, Language and Hearing Sciences, College of Science, University of Arizona <b>Cheryl Tomoeda</b> , Department of Speech, Language and Hearing Sciences, College of Science, University of Arizona
<b>Title:</b>	<i>Maximizing the function of individuals with Alzheimer Disease through cognitive stimulation</i>
<b>Key Words:</b>	Function; stimulation; dementia
<b>Funding Agency:</b>	Alzheimer's Association (U.S.A.) (\$99,987 USD)
<b>Time Frame:</b>	2002 - 2004
<b>Purpose:</b>	The purpose of this project was to assess the effects of spaced-retrieval training (SRT) on learning of new and previously known associations by individuals with dementia in two treatment conditions: one in which the recall intervals were filled with activities unrelated to the information being learned (unrelated condition) and one in which the intervals were filled with related activities (related condition).
<b>Setting:</b>	McConnell Place North, McConnell Place West, and CapitalCare Strathcona
<b>Methods:</b>	Thirty-two individuals with mild to moderate dementia (30 with a diagnosis of Alzheimer disease; two with vascular dementia) participated in the study (26 community dwelling; 6 in Alzheimer care centres).
<b>Results:</b>	On average, participants learned the associations in fewer than four sessions and retained the information for variable amounts of time, up to 6 weeks. Previously known associations were learned significantly faster than new associations. The modified SRT format, in which the within-session recall intervals were filled with information related to the target association, did not result in faster learning or longer retention of learned associations. Participants learned previously known associations in the standard SRT format (with unrelated information in the recall intervals) significantly faster than new associations taught in the modified SRT condition. Cognitive impairment, as measured by the MMSE, was significantly correlated with time to learn new associations, but did not explain a large proportion of the variance in new learning.
<b>Conclusions:</b>	Individuals with AD can learn new and previously known associations. This can have a positive impact on their care and their level of participation in activities meant to improve quality of life.

Continued...

**Hopper, Bayles, & Tomoeda (continued)**

**Journal Article:**

Under review

**Report:**

Hopper, T., et al. (2005). *Cognitive stimulation for individuals with Alzheimer's disease*. Final report submitted to Alzheimer's Association. USA.

**Presentations:**

Hopper, T. (2004, May). *The effects of spaced-retrieval training for individuals with dementia*. Clinical Aphasiology Conference, Park City, UT.

Hopper, T., Bayles, K. A., Tomoeda, C. K., & Drefs, S. (2005, April). *Spaced-retrieval training and learning by individuals with dementia*. Reprogramming the Human Brain Symposium, Dallas, TX. (poster)

## Hopper & Cleary

<b>Principal Investigator:</b>	<b>Tammy Hopper</b> , Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta
<b>Co-Investigator:</b>	<b>Stuart Cleary</b> , Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta
<b>Title:</b>	<b><i>Staff perspectives of family dining in an Alzheimer special care unit</i></b>
<b>Key Words:</b>	Family style dining; long-term care; dementia; staff
<b>Funding Agency:</b>	Non-funded
<b>Time Frame:</b>	2006 - present
<b>Purpose:</b>	The purpose of this project was to determine the perceptions of professional staff members regarding Family Style Dining (FSD) in long-term care settings (specialized Alzheimer's care centre). The project follows from a capstone research project in the Department of Speech Pathology and Audiology (SPA 900) (Family Style Dining in Alzheimer's Special Care Units – Staff Perspectives) in which Petrea Piepgrass, (with supervisors Tammy Hopper and Stuart Cleary), reviewed the literature and designed a study to investigate staff perspectives on FSD. FSD is recommended for use in long-term care; yet, aside from anecdotes, nothing is known about staff members' opinions regarding this method of mealtime service delivery. As staff members must carry out the program, their perceptions will influence the program's effectiveness.
<b>Setting:</b>	McConnell Place North
<b>Methods:</b>	In this qualitative study, data were collected through semi-structured interviews at a specialized Alzheimer's Care Centre. Seven staff members and one administrator were individually interviewed. The semi-structured interview contained questions and probes regarding logistics of FSD, perceptions of FSD and recommendations on how to implement FSD. These interviews were approximately 15-20 minutes in length and followed a set of pre-determined open-ended questions, asked in a conversational manner. All interviews were audio-recorded and later transcribed. Analysis will be based on interpretive description in which the focus is on thematic analysis of participant responses.
<b>Results:</b>	Not yet available
<b>Conclusions:</b>	Not yet available

**Hopper, Cleary, Milke, Liu, Wark, Van Soest, & Francis**

**Principal Investigator:** Tammy Hopper, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta

**Co-Principal Investigator:** Stuart Cleary, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta

**Co-Investigators:** Doris Milke, CapitalCare  
Lili Liu, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta  
Connie Wark, CapitalCare  
Deanna Van Soest, CapitalCare  
Angela Francis, CapitalCare

**Title:** *Knowledge and practice patterns related to eating and swallowing in long-term care*

**Key Words:** Long-term care; dysphagia; eating and swallowing; best practices

**Funding Agency:** CapitalCare Foundation (\$19,911)

**Time Frame:** 2003 - 2005

**Purpose:** The study was conducted in two phases. Phase One focused on estimation of prevalence of swallowing and eating problems within CapitalCare facilities and Phase Two involved revising current dysphagia training programs and evaluating the effects of the revised program on staff knowledge and practice patterns. Three research questions were addressed:  
1) How many residents in CapitalCare facilities have swallowing and eating problems?  
2) What is the nature of the current staff training and education program related to swallowing and eating for residents in CapitalCare facilities?  
3) What is the effect on staff knowledge and practice patterns of a revised program?

**Setting:** Phase One: CapitalCare facilities  
Phase Two: CapitalCare Lynnwood, CapitalCare Norwood, CapitalCare Grandview, Laurier House, McConnell Place West, Mewburn Veterans Centre, CapitalCare Strathcona

**Methods:** In Phase One, a random sample of 179 residents was assessed by designated CapitalCare therapists and research unit staff, using the Mealtime Assistance Screening Tool (MAST; Steele, 1996). In Phase Two, a three-group quasi-experimental design was employed. Nurses, nurses' assistants, and other staff completed two pre-tests to gauge their knowledge of dysphagia: the Dysphagia Knowledge Quiz and an evaluation questionnaire on their perspectives on mealtime service delivery and the training program. Following the pre-test, participants then took part in either 1) the traditional didactic in-service training, 2) the World of Work (WOW) training that involved a visual poster in the WOW display, or 3) no training.

**Continued...**

## Hopper, Cleary, et al. (continued)

- Methods (continued):** Post-tests were conducted to measure any changes in the staff's knowledge of dysphagia. The final sample size for analysis of group differences in knowledge quiz scores and questionnaire ratings was 98 (Didactic n=38, WOW n=47, Control n=13).
- Results:** A variety of eating and swallowing problems existed among residents, with 65.7% meeting at least one of the criteria for professional referral to further assess mealtime behaviour. With regard to the revised dysphagia training program and its effects on staff knowledge and practice patterns, the new program was well-received and implemented in the WOW education program and within the traditional lecture style in-service model. No difference in knowledge of dysphagia was noted between study groups. The researchers offer several possible reasons for this result. They indicate that the Dysphagia Knowledge Quiz was not a sensitive outcome measure. The quiz was developed for the purposes of this study to assess a basic knowledge of eating and swallowing among staff working in long-term care settings. However, it was evident from the analysis of pre-test scores that the quiz was too easy for the participants with several of the participants performing at or close to ceiling level. As a result of this ceiling effect and the lack of variability in the test scores for any group, the test could not be used to measure change that may have occurred as a result of training.
- Conclusions:** The authors indicate that these results provide a foundation for the development of a new dysphagia knowledge quiz that can be used to measure outcomes of swallowing and eating training programs. They call for future research into best practices for long-term care residents with dysphagia, including how staff members feel about types of training programs for eating and swallowing, in terms of content and format.
- Report:**
- Hopper, T., Cleary, S., Milke, D., Van Soest, D., Francis, A., Liu, L., & Wark, C. (2005). *Knowledge and practice patterns related to eating and swallowing in long-term care*. Final report submitted to CapitalCare, Edmonton, AB.
- Presentation:**
- Hopper, T., Cleary, S., & Van Soest, D. (2006, February). *Dysphagia training in long-term care*. CapitalCare People and Progress Conference, Edmonton, AB. (poster)

**Hopper, Marcy-Edwards, Gillespie, Kadlec, Katz, Lai, Mansell, Milke, Nordstrom, Pregitzer, Rowe, Schalm, Shaw, Taylor, & Wark**

**Principal Investigator:** Tammy Hopper, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta

**Co-Investigators:** Donna Marcy-Edwards, Faculty of Nursing, University of Calgary  
Mike Gillespie, Department of Sociology, Faculty of Arts, University of Alberta  
Gayle Kadlec, Calgary Health Region  
Deborah Katz, Calgary Health Region  
Vivien Lai, Alberta Health and Wellness  
Lynne Mansell, Capital Health  
Doris Milke, CapitalCare  
Marlene Nordstrom, Capital Health  
Lynne Pregitzer, Capital Health  
Marguerite Rowe, Capital Health  
Corinne Schalm, CapitalCare (now with Shepherd's Care Foundation)  
Susan Shaw, Alberta Health and Wellness  
Prudence Taylor, Alberta Health and Wellness  
Connie Wark, CapitalCare (listing from final report)

**Title:** *Managing continuity of care for continuing care services*

**Key Words:** Continuing care; waitlists; service utilization; quality of care

**Funding Agencies:** Canadian Health Services Research Foundation (CHSRF), Canadian Institutes of Health Research (CIHR) and the Alberta Heritage Foundation for Medical Research (AHFMR) (\$200,000)

**Time Frame:** 2004 - 2007

**Purpose:** The purpose of this project was to investigate continuity of care for older adults waiting for admission for full-time, publicly funded continuing care centres. The research objectives were to better understand: 1) the nature of waiting lists for publicly funded continuing care services in Alberta's two most populous health regions: Capital Health (Edmonton and area) and Calgary Health Region (Calgary and area), and 2) the experience of individuals as they wait for these services.

**Setting:** Participants' homes; long-term care facilities

**Methods:** The project was carried out in two phases. Phase 1 involved a review of waitlists for continuing care (1999-2006), using data from the Long-term Care Client Information System. Data from the Home Care Information System (2004-05) were also analyzed to determine services used by clients while waiting. Phase 2 involved interviews with 40 waitlisted clients and their families to explore their perspectives while waiting for full-time continuing care and after they had received an admission offer.

Continued...

## Hopper, Marcy-Edwards, et al. (continued)

### **Results:**

The results do not identify the specific regions but rather refer to Region 1 and Region 2. Based on Phase 1 analyses, waitlist clients in both regions were mostly female, approximately 80 years of age, and waiting for admission to long-term care centres. In Region 1, wait times averaged 25 days for long-term care (LTC) admission and 44 days for designated assisted living (DAL). Most waitlist clients in Region 1 were initially assessed in acute care settings; these clients' mean wait was 20.8 days for LTC and 37 days for DAL, which was shorter than the waits of clients assessed in the community. In Region 2, most clients waiting for LTC were assessed in acute care and community (personal home) settings; most waiting for DAL were in the community. Clients in acute care and geriatric assessment and rehabilitation settings waited the least amount of time for LTC while those in acute care had the shortest average wait time for DAL. Average wait times for admission to LTC generally declined in both regions, with some variability, from 1999 to 2006. Clients waiting for LTC in Region 1 used more hours of home care per month compared to those waiting for DAL; the opposite was true in Region 2. Based on Phase 2, clients and/or their family members described the circumstances surrounding the decision to wait as *difficult, evolving over time, and being the "next step" in the client's care continuum*. They described the waiting process as *marked by uncertainty* and families indicated they received information about waitlists and continuing care services from various sources. The family caregiver's home or work location emerged as a primary factor in choosing a continuing care centre. While waiting, clients received formal and informal support, particularly assistance with activities of daily living and medication management. Family caregivers expressed relief and attempted to continue their involvement in the clients' lives after admission.

### **Conclusions:**

Implications for policy and decision makers with regards to communication, resource allocation and outcomes measurements are discussed. The authors argue that communication with older adults and their families about continuing care services must take various forms to be effective in reducing confusion about waitlist operation and access to services. Resource allocation such as increasing the supply of designated assistive living facilities for individuals with special needs and increasing staff in regional offices to assume case co-ordination responsibilities for waitlist clients and families need to be considered. Regional health authorities need to examine outcome measurement, including defining and assessing the effects of strategies to improve continuity of care. Areas for future research are suggested.

### **Report:**

Hopper, T. (2008). *Managing continuity of care for continuing care services in two health regions: Perspectives on waitlists*. Final report submitted to the Canadian Health Services Research Foundation, Ottawa, ON. Available at [http://www.chsrf.ca/final\\_research/ogc/pdf/Hopper\\_Report.pdf](http://www.chsrf.ca/final_research/ogc/pdf/Hopper_Report.pdf)- 213.7KB

Continued...

**Hopper, Marcy-Edwards, et al. (continued)**

**Presentations:**

Hopper, T., Kendall, S., Drefs, S., Marcy-Edwards, D., Milke, D., & Marshall, A. (2007, March). *Experiences of individuals waiting for long-term care admission*. The Greying Nation: Transition of Care in Later Life Conference, Edmonton, AB. (poster)

Hopper, T., Milke, D., Kendall, S., Drefs, S., & Marshall, A. (2006, October). *The experience of waiting for continuing care admission*. 35<sup>th</sup> Annual Scientific and Educational meeting of the Canadian Association on Gerontology, Quebec City, PQ.

Hopper, T., & Reimer, M. (2005, September). *Towards a scientific basis for managing waiting lists for long-term care: Managing continuity of care for continuing care services*. 6<sup>th</sup> International Conference on the Scientific Basis of Health Services (ICSBHS), Montreal, PQ. (poster)

Reimer, M., Hopper, T., & Milke, D. (2005, October). *Navigating long-term care waiting lists: What have we learned?* 34<sup>th</sup> Annual Scientific and Educational meeting of the Canadian Association on Gerontology, Halifax, NS.

**Hopper, Van Soest, Cleary, Wilson, Pederson, & Milke**

**Co-Principal Investigators:** **Tammy Hopper**, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta  
**Deanna Van Soest**, CapitalCare

**Co-Investigators:** **Stuart Cleary**, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta  
**Val Wilson**, CapitalCare  
**Kim Pederson**, CapitalCare  
**Doris Milke**, CapitalCare

**Title:** *Using structured mealtime interaction to maintain or improve eating behaviours in Alzheimer's Disease*

**Key Words:** Mealtime; eating behaviours; Alzheimer's disease

**Funding Agency:** Canadian Foundation for Dietetic Research (\$13,800)

**Time Frame:** 2004 - 2006

**Purpose:** The goal of this project was to evaluate a behavioural intervention to assist dietitians in long-term care in their efforts to keep persons with dementia eating regular textured foods from a standard menu. The questions addressed were:

- 1) What are the effects of structured conversation on the problem mealtime behaviours and on food and fluid consumption of residents with dementia?
- 2) What are the effects of a structured cueing protocol on the problem mealtime behaviours and food and fluid consumption of residents with dementia?
- 3) What is the relative effectiveness of scripted conversation as compared to structured cues as strategies to decrease negative mealtime behaviours and improve food and fluid consumption?

**Setting:** CapitalCare facilities

**Methods:** Five females and two males aged 80-92 participated. All were moderately to severely impaired in cognitive function due to a specified (e.g., Alzheimer's disease) or unspecified dementia. A single-subject experimental design was used with replications across subjects. Investigators twice presented and withdrew each intervention and baseline phase, resulting in a six-phase experiment. Experimental control comes from changes in the dependent variables in conjunction with implementation and withdrawal of the intervention; participants serve as their own controls. The baseline phase (A) consisted of no intervention, the conversation intervention phase (B) consisted of structured conversational prompts, and the cueing (C) phase consisted of a structured cueing protocol. Each phase was repeated once, with 3 data collection sessions per phase, resulting in an A-B-C-A-C-B design and 18 data collection sessions for each participant. Presentation was counterbalanced to control for sequencing effects.

Continued...

## Hopper, Van Soest, et al. (continued)

### **Methods (continued):**

All sessions were video-recorded. Over three non-consecutive days within the baseline (A) and intervention (B) and (C) phases, data were collected on the amount of food consumed by each participant at the designated meal as measured by weight; amount of fluid consumed as measured by the dietitian's judgment of photographs taken before and after the meal; and, average time taken to complete meals as measured by elapsed minutes from serving of the meal until the resident indicated that s/he had completed it (e.g., pushed away from the table, put napkin on plate, stated that they were done, did not eat or drink anything for at least five consecutive minutes) or when 45 minutes elapsed. The nature and frequency of problem mealtime behaviours were measured using a checklist assessment called the *Feeding Behaviour Inventory* which has sections related to resistive/disruptive behaviours, style of eating, pattern of intake, and oral behaviours.

### **Results:**

In general, there was no discernible trend towards increased consumption of food or fluids as a result of the application of a conversation or cueing intervention for six of the seven participants. Time taken to complete meals did not vary as a function of experimental condition for any of the participants. That is, participants did not stay at the table longer on average in any of the experimental conditions as compared to the baseline conditions. Also, the effects of conversation and cueing protocols on the nature and frequency of problem mealtime behaviours could not be answered using the *Feeding Behaviour Inventory*.

### **Conclusions:**

The finding from this study is contrary to what other researchers have found in similar pilot studies. The researchers call for more attention to the extent to which cognitive impairment influences the ability to benefit from mealtime interaction, personal factors that may affect responsiveness to cues and conversation, environmental factors that may have an effect on eating and swallowing that overshadow any behavioural intervention, and the impact of staff reactivity. They recommend that, in future studies, a "standard" dining room should be used in which sound and light levels are controlled, as well as amount of assistance provided by regular dining room staff. The researchers recognize the need for a method to effectively judge the nature and frequency of problem mealtime behaviours, as well as a description of communication behaviours during mealtime, in addition to food and fluid consumption.

In addition to the primary goal of this project, a secondary analysis of language and communication was conducted. Approval was received from the ethics board to study the videotapes of participants to investigate the effects of the reminiscence-type conversation scripts on the *language* (not mealtime behaviours) produced during the meal. Two MSc-SLP students conducted the analysis under the supervision of Hopper and Cleary and the results were published (see below).

**Continued...**

**Hopper, Van Soest, et al. (continued)**

**Journal Article:**

Hopper, T., Cleary, S., Baumbach, N., & Fragomeni, A. (2007). Table fellowship: Mealtime as a context for conversation with individuals who have dementia. *Alzheimer's Care Quarterly*, 8(1), 34-42.

**Report:**

Hopper, T., et al. (2005). *The effects of structured cueing and conversation on the mealtime behaviours of nursing home residents with dementia*. Final report submitted to the Canadian Foundation for Dietetic Research, Toronto, ON.

**Presentation:**

Van Soest, D., Cleary, S., & Hopper, T. (2005, April). *Eat, drink, and be merry: A look at research into mealtimes in a continuing care setting*. 9<sup>th</sup> Annual Regional Nutrition and Food Service Conference, Capital Health, University of Alberta Hospital, Edmonton, AB.

## Hunter, Moore, & Voaklander

<b>Principal Investigator:</b>	<b>Kathleen F. Hunter</b> , Faculty of Nursing, University of Alberta
<b>Co-Investigators:</b>	<b>Katherine N. Moore</b> , Faculty of Nursing, University of Alberta <b>Don Voaklander</b> , School of Public Health, University of Alberta
<b>Title:</b>	<b><i>Lower urinary tract symptoms, quality of life and fall risk among older women receiving home care</i></b>
<b>Key Words:</b>	Lower urinary tract symptoms (LUTS); quality of life (QoL); falls; home care
<b>Funding Agencies:</b>	MSI Foundation (\$39,069) and University of Alberta Faculty of Nursing Start Up Grant (\$15,000)
<b>Time Frame:</b>	2008 - 2010
<b>Purpose:</b>	The purpose of this project is to describe the relationship between LUTS, fall risk, and urinary related QoL in community-based older women receiving home care. Three research questions will be addressed, in older women receiving home care services: <ol style="list-style-type: none"><li>1) What is the relationship between LUTS and fall risk?</li><li>2) What is the relationship between urinary related QoL and fall risk?</li><li>3) What are the risk factors for change in LUTS and falls?</li></ol>
<b>Setting:</b>	Independent living with home care services
<b>Methods:</b>	This prospective, longitudinal cohort study involves female clients aged 70+ receiving long-term home care services through Alberta Health Services – Capital Health. Data on baseline LUTS, fall risk, medical conditions associated with impaired bladder function in older persons, hospitalization, urinary catheterization in hospital, urinary tract infection, and urinary QoL will be collected at baseline, three and six months. Data on hospitalization, urinary catheterization in hospital, and urinary tract infection will also be collected at three and six months. Standardized instruments will be used to measure LUTS (International Consultation on Incontinence Female Lower Urinary Tract Symptoms Questionnaire (ICIQ-FLUTS), Jackson et al., 1996), fall risk (Timed Up and Go (TUG), Podsiadlo & Richardson, 1991), and QoL (International Consultation on Incontinence Lower Urinary Tract Symptom Quality of Life Questionnaire (ICIQ-LUTSqol), Kelleher et al., 1997).
<b>Results:</b>	Not yet available
<b>Conclusions:</b>	Not yet available

**Johnson, Duebel, Andison, Cleary, Draper, Ducharme, Estabrooks, Haugen, Hopper, Lai, Maisey, Mansell, Maxwell, McIntosh, Michaud, Milke, Sales, Schalm, Strain, Warren, & Yaremchuk**

**Co-Principal Investigators:** Cynthia Johnson, Capital Health  
Thorsten Duebel, CapitalCare

**Team Members:** **Edythe Andison**, The Good Samaritan Society  
**Stuart Cleary**, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta  
**Kellie Draper**, Faculty of Nursing, University of Alberta  
**Michael Ducharme**, The Good Samaritan Society  
**Carole Estabrooks**, Faculty of Nursing, University of Alberta  
**Laura Haugen**, Youville Home  
**Tammy Hopper**, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta  
**Vivien Lai**, Alberta Health and Wellness  
**Suzanne Maisey**, Shepherd's Care Foundation  
**Lynne Mansell**, Capital Health  
**Colleen Maxwell**, Departments of Community Health Sciences and Medicine, Faculty of Medicine, University of Calgary  
**Donnie McIntosh**, The Good Samaritan Society  
**Pauline Michaud**, Alberta Health and Wellness  
**Doris Milke**, CapitalCare  
**Anne Sales**, Faculty of Nursing, University of Alberta  
**Corinne Schalm**, Shepherd's Care Foundation  
**Laurel Strain**, Alberta Centre on Aging, University of Alberta  
**Sharon Warren**, Faculty of Rehabilitation Medicine, University of Alberta  
**Bernice Yaremchuk**, The Good Samaritan Society

**Title:** *Evidence and policy in long term care, building a bridge with knowledge brokering*

**Key Words:** Knowledge brokering; evidence-based decision making

**Funding Agencies:** Canadian Health Services Research Foundation (CHSRF) (\$153,339) and Alberta Heritage Foundation for Medical Research (AHFMR) (\$110,776)

**Time Frame:** 2004 - 2007

**Purpose:** In 2003, the province of Alberta began implementation of the Resident Assessment Instrument Minimum Data Set (RAI/MDS), a standardized computerized assessment tool used to assess health, functional and psychosocial needs, and strengths of older adults in various care and support settings. A group of decision makers and researchers viewed this implementation as a unique opportunity and formed the Knowledge Brokering Group (KBG), one of six CHSRF funded 3-year national demonstration projects to explore the application of knowledge brokering in health services delivery organizations.

Continued...

## Johnson et al. (continued)

<b>Setting:</b>	Long-term care
<b>Methods:</b>	The KBG used knowledge brokering to promote discussions and learnings around the RAI/MDS tools, to inform the process of using the RAI/MDS data to improve quality of care and identify research priorities and to promote an increased understanding of the researcher and decision maker cultures.
<b>Results:</b>	The KBG activities and events attracted a broad audience from frontline staff to senior policy makers to graduate students and researchers, and were successful in increasing capacity related to RAI/MDS and developing a better understanding of each other's cultures. The KBG extended project members' existing networks, increased decision makers' research capacity, promoted new research projects, increased reciprocal understanding of cultures, increased awareness of and capacity to use the RAI/MDS data and outputs and hosted well received educational events.
<b>Conclusions:</b>	<p>The project increased the number and frequency of interactions and collaborations between researchers and decision makers. There has been the development of a mutual understanding of the researcher and decision maker cultures that is clearer than prior to the KBG. Researchers have a better understanding of what aspects of their research are important to decision makers and how to involve decision makers at the beginning of proposal development. There has also been an increase in student involvement in the KBG project. Teams of researchers and decision makers submitted grant proposals to external funding agencies during the term of the project. Four pilot research projects were supported by the KBG and the researchers have shared early results with the decision makers. These project included:</p> <ul style="list-style-type: none"><li>- <b>Brown, C.</b> <i>Establishing the pain profile of non-verbal long-term care residents with dementia: Analysis of archived Resident Assessment Instrument (RAI) 2.0 data</i> (see Brown)</li><li>- <b>Sales, A.</b> <i>Pilot study to develop quality improvement feedback reports using MDS/RAI data</i> (see Sales)</li><li>- <b>Sales, A., Maxwell, C., &amp; Teare, G.</b> <i>Prioritizing process improvement indicators using MDS/RAI Data</i> (see Sales, Maxwell, &amp; Teare)</li><li>- <b>Wielandt, P.</b> <i>Identification of characteristics of long term care residents' functional abilities, assistive technology use and activity participation: Analysis of the Resident Assessment Instrument (RAI) 2.0 data</i> (see Wielandt)</li></ul>
<b>Report:</b>	
	Johnson, C., et al. (2008). <i>Evidence and policy in long term care: Building a bridge with knowledge brokering</i> . Final report submitted to CHSRF and AHFMR.

Continued...

## **Johnson et al. (continued)**

### **Presentations:**

- (2005, February). *Evidence and policy in long term care: Building a bridge with knowledge brokering. A knowledge brokering demonstration project.* Resident Safety Symposium: Focus on Research and Practice in Continuing Care: Ensuring Safety, Measuring Risk, Promoting Quality, Edmonton, AB. (poster)
- (2005, March). *A knowledge brokering demonstration project. Evidence and policy in long term care: Building a bridge with knowledge brokering.* Capital Health Administrative Grand Rounds, Edmonton, AB.
- (2005, April). *A knowledge brokering demonstration project. Evidence and policy in long term care: Building a bridge with knowledge brokering.* Good Samaritan Society Executive Management Team, Edmonton, AB.
- (2005, May). *Decision makers panel.* Centre for Knowledge Transfer 2005 Spring Institute: Enhancing Patient Safety through Knowledge Transfer, Edmonton, AB.
- (2005, May). *Knowledge brokering in the trenches: One organization's ongoing journey.* Health Research Transfer Network of Alberta Water Cooler Videoconference, Edmonton, AB.
- (2005, October). *Evidence and policy in long term care: Building a bridge with knowledge brokering.* 4<sup>th</sup> Annual National CHSRF Knowledge Brokering Workshop, Halifax, NS.
- (2006, February). *Are the Russians coming??? Or what the heck is the KBG?* CapitalCare Corporate Services, Edmonton, AB.
- (2006, February). *Are the Russians coming??? Or what the heck is the KBG?* KUSP Research Brown Bag Lunch series, University of Alberta, Edmonton, AB.
- (2006, February). *Researchers and decision makers unite! Knowledge brokering in action.* CapitalCare People and Progress Conference, Edmonton, AB. (poster)
- (2007, May). *Knowledge brokering, the yellow brick road to evidence based decision making using the Resident Assessment Instrument (RAI 2.0).* Canadian RAI Conference Making the Health Connection, Sharing & Caring Beyond Borders, Ottawa, ON. (poster)
- (2007, June). *Building a network through knowledge brokering in continuing care.* SEARCH Canada, Edmonton, AB.
- (2007, October). *Evidence and policy in long term care: Building a bridge with knowledge brokering.* Research Transfer Network of Alberta Knowledge Transfer, Raising the Stakes for System Change, Edmonton, AB.
- (2007, October). *Supporting research: A key to unlocking evidence-informed decision making.* Margaret Scott Wright Research Day, Faculty of Nursing, University of Alberta, Edmonton, AB. (poster)
- (2007, November). *Creating a culture of evidence-informed decision making in continuing care organizations.* Canadian Association on Gerontology 36<sup>th</sup> Annual Scientific and Educational meeting, Canadian Association on Gerontology, Calgary, AB.
- (2007, November). *Rubbing shoulders to advance and guide research: Evaluating a continuing care national demonstration project.* 36<sup>th</sup> Annual Scientific and Educational meeting, Canadian Association on Gerontology, Calgary, AB. (poster)

**Jones, Mielke, & Hopper**

**Co-Principal Investigators:** Catherine Jones, Glenrose Rehabilitation Hospital  
Kent Mielke, Glenrose Rehabilitation Hospital

**Co-Investigator:** Tammy Hopper, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta

**Title:** *Transition of care: Improving continuity from a rehabilitation hospital to home*

**Key Words:** Transitions; continuity of care; rehabilitation hospital

**Funding Agency:** Glenrose Rehabilitation Hospital Clinic Research Fund (\$7,600)

**Time Frame:** 2008 - present

**Purpose:** The research questions to be addressed are:  
1) What is the effect on patients' perceptions of continuity of care as a result of a social work intervention following transition from hospital to home?  
2) Does the intervention reduce hospital readmission rates over a 3-month period following discharge?

**Setting:** Glenrose Rehabilitation Hospital; home

**Methods:** Patients aged 65+ who are being discharged from a specific unit at the Glenrose Rehabilitation Hospital will be randomly assigned to treatment (n=25) and control (n=25) groups. The intervention is based on the Care Transitions Intervention, developed and tested by Coleman et al. (2006). The intervention group will include one home visit 7-10 days post-discharge and one phone call 20-28 days post-discharge. The control group will receive no contact after discharge, which is current practice. The primary outcome measure is the 15-item Care Transition Measure (CTM) (Coleman, 2006).

**Results:** Not yet available

**Conclusions:** Not yet available

## **Jurczak**

- Principal Investigator:** Susan Jurczak, MSc candidate (Occupational Therapy-Post Professional), School of Occupational Therapy, Dalhousie University
- Title:** *Maintaining family relationships within assisted living facilities for clients with dementia: Effects of the physical and social environment*
- Key Words:** Dementia care assisted living facilities; physical environment; social environment; family relationships
- Funding Agencies:** CapitalCare Foundation (\$14,602), Canadian Occupational Therapy Foundation, and the Alberta Association on Gerontology Student Bursary
- Time Frame:** 2007 - present
- Purpose:** The focus of this thesis research is on the ability of dementia care facilities to foster shared meaningful activities between residents and their family members and friends within the context of the physical and social environment.
- Setting:** An Alzheimer Care Centre and a Designated Assisted Living (DAL) facility for clients with dementia
- Methods:** The Professional Environmental Assessment Protocol (PEAP) and the Policy and Program Information Form (POLIF) were used to describe the physical and social environments of two dementia care facilities. Valued activities for residents and their family members and friends were identified through semi-structured interviews, coded and compared with relevant areas of the PEAP and POLIF to determine if the facilities were able to support the activities identified.
- Results:** Not yet available
- Conclusions:** Not yet available
- Report:**  
Jurczak, S. (2007, Summer). Maintaing family relationships within assisted living facilities for clients with dementia: Effects of the physical and social environment. *AAGMag (Alberta Association of Gerontology Newsletter)*, 24(2).
- Presentation:**  
Jurczak, S. (2008, June). *Maintaining family relationships within dementia care assisted living facilities*. Canadian Association of Occupational Therapists National Conference, Whitehorse, YK. (poster)

## **Kinjerski & Skrypnek**

- Principal Investigator:** Val Kinjerski, Kaizen Solutions for Human Services, St. Albert
- Co-Investigator:** Berna Skrypnek, Department of Human Ecology, Faculty of Agriculture, Life and Environmental Sciences, University of Alberta
- Title:** *Spirit at Work at CapitalCare: Increasing job satisfaction and organizational commitment and reducing turnover and absenteeism*
- Key Words:** Staff wellness; job satisfaction; absenteeism; turnover
- Funding Agency:** CapitalCare Foundation (\$20,000)
- Time Frame:** 2005 - 2006
- Purpose:** The purpose of this study was to test the effectiveness of a spirit at work program to improve spirit at work and staff wellness in long-term care. The research question was "Can a spirit at work intervention program increase employee spirit at work, employee wellness, job satisfaction, and organizational commitment, and decrease absenteeism and turnover?"
- Setting:** Two similar units from different CapitalCare facilities
- Methods:** The study employed a quasi-experimental, two-group, pretest-posttest design. Staff on one unit received the spirit at work intervention (n=24) while staff on a second unit did not receive the intervention and acted as a comparison group (n=34). The intervention consisted on a 1-day workshop *Cultivating Spirit at Work in Long-term Care* supplemented by eight weekly 1-hour booster sessions. Data were collected on spirit at work, job satisfaction, organizational commitment, organizational culture, vitality, life satisfaction, and orientation to life. Turnover and absenteeism data for both sites were provided for 1 year prior to the start of the intervention to 1 month after the final booster session. A focus group was held with participants in the intervention group only.
- Results:** The findings provide support that participants attending the program experienced increased spirit at work, job satisfaction, organizational commitment, and organizational culture (particularly teamwork and morale), which lead to a reduction in turnover and absenteeism. No differences were found for increases in life satisfaction or a sense of vitality and wellness that could be attributed to the program. Qualitatively, participants indicated that overall morale and communication improved, staff experienced personal growth, and greater attention and care was provided to the residents.
- Conclusions:** The authors conclude that the program was successful and led to reductions in turnover and absenteeism. They suggest that implementation of a spirit at work program is a relatively inexpensive way to enhance employees' work satisfaction, increase commitment to the organization, and ultimately improve the quality of resident care.

Continued...

## **Kinjerski & Skrypnek (continued)**

### **Journal Article:**

Kinjerski, V., & Skrypnek, B. J. (2008). The promise of spirit at work: Increasing job satisfaction and organizational commitment and reducing turnover and absenteeism in long-term care. *Journal of Gerontological Nursing, 34*(10), 17-25.

### **Report:**

Kinjerski, V., & Skrypnek, B. J. (2006). *Spirit at work at CapitalCare: Increasing job satisfaction and organizational commitment and reducing turnover and absenteeism*. Final report submitted to CapitalCare, Edmonton, AB.

### **Presentations:**

Kinjerski, V. (2008, May). *The promise of spirit at work: Increasing employee wellbeing, job satisfaction and commitment*. Exploring Spirituality and Health Conference, Edmonton, AB.

Kinjerski, V., & Skrypnek, B. J. (2006, March). *The spirit at work project: Creating positive outcomes in long term health care*. Long Term Care Winter Conference, Jasper, AB.

Kinjerski, V., & Skrypnek, B. J. (2006, May). *Fostering spirit at work in long term care staff*. Naming and Claiming Spirituality: The Invisible Ingredient in Health and Healing, Vancouver, BC.

## Liu, Milke, Maisey, & Mayan

<b>Principal Investigator:</b>	<b>Lili Liu</b> , Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta
<b>Co-Investigators:</b>	<b>Doris Milke</b> , CapitalCare <b>Suzanne Maisey</b> , Shepherd's Care Foundation <b>Maria Mayan</b> , Community-University Partnership for the Study of Children, Youth, and Families, University of Alberta
<b>Title:</b>	<b><i>How can CapitalCare balance residents' needs for a homelike environment with caregivers' needs for efficient ways to deliver care?</i></b>
<b>Key Words:</b>	Long-term care; environment; staff; qualitative methods
<b>Funding Agency:</b>	CapitalCare Foundation (\$20,000)
<b>Time Frame:</b>	2008 - 2010
<b>Purpose:</b>	The purpose of this project is to provide CapitalCare with effective methods to help staff give efficient, high quality care and to continue to make each centre feel as much like home as possible for the residents. The main research questions are: <ol style="list-style-type: none"><li>1) How do the residential care facilities rate on two standardized measures that assess physical therapeutic environments?</li><li>2) What factors are related to homelikeness that facilitate or hinder care delivery according to family and staff?</li><li>3) What suggestions do family members and staff members have to balance homelikeness with efficient ways to deliver care?</li><li>4) How do Corporate Best Practice Committees and Managers of the Planning and Research Departments reconcile the strategies for balancing homelikeness with efficient ways to deliver care recommended by families and staff with required standards, policies, procedures, and guidelines?</li></ol>
<b>Setting:</b>	McConnell Place North, McConnell Place West, Strathcona Alzheimer Care Centre, Kipnes Centre for Veterans
<b>Methods:</b>	Two assessments will be used to describe the physical environments: the Professional Environmental Assessment Protocol (PEAP) and the Therapeutic Environment Screening Survey-Nursing Home (TESS-NH). Six family members and six staff members at each centre will be interviewed. Photographs of the spaces within a centre, such as the dining area, bedroom, and hallway, will be used. Family and staff will be asked what makes the centre feel homelike and what does not, and for suggestions about how staff members can work efficiently and give high quality care, but continue to make the centre feel like home for the resident. Focus groups will be held with the CapitalCare Corporate Best Practice Committee and members of the Planning and Research Department to discuss the suggestions made by family members and staff.
<b>Results:</b>	Not yet available
<b>Conclusions:</b>	Not yet available

**Mager, Atkins, & Wojcik**

**Principal Investigator:** **Diana Mager**, Department of Agriculture, Food, and Nutritional Sciences, Faculty of Agriculture, Life and Environmental Sciences, University of Alberta

**Co-Investigators:** **Marlis Atkins**, Nutrition Services, Regional Home Care Program, Alberta Health Services  
**Agnieszka Wojcik**, Nutrition Services, Regional Home Care Program, Alberta Health Services

**Title:** ***Dietary intake in home care clients with chronic wounds***

**Key Words:** Chronic wounds; nutrition; dietary intake

**Funding Agency:** Non-funded

**Time Frame:** 2007 - present

**Purpose:** The purpose of this study is: 1) to assess the nutrition intake of home-care clients with wounds using 3-day food records to determine macro and micronutrient intake, 2) to examine the relationship between pressure ulcers, body composition and the impact of nutrient intake on these variables, 3) to promote improved nutritional well-being and improved wound healing of chronic wounds by providing dietary counselling focus on individual client need, and 4) to determine the resources needed to address the nutritional concerns of home care clients with chronic wounds.

**Setting:** Regional Home Living Program - Edmonton

**Methods:** Data will be collected in the following forms: food intake records (by client), laboratory markers of nutritional status (from medical chart), anthropometric assessment, wound severity, and wound information (in home visit by Registered Dietician in program)

**Results:** Not yet available

**Conclusions:** Not yet available

**Presentation:**

Mager, D. R., Atkins, M., & Wojcik, A. (2009, February). *Does dietary intake influence wound severity in adult patients with pressure and venous stasis ulcers?* Clinical Nutrition Week, American Society of Clinical Nutrition, New Orleans, LA. (poster)

**Maisey, Liu, Milke, Van Soest, Wark, Schalm, & Cleary**

**Co-Principal Investigators:** **Suzanne Maisey**, CapitalCare (now with Shepherd's Care Foundation)  
**Lili Liu**, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta

**Co-Investigators:** **Doris Milke**, CapitalCare  
**Deanna Van Soest**, CapitalCare  
**Connie Wark**, CapitalCare  
**Corinne Schalm**, Shepherd's Care Foundation (formerly with CapitalCare)  
**Stuart Cleary**, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta

**Title:** *Impact of environmental change following a move from a traditional continuing care centre to a purpose-built centre: Exploring resident, staff, environmental, and system indicators*

**Key Words:** Long-term care environment; relocation; staff; veterans; observation; focus group; post occupancy evaluation

**Funding Agencies:** CapitalCare, Veterans Affairs Canada, and the University of Alberta

**Time Frame:** 2005 - 2007

**Purpose:** In 2005, CapitalCare opened a new long-term care centre for veterans, Kipnes Centre for Veterans (KCV) to replace the older Mewburn Veterans Centre (MVC). The MVC, build in 1966, was a traditional centre with a high density of people within a small, hospital-like space with mostly four-bed rooms. The resident population included 140 male veterans, 81% with dementia, who exhibited a high prevalence of negative behavioural symptoms, some of which were believed to be exacerbated by the crowded MVC environment. The KCV (2005) incorporated the principles of therapeutic and universal design, especially features recommended for dementia, to create a non-institutional building where the physical and social environments support maximal resident functioning, increase privacy and approximate home. This post-occupancy evaluation describes and contrasts the designs of the two-buildings and examines the impact of the changed physical, social, and care environments on the residents, staff, environment and system indicators measured before and after the move. It was hypothesized that despite stresses that can accompany relocation, the processes used to support the move and the improved environment would be positive overall and would reduce some of the negative behaviours without negatively impacting other indicators.

**Setting:** Mewburn Veterans Centre, Kipnes Centre for Veterans

**Methods:** Satisfaction surveys, focus groups and research observations, meal time measures, building assessments, and light and sound measures.

Continued...

## Maisey et al. (continued)

**Results:** Results indicate that the new facility design contributed to positive outcomes including significantly increased family satisfaction with home-likeness and privacy and demonstrated resident preference for the private spaces now available. Some building features raised concerns, including the staff's and families' perceptions that residents' preferences for privacy might lead to isolation and that the larger size of building might contribute to resident fatigue.

**Conclusions:** Not yet available

### **Presentations:**

Chard, G., Liu, L., Maisey, S., & Harris, R. (2007). *Impact of environments in continuing care facilities: Residents, family, staff perspectives*. 31<sup>st</sup> Annual meeting of the College of Occupational Therapists, United Kingdom. (poster)

Liu, L., Chard, G., & Maisey, S. (2007, March). *Providing home-like models of care in long-term residential facilities: Resident, family and staff perspectives*. The Greying Nation: Transition of Care in Later Life, Edmonton, AB. (poster)

Maisey, S., Liu, L., Milke, D., & VanSoest, D. (2007, November). *Assessing the impact of environmental change on veteran residents, staff and families relocated from a traditional long term care centre to a purpose-built residential care environment: A post occupancy evaluation to inform current practice and future decisions*. Symposium of four papers, 36<sup>th</sup> Annual Scientific and Educational meeting of the Canadian Association on Gerontology, Calgary, AB. Titles of specific papers are:

Maisey, S., Wark, C., & Walsh, T. (2007, November). *Assessing the impact of relocation from a traditional continuing care centre to a purpose-built veterans centre: What changed and what do people think?*

Milke, D.L., Knopp, A., Walsh, T., & Maisey, S. (2007, November). *Activity mapping*.

Van Soest, D., Milke, D.L., Maisey, S., & Knopp, A. (2007, November). *The effects of relocation on the mealtime experience*.

Liu, L., Chard, G., & Maisey, S. (2007, November). *How do perceptions of residents, family, and staff compare?*

Maisey, S., Milke, D., Wark, C., Liu, L., Schalm, C., Walsh, T., & Knopp, A. (2007, February). *Listening to families, residents and staff: A post-occupancy evaluation*. CapitalCare's 21<sup>st</sup> Annual People and Progress Conference, Edmonton, AB.

Maisey, S., Walsh, T., & Wark, C. (2007, November). *Relocation from a traditional continuing care centre to a purpose-built veterans centre: Assessing the impact of a large environmental change on resident behaviours, family satisfaction and other quality indicators*. Annual Scientific meeting of the Gerontological Society of America, San Diego, CA. (poster)

Van Soest, D., Knopp, A., Milke, D., Clearly, S., & Maisey, S. (2006, October). *Let them eat cake: Easing relocation stress for veterans with dementia*. 20<sup>th</sup> Annual Margaret Scott Research Day, Edmonton, AB. (poster)

Note: See Van Soest et al. for a sub-study of this project.

## **Mallidou**

<b>Principal Investigator:</b>	<b>Anastasia Mallidou</b> , Postdoctoral Fellow, Faculty of Nursing, University of Alberta (Supervisors: Carole Estabrooks and Greta Cummings, Faculty of Nursing, University of Alberta; Corinne Schalm, Shepherd's Care Foundation)
<b>Title:</b>	<b><i>How context in nursing homes influences resident outcomes</i></b>
<b>Key Words:</b>	Organizational culture; long-term care facilities; nursing homes; knowledge translation; resident outcomes; safety practices
<b>Funding Agencies:</b>	Stipend funding for postdoctoral fellowship (PDF), small research allowance through Canadian Health Services Research Foundation (CHSRF), Alberta Heritage Foundation for Medical Research (AHFMR), & Faculty of Nursing
<b>Time Frame:</b>	2008 - 2010
<b>Purpose:</b>	The purpose of this postdoctoral research study is to explore the impact of healthcare work environment in long-term care settings on: 1) the incorporation of new knowledge (i.e., best practices) into work routines; and 2) safety practices for enhancing resident outcomes. The specific research questions are: <ol style="list-style-type: none"><li>1) Does the nursing home work environment influence research use?</li><li>2) Do both or either (work environment, research use) influence quality of care and resident safety?</li></ol>
<b>Setting:</b>	Shepherd's Care Foundation's (SCF) long-term care facilities
<b>Methods:</b>	For the first stage (statistical modeling), secondary analyses of existing data sets will be undertaken. Using the information from the model that emerges and in consultation with SCF decision makers, an organizational intervention will be designed to improve quality of care and resident safety in key areas that overlap with both the Translating Research in Elder Care (TREC) project (which is examining pain management, falls prevention, and dementia behaviour) and SCF priority areas.
<b>Results:</b>	Not yet available
<b>Conclusions:</b>	Not yet available

## **Marin, Wilson, & Steinkey**

- Principal Investigator:** **Alexandra Marin**, Division of Care of the Elderly, Department of Family Medicine, Faculty of Medicine and Dentistry, University of Alberta
- Co-Investigators:** **Donna Wilson**, Faculty of Nursing, University of Alberta  
**Ethel Steinkey**, Caritas Health Group
- Title:** *Hope as a technique for reducing depression among continuing care residents*
- Key Words:** Depression; hope; long-term care
- Funding Agency:** Caritas Research Fund (\$5,000)
- Time Frame:** 2006 - 2008
- Purpose:** This study was designed to explore the effect of a 4-week treatment program involving HOPE interventions among seniors diagnosed with depression at the Edmonton General Continuing Care Centre.
- Setting:** Edmonton General Continuing Care Centre
- Methods:** Potential participants were screened at the care centre, and nine participants were randomly assigned control conditions while eight participants were randomly assigned intervention conditions. The participants in the intervention group were provided with the hope intervention treatment over the course of four weeks, while the control group was provided with informal visitation for the same time frame. Test measures of hope and depression were taken before and after hope interventions.
- Results:** A comparison of the intervention group and control group showed no difference in increased feelings of hope or decreased feelings of depression. In the intervention group, there was a decrease of depressive symptoms and a decline in hope. In the control group, there was a decrease in depressive symptoms but an increase in hope. The control group showed improvement from daily informal, unstructured visitations.
- Conclusions:** The hope intervention was not useful in alleviating depressive symptoms for the participants. Further, a non-clinical approach may be the most advantageous way to treat depression as exhibited by the control group who experienced an increase in hope through informal visits. Although it poses a case for a more personal (vs. clinical) approach to treatment of depression in elderly, further investigation is needed.

**Maxwell, Strain, Hogan, Eliasziw, Parboosingh, Hagen, Teare, Wodchis, Zimmerman, & Schmaltz**

**Co-Principal Investigators:** **Colleen J. Maxwell**, Departments of Community Health Sciences and Medicine, Faculty of Medicine, University of Calgary  
**Laurel A. Strain**, Alberta Centre on Aging and Department of Sociology, Faculty of Arts, University of Alberta

**Co-Investigators:** **David Hogan**, Departments of Clinical Neuroscience and Community Health Sciences, Faculty of Medicine, University of Calgary  
**Michael Eliasziw**, Departments of Clinical Neuroscience and Community Health Sciences, Faculty of Medicine, University of Calgary  
**Jean Parboosingh**, Department of Community Health Sciences, University of Calgary  
**Brad Hagen**, School of Health Sciences, University of Lethbridge  
**Gary Teare**, Health Quality Council of Saskatchewan  
**Walter Wodchis**, Health Policy, Management and Evaluation, Faculty of Medicine, University of Toronto  
**David Zimmerman**, Department of Industrial and Systems Engineering, College of Engineering, University of Wisconsin  
**Heidi Schmaltz**, Division of Geriatric Medicine, Faculty of Medicine, University of Calgary

**Title:** *Continuing care reform: Implications for the balance and quality of care for frail older Canadians*

**Key Words:** Continuing care; quality care; continuing care reform

**Funding Agencies:** Alberta Heritage Foundation for Medical Research (AHFMR) (\$900,000), with additional funding for the rural component through a New Emerging Team Grant (PI Strain) from the Canadian Institutes of Health Research's Institute of Aging (CIHR-IA) and the Northern and Rural Health Research Initiative

**Time Frame:** 2006 - present

**Purpose:** The purpose of this project is to examine: 1) the health and social needs and quality of care of older adults residing in designated assistive living/supportive living/supportive housing facilities (DAL) and in long-term care facilities (LTC), 2) the mix of services provided (including the relative contributions of informal caregivers) to these residents, and 3) health outcomes across the settings, such as changes in functional status, emotional well-being, relocation to higher levels of care, mortality and hospitalization rates, and caregiver burden, taking resident and facility characteristics into account.

**Setting:** DAL and LTC facilities in 5 health regions throughout Alberta

Continued...

## **Maxwell et al. (continued)**

**Methods:** Data collection includes: resident assessments with a sample of DAL and LTC residents (interRAI tools and quality of care/satisfaction survey) at baseline and 12 months later; interviews with informal caregivers (family members/friends) at baseline and 12 months later; facility interviews; and key informant interviews with provincial and regional representatives with responsibilities for health and/or housing in these settings. Over 2000 DAL and LTC residents were in the study at baseline.

**Results:** Not yet available

**Conclusions:** Not yet available

### **Presentations:**

Maxwell, C. J. (2007, March). *Where does (should) assisted living fit into the continuum of continuing care options for older Albertans?* Greying Nation: Transitions of Care in Later Life Conference, Edmonton, AB. (invited keynote)

Maxwell, C. J. (2007, April). *Assisted Living: Where does (should) it fit into the continuum of continuing care?* Annual Scientific meeting of the Canadian Geriatrics Society, Banff, AB. (CIHR-IA sponsored invited keynote)

Maxwell, C. J., & Strain, L. A. (2005, November). *Care and quality of life needs of seniors in continuing care: Review of the Alberta Continuing Care Epidemiologic Studies (ACCES) program.* Annual meeting of the Alberta Long Term Care Association, Calgary, AB. (invited keynote)

Maxwell, C. J., & Strain, L. A. (2008, February). *Assisted living in Alberta.* 7<sup>th</sup> Annual Long Term Care Colloquium, Calgary, AB. (invited presentation)

Maxwell, C. J., & Strain, L. A. (2008, May). *Assisted living in Alberta: Early lessons learned about residents' clinical, psychosocial and quality of care needs from the ACCES Study.* Making the Quality Connection, 2008 Canadian RAI Conference, Edmonton, AB. (invited keynote)

Maxwell C. J., & Strain, L. A. (2008, September). *Assisted living in Alberta: Early findings from the ACCES study.* Alberta Continuing Care Association Board meeting. Edmonton, AB. (invited presentation)

Maxwell, C. J., & Strain, L. A. (2008, September). *Assisted living in Canada: Implications for the quality of care and life for seniors* 2008 Registered Nurses Association of Ontario Elder Care Conference: Aging and Health across the Continuum, Toronto, ON. (invited plenary)

Strain, L. A., & Maxwell, C. J. (2007, June). *Challenges facing health services researchers: Examples from ACCES.* Knowledge Brokering Group, Edmonton, AB. (invited)

Strain, L. A., & Maxwell, C. J. (2008, October). *Assisted living in Alberta: Research and evidence from the ACCES Study.* Assisted Living Above the 49<sup>th</sup> Parallel Conference, organized by the Good Samaritan Society, Banff, AB. (invited keynote)

## **McFall & Milke**

- Principal Investigator:** G. Peggy McFall, Graduate Student, Department of Psychology, Faculty of Science, University of Alberta (Student Intern, Department of Psychology, University of Alberta at time of data collection)
- Co-Investigator:** Doris Milke, CapitalCare
- Title:** *Preference of continuing care staff for electronic surveys*
- Key Words:** Data collection; computers; staff
- Funding Agency:** Non-funded internship research
- Time Frame:** 2003 - 2007
- Purpose:** The focus of this study was to evaluate the interest of long-term care (LTC) staff in participating in research and to uncover staff's perceptions of the various ways research data are collected. Four research questions were addressed:
- 1) Do electronic surveys result in faster response times and higher response rates than traditional paper surveys?
  - 2) Do care staff feel sufficiently competent with computers to use them for data collection tasks such as completing electronic surveys?
  - 3) Do care staff believe they spend too much time on research activities?
  - 4) Do electronic surveys make it more convenient to participate in research?
- Setting:** 13 CapitalCare facilities
- Methods:** Care staff were randomly assigned to either the electronic or the paper survey groups. A 12-item questionnaire included questions about manager and staff computer skills and their perceptions of research workload and the convenience of electronic surveys. Questions were primarily based on a 5-point Likert scale, with some yes/no, ranking, choice, and fill-in-the-blank items. A total of 25 nursing managers and 32 other professional care staff completed the survey either electronically via e-mail or on paper through inter-office mail. Response rates were 72% for the electronic survey and 78% for the paper survey.
- Results:** Overall, staff were satisfied with the extent of their research participation. While workload was the main deterrent to research participation, nursing managers and other professional staff indicated an ability to manage their research load, although some staffing groups, rehabilitation in particular, seemed to have few research opportunities. In general, staff preferred electronic surveys although the response rates and response times were the same for the electronic and paper surveys. Participants felt comfortable using computers in all but one factor: keeping patient data electronically.

Continued...

### **McFall & Milke (continued)**

**Conclusions:** The researchers conclude that electronic surveys are an important tool in the collection of research data. They argue that the use of electronic surveys could positively affect the researcher/care staff relationship, which is an integral part of quality health care research.

#### **Journal Article:**

McFall, G. P., & Milke, D. (2007). Preference of continuing care staff for electronic surveys. *Canadian Journal of Nursing Research, 39*(3), 166-180.

#### **Presentations:**

McFall, G. P. (2004, December). *Using electronic surveys to collect research data from care staff in continuing care centres*. The CapitalCare Group, Edmonton, AB.

McFall, G. P., & Milke, D. (2005, March). *Using electronic surveys to collect research data from care staff in continuing care centres*. Joseph R. Royce Research Conference, Department of Psychology, University of Alberta, Edmonton, AB.

**Milke, Kendall, Neumann, Wark, & Knopp**

**Principal Investigator:** Doris Milke, CapitalCare

**Co-Investigators:** T. Scott Kendall, CapitalCare  
Iris Neumann, CapitalCare  
Connie Wark, CapitalCare  
Alana Knopp, CapitalCare

**Title:** *A longitudinal evaluation of restraint reduction within a multi-site, multi-model Canadian continuing care organization*

**Key Words:** Mechanical restraints; restraint reduction; physical restraints

**Funding Agency:** CapitalCare

**Time Frame:** 2003 - 2006

**Purpose:** This study examined the efforts to reduce mechanical restraint use in facilities operated by CapitalCare.

**Setting:** 11 CapitalCare facilities, including six traditional style continuing care centres (ranging in size from 149 to 296 beds), three small purpose-built Alzheimer care centres (36 beds each), and two life-lease care housing facilities (42 and 78 suites, which provide a level of care similar to that in traditional centres).

**Methods:** Restraint data from four annual data collections (February 2003, February 2004, February 2005, and February 2006), involving approximately 1,200 cases per year, were analysed to examine the trends in restraint use within the organization. Data were collected on all residents living within the facilities (with exception of sub-acute and transition units), using a restraint-tracking form developed by the organization with assistance of the researchers. Facility care and administrative staff completed the restraint-tracking form on a regular basis in the course of their duties.

**Results:** Over a 4-year study period and during a campaign to reduce mechanical restraint use, the organizational prevalence dropped from 24.68% to 16.01%. There was substantial variability in restraint prevalence among the 11 centres (range: 0% - 39.86% of residents restrained). Restraint prevalence was lowest in the residential Alzheimer centres and the life-lease care facilities. In the traditional-style centres, the rates were relatively high and varied greatly (1.69% - 39.86%). All but one facility was able to achieve mechanical restraint reduction.

**Conclusions:** The authors conclude that restraint-reduction initiatives can be successful and sustained. Facilitators to achieving and sustaining restraint reduction are identified, including small facility size, provision of specialized care (e.g., Alzheimer's disease), and an on-site champion. Potential barriers such as large facility size and an off-site champion as well as areas for future research are discussed.

Continued...

**Milke et al. (continued)**

**Publication:**

Milke, D., Kendall, T. S., Neumann, I., Wark, C. F., & Knopp, A. (2008). A longitudinal evaluation of restraint reduction within a multi-site, multi-model Canadian continuing care organization. *Canadian Journal on Aging, 27*(1), 35-43.

## Miyazaki & Miller

- Principal Investigator:** Masako Miyazaki, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta
- Co-Investigator:** James Miller, Department of Electrical and Computer Engineering, Faculty of Engineering, University of Alberta
- Title:** *E-Health Edmonton Program - Development and Integration of the Wireless Wearable Physiological Monitor (WWPM)*
- Key Words:** Wireless wearable physiological monitor (WWPM); home care; continuum of care; unobtrusive monitoring
- Funding Agencies:** Innovation and Science, Alberta Health and Wellness, Government of Alberta (\$1,585,000), and Western Economic Diversification, Government of Canada (\$2,850,000)
- Time Frame:** 2002 - 2008
- Purpose:** The Wireless Wearable Physiological Monitor (WWPM) aims to provide unobtrusive, regular, remote physiological monitoring of clients within their home environment. Its goal is to provide sufficient health support functions to enable its user to remain at home while still being under a limited form of medical supervision. The WWPM solution aims to reduce the care burden on families and friends, and at the same time provide a sense of continuous care for the ill or elderly. It is a combination of non-invasive sensors that collect a person's physiological data and a 2-way communication system that allows the physiological data to be shared with a central software application. The central software application can utilize the data to alert a care provider to intervene with appropriate support or automatically prompt the individual to take necessary actions. It is intended for use by care providers within the traditional continuum of care to create a health management or care plan for an individual's particular condition. This combination of data, professional care and communication are intended to produce the medical and behavioural outcomes necessary for individuals to manage their health and wellness outside of the walls of the traditional health services institutions.
- Setting:** Home Care, laboratory
- Methods:** Study participants included Home Care clients and community-residing healthy older adults as well as health professionals and Community Care Access staff. In Phase I, the WWPM system was tested for validity and reliability of the equipment for a sample population (volunteer and Home Care clients). In Phase II, the WWPM System was tested in clinical populations in Alberta Health Services (Capital Health) by monitoring blood glucose, pulse rate and messaging functions. These steps enabled the project to proceed from technical innovation to the production of a commercially viable technology that allows remote physiological monitoring of clients in their homes.

Continued...

## **Miyazaki & Miller (continued)**

**Results:** Results support the use of the WWPM system for glucose monitoring and messaging. However, clients provided suggestions for improving these functions such as increase the comfort of the watch strap, increase or adjust volume of buzzing and voice sounds, and increase contrast of visual displays so that older adults with declining vision and hearing can use the system. The health professionals provided similar suggestions. The user-interface could be improved upon so that alerts from the WWPM appearing on clinicians' computer screens would be more user-friendly. Health professionals provided suggestions for improvements which would allow for more effective bidirectional messaging.

**Conclusions:** The WWPM system can be used to remotely monitor blood glucose levels of clients in their homes. Improvements to the software can better allow bidirectional messaging to be used between health professionals and clients. Similarly, software modifications to the pulse sensor may allow only realistic readings to be displayed. Ideally, the pulse sensor would also have motion cancellation capability in future.

### **Journal Articles:**

Miyazaki, M. (2003). The future of E-health—wired or not wired. *Business Briefing: Hospital Engineering & Facilities Management* (Business Briefings Ltd). ISBN: 1903150760.

Miyazaki, M. (2005). Wireless healthcare – Bluetooth and beyond. *Business Briefing: Medical Device Manufacturing & Technology*, London, UK, pp. 65-67.

Miyazaki, M. (2006). Evolution of e-Health. *eHealth Medical IT Solutions, Touch Briefings*, (1), 13-15.

Miyazaki, M. (2006). Happiness is a life with dreams. *Kotohira* (61), 154-155.

Miyazaki, M. (2007). Wireless healthcare - Bluetooth and beyond. *CSI Communications*, 30(11), 28-29.

Miyazaki, M. (2007). Promoting global health through a telehealth initiative. *Occupational Therapy Now*, 9(3), 25-26.

Miyazaki, M. (2008). Wearable Wireless Physiological Monitor. *Healthcare Bulletin*;  
<http://www.healthcare-bulletin.com/healthcare-it/>

### **Reports:**

Based on the government contracts, quarterly and bi-annually reports have been submitted to funding agencies.

### **Presentations:**

Liu, L., Miyazaki, M., & Simmons, D. (2004, June). *Feasibility of using Videophone for assessing cognitively impaired seniors in their homes*. RESNA, Orlando, FL.

Miyazaki, M. (2004, May). *e-Health collaboration in new technology development*. ICT Forum, Edmonton, AB.

Continued...

## **Miyazaki & Miller (continued)**

### **Presentations (continued):**

- Liu, L., Miyazaki, M., & Simmons, D. (2004, June). *Feasibility of using Videophone for assessing cognitively impaired seniors in their homes*. RESNA, Orlando, FL.
- Miyazaki, M. (2004, May). *e-Health collaboration in new technology development*. ICT Forum, Edmonton, AB.
- Miyazaki, M. (2004, May). *How do you take a new product to a market?* American Telemedicine Conference, Tampa, FL.
- Miyazaki, M. (2005, June). *Mind and soul at the airport*. Campus Computing, Edmonton, AB.
- Miyazaki, M. (2006, January). *Embedded Sensors*. Wider Horizons-Clinical Telehealth in the Future. Calgary Health Region, Calgary, AB.
- Miyazaki, M. (2006, February). *Can we make a difference?* 7<sup>th</sup> Annual CIPS Women in Information Technology, Edmonton, AB.
- Miyazaki, M. (2006, April). *WWPM*. TechMed Alberta, Edmonton, AB.
- Miyazaki, M. (2006, August). *Future of e-health: Integration of wearable physiological sensor technologies*. Biotech East: E-Health, Edmonton, AB & Taipei, Taiwan.
- Miyazaki, M., Ido, K., Hatano, M., & Tanaka, M. (2002, April). *Healthy community living: Japan and Canada*. From Knowledge to Wisdom, Toronto, ON.
- Miyazaki, M., Lebeuf, M., Ataka, T., & Sutphen, S. (2008, April). *Physiological monitoring in extreme environment including in the Space*. 13<sup>th</sup> Annual International meeting of the American Telemedicine Association, Seattle, WA.
- Miyazaki, M. & Liu, L. (2002, April). *Preparation essentials for the future of e-Health and telehealth*. CAOT Tele-Ed, Toronto, ON.
- Miyazaki, M., Ogoranko, T., Moors, B., & Bevan, J. (2004, October). *Health Connections*. Greater Edmonton's ICT Cluster, Edmonton, AB.
- Miyazaki, M., Ohyanagi, T., & Khan, M. (2004 September). *Telehealth*. Expanding Horizons II Conference, Edmonton, AB.
- Miyazaki, M., Ohyanagi, T., Miller, J., Sutphen, S., Uematsu, S., & Takashima, M. (2004, May). *eHealth technology development*. American Telemedicine Conference, Tampa, FL.
- Miyazaki, M., Ohyanagi, T., & Sengoku, Y. (2004, May). *Cultural aspect of technology implementation: Japan and Canada*. American Telemedicine Conference, Tampa, FL.
- Mitani, M., Ohyanagi, T., Sengoku, Y., & Miyazaki, M. (2004, May). *Tele-ultrasound: Enhanced data sharing of motion and still images*. American Telemedicine Conference, Tampa, FL.
- Miyazaki, M., Rowe, M., Ohyanagi, T., Liu, L., Clark, C., Cook, A., & Duguay, R. (2008, April). *Bidirectional wireless physiological monitoring of homecare clients*. 13<sup>th</sup> Annual International meeting of the American Telemedicine Association, Seattle, WA.

Continued...

## **Miyazaki & Miller (continued)**

### **Presentations (continued):**

Ohyanagi, T., Mitani, M., Sengoku, Y., & Miyazaki, M. (2004, May). *Telehealth system for enhanced data sharing over TCP/IP Network*. American Telemedicine Conference, Tampa, FL.

Ohyanagi, T., Miyazaki, M., Miller, J., Sutphen, S., & Walley, A. (2007, May). *Technical aspects of the WWPM project in Edmonton: Homecare system using wristwatch type wearable pulse sensor*. American Telemedicine Conference, Nashville, TN.

## Moore, Hunter, & McGinnis

<b>Principal Investigator:</b>	<b>Katherine Moore</b> , Faculty of Nursing, University of Alberta
<b>Co-investigators:</b>	<b>Kathleen Hunter</b> , Faculty of Nursing, University of Alberta <b>Rosemary McGinnis</b> , Home Care, Calgary Health Region
<b>Title:</b>	<i>Evaluation of weekly bladder irrigations with Suby G (Contisol) or saline versus catheter changes alone in patients with long-term indwelling catheters</i>
<b>Key Words:</b>	Urinary catheter; washout; Contisol TM; catheter blockage
<b>Funding Agencies:</b>	Alberta Heritage Foundation for Medical Research (AHFMR) and Canadian Nurses Foundation (\$97,000)
<b>Time Frame:</b>	2004 – 2008
<b>Purpose:</b>	The purpose was to examine whether saline or commercially available acidic catheter washouts prevent or reduce catheter blockage. The hypothesis was that catheter life would be extended by 25% in the commercial solution group.
<b>Setting:</b>	Home living programs and long-term care facilities
<b>Methods:</b>	This multisite randomized controlled trial involved three groups: control (usual care, no washout), saline washout, or Contisol™ washout. Adults with long-term indwelling catheters living in the community, supportive, or continuing care were recruited. The catheter was changed at the baseline visit, and participants were followed weekly for 8 weeks, with checks for catheter patency and urine pH. Participants were randomized to saline and Contisol™ groups had a weekly washout with the appropriate solution. Endpoints were 8 weeks (completion date), three or more catheter changes in the 8 week period, or symptomatic urinary tract infection requiring antibiotics. RCT ANOVA was used to analyze mean differences on demographic variables and mean number of weeks in study. Kaplan Meier survival curve analysis showed no statistical difference between the groups in time to first catheter change.
<b>Results:</b>	A total of 110 potential participants were screened; 71 were enrolled and randomized. All had MMSE scores of 23 or higher. Of these, 50 completed the full 8 weeks of data collection; 15 terminated early because of 3 catheter changes or UTI. Other reasons for dropping out included haematuria, latex sensitivity, deceased/severe illness, or personal choice. Using Kaplan-Meier survival curve analysis, no statistical difference between the groups was found in time to first catheter change. However, the study was under powered.
<b>Conclusions:</b>	At this time the evidence is insufficient to state whether catheter washout with saline or Contisol TM is more effective than usual care with no washout in preventing blocking. There was no increased risk of UTI associated with washout regimes.

Continued...

**Moore, Hunter, & McGinnis (continued)**

**Journal Article:**

Moore, K. N., Hunter, K. F., McGinnis, R. H., Bascu, C. D., Fader, M., Gray. M., Getliffe, K., Chobanuk, J., Puttangunta, L., & Voaklander, D. (2009). Do catheter washouts extend patency time in long term indwelling urethral catheters? A randomized controlled trial of acidic washout solution, normal saline washout, or standard care. *Journal of Wound Ostomy & Continence Nursing*, 36(1), 82-90.

**Morrish, Beaupre, & Mujumdar**

**Principal Investigator:** Donald Morrish, Division of Endocrinology and Metabolism, Department of Medicine, Faculty of Medicine and Dentistry, University of Alberta

**Co-Investigators:** Lauren Beaupre, Department of Physical Therapy, Faculty of Rehabilitation Medicine, University of Alberta  
S. Mujumdar, Department of Medicine, Faculty of Medicine and Dentistry, University of Alberta

**Title:** *Prevalence of osteoporosis care in chronic care institutions*

**Key Words:** Osteoporosis; long-term care; therapy

**Funding Agency:** Aventis Pharma (\$10,000)

**Time Frame:** 2007 - present

**Purpose:** The purpose of this project is to determine if persons with osteoporosis or fracture are receiving appropriate therapy in chronic care institutions.

**Setting:** CapitalCare Grandview, CapitalCare Lynwood, Laurier House, McConnell Place West

**Methods:** Chart reviews are being conducted.

**Results:** Not yet available

**Conclusions:** Not yet available

## Olson, Krachuk, & Quddusi

- Principal Investigator:** Karin Olson, Faculty of Nursing, University of Alberta
- Co-Investigators:** Amanda Krachuk, Royal Alexandra Hospital  
Taseed Quddusi, University of Manitoba
- Title:** *Fatigue in individuals with advanced cancer in active treatment and palliative settings*
- Key Words:** Advanced cancer; palliative settings; fatigue; physical and psychological adaption
- Funding Agencies:** National Cancer Institute of Canada, the Alberta Heritage Foundation for Medical Research (AHFMR), and the Alberta Cancer Board Provincial Palliative Care Research Initiative
- Time Frame:** 2004 - 2007
- Purpose:** The purpose of this project was to compare fatigue across ill and non-ill populations in order to identify the unique features of fatigue in individuals with cancer.
- Setting:** Active cancer treatment settings and palliative settings
- Methods:** The participants in this qualitative study were selected as they had advanced cancer and were able to describe their experiences of tiredness, fatigue, and/or exhaustion. All were aged 18 or older and were currently receiving treatment or palliative care for advanced cancer. Seventeen individuals receiving active treatment (8 women, 9 men) and 10 individuals receiving palliative care (4 women, 6 men) were recruited. In the palliative care setting, the 6 males ranged in age from 37 to 79 and had colorectal, lung, or prostate cancer as their primary diagnosis while the 4 females ranged in age from 49 to 63 and had lung or ovarian cancer as their primary diagnosis. Participants were interviewed between 1 and 3 times each. They also were asked to identify friends or family members and a nurse who cared for them. Consent was obtained from a spouse and a nurse for 4 participants and from a nurse for 1 additional participant. Spouses and nurses were interviewed once.
- Results:** Tiredness, fatigue and exhaustion emerged as separate concepts rather than degrees of intensity within the same concept. Five attributes of each concept emerged, including changes in emotional, cognitive, and muscular function; decreasing control over body processes; and decreased social interaction. There were both similarities and differences between the attributes for participants in the advanced cancer treatment and palliative care settings. Both groups discussed emotion related to all three concepts. Muscle function was evident in the words of palliative care patients only with regards to fatigue and exhaustion whereas for the advanced cancer treatment participants, it emerged for all three concepts. A similar pattern was found with respect to cognitive function, and control over body processes.

Continued...

### **Olson, Krachuk, & Quddusi (continued)**

**Results (continued):** With regards to interactions with others, participants from the palliative care setting used words that fit the definition for both fatigue and exhaustion whereas those in active care setting did not. In palliative settings, participants' interviews reflected primarily fatigue and exhaustion. Compared to those in the active treatment setting, participants from the palliative care settings paused more frequently and for longer times as well as speaking more slowly and using fewer words per sentence.

**Conclusions:** The authors conclude that tiredness, fatigue, and exhaustion are distinct states. They argue that interventions that could prevent, or at least delay, the progression from tiredness to fatigue may be inappropriate for the prevention or delay of progression from fatigue to exhaustion.

#### **Journal Article:**

Olson, K., Krawchuk, A., & Guddusi, T. (2007). Fatigue in individuals with advanced cancer in active treatment and palliative settings. *Cancer Nursing, 30*(4), E1-E10.

## Predy & Stokes

<b>Co-Principal Investigators:</b>	Gerry Pedy, Capital Health Elaine Stokes, The Good Samaritan Society
<b>Title:</b>	<i>Safety of COLD-fX when used for prevention of respiratory tract infections in a population requiring continuing care</i>
<b>Key Words:</b>	Respiratory tract infection; continuing care population; COLD-fX
<b>Funding Agency:</b>	CV Technologies Inc.
<b>Time Frame:</b>	2005 - 2006
<b>Purpose:</b>	The objectives of this study were: 1) to determine the safety of a licensed, over-the-counter, natural health product, COLD-fX, in a continuing care setting when used to prevent respiratory tract infections, 2) to assess the rate of adverse events in the study population, and 3) to determine the rate of influenza-like illness in the study population compared to comparable centres where residents are not receiving COLD-fX.
<b>Setting:</b>	Two Good Samaritan sites; one rural and one urban
<b>Methods:</b>	Residents (or their legal representatives) who met the inclusion criteria were invited to participate in the study. Individuals who consented and whose physicians also consented were enrolled. Facility staff administered 400 mg of COLD-fX per day to participants for 16 weeks, and did daily monitoring of any symptoms/adverse events. Renal function tests were done to determine adjustments in the dosage of the study product. A total of 100 residents were enrolled.
<b>Results:</b>	There were four serious adverse events which is not unexpected in this population and they were not related to the study product.
<b>Conclusions:</b>	It appears that COLD-fX was well-tolerated by these continuing care residents.

## **Rust & Kwong See**

- Principal Investigator:** Tiana Rust, PhD Candidate, Department of Psychology, Faculty of Arts, University of Alberta
- Co-Investigator:** Sheree Kwong See, Department of Psychology, Faculty of Arts, University of Alberta
- Title:** *Caregivers' beliefs about aging and disease*
- Key Words:** Alzheimer's disease; stereotyping; dependency
- Funding Agencies:** Alzheimer Care Research Grant, CapitalCare (Phase I, 2004: *Effects in independence of institutionalized persons with Alzheimer's disease* (\$6,247)), (Phase II, 2005: *Residents' and caregivers' mealtime preparation at residential Alzheimer care centres* (\$12,558)), and Dr. Peter McCracken Legacy Scholarship (\$1,000)
- Time Frame:** 2004 - 2009
- Purpose:** The overall goal of this dissertation research is to assess caregivers' beliefs about aging and Alzheimer's disease (AD). In Phase I, the focus is on the relationship between caregiver beliefs about AD and dependency supportive behaviour. In Phase II, attention is given to residents' and caregivers' mealtime preparation.
- Setting:** Three CapitalCare Alzheimer Care Centres
- Methods:** In Phase I, 53 caregivers who worked as resident companions and 54 undergraduate psychology students completed modified versions of the Dieckmann et al.'s (1988) Alzheimer Disease Knowledge Test and the multiple-choice version of the Palmore's (1998) Facts on Aging Quiz #1. Phase II data collection is underway.
- Results:** Overall, Phase I results revealed that knowledge levels about AD and aging were low. Caregivers were found to be more knowledgeable about AD than were non-caregivers (58% and 42% correct, respectively), but these groups did not differ on knowledge about aging (40% and 39% correct, respectively).
- Conclusions:** The researchers argue that the most common misconceptions and areas of ignorance on the two tests demonstrate that participants rely on age stereotypes. They call for efforts to improve caregivers' knowledge of aging and older adults.
- Journal Article:**
- Rust, T. B., & Kwong See, S. (2007). Knowledge about aging and Alzheimer disease: A comparison of professional caregivers and noncaregivers. *Educational Gerontology*, 33(4), 349-364.

Continued...

### **Rust & Kwong See (continued)**

#### **Presentations:**

Rust, T. B., & Kwong See, S. (2005, October). *Aging and Alzheimer disease: How much and what do caregivers and students know?* 34<sup>th</sup> Annual Scientific and Educational meeting of the Canadian Association on Gerontology, Halifax, NS.

Rust, T. B., & Kwong See, S. (2005, October). *Beliefs about aging and Alzheimer disease.* 34<sup>th</sup> Annual Scientific and Educational meeting of the Canadian Association on Gerontology, Halifax, NS. (poster)

## Sales

- Principal Investigator:** Anne Sales, Faculty of Nursing, University of Alberta
- Title:** *Pilot study to develop quality improvement feedback reports using MDS/RAI data*
- Key Words:** Quality improvement; long-term care; feedback reports; MDS/RAI data; priorities assessment
- Funding Agency:** Knowledge Brokering Group, *Evidence and policy in long term care, building a bridge with knowledge brokering* (\$15,232) (see Johnson et al.)
- Time Frame:** 2007 - 2008
- Purpose:** The primary purpose of this pilot project is to develop feedback reports to be used by care staff in the improvement of care practices in facility-based long-term care settings that are tailored to different types of providers. Questions to be addressed include:
- 1) Do provider groups differ in the priorities they assign to content derived from the Minimum Data Set/Resident Assessment Instrument version 2.0 (MDS/RAI)?
  - 2) How different are reports optimized for different provider groups?
  - 3) Do provider groups differ in their assessment of the usefulness of feedback reports?
  - 4) What formats are considered most useful for each provider type?
- This study is a pilot for future work that will further develop feedback reports, develop and test quality improvement interventions, and contribute to a researcher-decision maker partnership focusing on best practices in use of MDS/RAI for quality improvement purposes.
- Setting:** CapitalCare Strathcona, CapitalCare Grandview
- Methods:** The initial step of the project is to elicit opinion on which domains of the MDS/RAI are most relevant to quality improvement for each provider group. In the second step, perceptions of feedback reports that have been tailored to each provider group will be obtained.
- Results:** Not yet available
- Conclusions:** Not yet available
- Presentation:**

Sales, A. (2007, December). *Priorities and providers: How different groups see information for quality improvement*. Knowledge Brokering Group Interactive Series, Edmonton, AB.

## **Sales, Maxwell, & Teare**

- Principal Investigator:** Anne Sales, Faculty of Nursing, University of Alberta
- Co-Investigators:** Colleen Maxwell, Departments of Community Health and Medicine, Faculty of Medicine, University of Calgary  
Gary Teare, Health Quality Council of Saskatchewan and Department of Community Health and Epidemiology, College of Medicine, University of Saskatchewan
- Title:** *Prioritizing process improvement indicators using MDS/RAI data*
- Key Words:** Long-term care; priorities assessment; quality improvement; quality and process improvement indicators; MDS/RAI data
- Funding Agencies:** Knowledge Brokering Group, *Evidence and policy in long term care, building a bridge with knowledge brokering* (see Johnson et al.) and Establishment grant, Faculty of Nursing, University of Alberta (\$46,939)
- Time Frame:** 2007 - 2008
- Purpose:** This project aims to identify priorities among existing quality and process improvement indicators, including the Resident Assessment Protocols (RAPs), which are derived from Resident Assessment Instrument (RAI) data, from the perspectives of key stakeholders in long-term care settings. Key stakeholders range from front-line care providers to senior policy advisors. The identified priorities will be used to develop a work plan to formalize process indicators for use in quality improvement. This plan will be created in consultation with key stakeholders in Alberta and national experts.
- Setting:** Nursing homes; assisted living facilities; home care; complex continuing care; rural and urban facilities and settings; regional health authorities; provincial health authorities in the long-term care sector in Alberta
- Methods:** A modified Delphi technique was used to identify the priorities in long-term care and in home care.
- Results:** Not yet available
- Conclusions:** Not yet available
- Report:**  
Sales, A. (2008). *Prioritizing process improvement indicators using MDS/RAI data*. Report to funding agencies, Edmonton, AB.

**Sales, Schalm, Anderson, Estabrooks, Elliott, Lai, Liu, Maisey, Mansell, Maxwell, Neumann, & Warren**

**Co-Principal Investigators:** **Anne Sales**, Faculty of Nursing, University of Alberta  
**Corinne Schalm**, Shepherd's Care Foundation

**Co-Investigators:** **Marian Anderson**, Shepherd's Care Foundation  
**Carole Estabrooks**, Faculty of Nursing, University of Alberta  
**Kari Elliott**, Capital Health  
**Vivien Lai**, Alberta Health and Wellness  
**Lili Liu**, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta  
**Suzanne Maisey**, Shepherd's Care Foundation  
**Lynne Mansell**, Capital Health  
**Colleen Maxwell**, Departments of Community Health Sciences and Medicine, Faculty of Medicine, University of Calgary  
**Iris Neumann**, CapitalCare  
**Sharon Warren**, Rehabilitation Research Centre, Faculty of Rehabilitation Medicine, University of Alberta

**Title:** ***Data for Improvement and Clinical Excellence (DICE) Program; CHSRF REISS Program***

**Key Words:** Long-term care; home care; improvement of quality of care; feedback report; MDS/RAI 2.0 and RAI-HC data

**Funding Agencies:** Canadian Health Services Research Foundation (CHSRF) and Alberta Heritage Foundation for Medical Research (AHFMR) (\$999,062)

**Time Frame:** 2008 - 2012

**Purpose:** Improving quality of care involves incorporation and utilization of new emerging data on care. Research questions to be addressed are:

- 1) How do organizations delivering continuing care services, particularly facility-based long-term care and home care, currently use or plan to use data to improve quality of care?
- 2) How do different provider groups (nurses, health care aides, rehabilitation professionals, and other direct care providers) in both continuing care and home care respond to feedback reports focused on improving quality of care?

**Setting:** Continuing care facilities; home care

**Methods:** To address the first question, the team will assess historical and current practices through a systematic review of the literature and through interviews and observation in continuing care organizations. This will provide an understanding of the evidence for data use in organizations across multiple jurisdictions, and allow the team to build on existing practices, and to have in-depth information about how well some of these practices have penetrated organizations in the past, and how useful different approaches have been.

**Continued...**

**Sales et al. (continued)**

**Methods (continued):** To address the second question, feedback reports will be delivered in four continuing care facilities. These reports will be tailored to different units and delivered to the provider groups in those units monthly for 12 months, followed by surveys to assess the usefulness of the reports to individual providers, as well as continued and ongoing assessment of priorities among the many domains available in the RAI-MDS 2.0 instrument.

**Results:** Not yet available

**Conclusions:** Not yet available

## Samuel

- Principal Investigator:** Shirley Samuel, Division of Care of the Elderly, Department of Family Medicine, Faculty of Medicine and Dentistry, University of Alberta
- Title:** *Changes in frailty and complexity in individuals attending a comprehensive day care program (CHOICE)*
- Key Words:** Frailty; comorbidity; Activities of Daily Living (ADLs); adult day care
- Funding Agency:** Non-funded residency research project
- Time Frame:** 2007
- Purpose:** The purpose of the project was to determine whether the medical complexity and frailty of participants attending the CHOICE programs at two Edmonton locations have changed over the past five years. It was hypothesized, based on clinical impressions, that CHOICE participants would have increased frailty, have more comorbidities, and require more assistance with ADLs than CHOICE participants in the past.
- Setting:** Two CHOICE locations in Edmonton: Mount Pleasant and Good Samaritan Place
- Methods:** The study was a retrospective study of participants attending a CHOICE program in 2002 and 2006. Data were reviewed from charts of participants from the two CHOICE locations. Established indices were used to compare comorbidities, level of frailty, and ADL abilities of CHOICE participants in 2002 and 2006. The Charlson index was used, with permission, to measure comorbidity; the Brief Frailty Tool was used to measure frailty; and the Barthel Index was used, with permission, to measure ADL.
- Results:** There was a trend toward increased comorbidity and frailty, and a greater need for assistance with ADLs between participants attending the CHOICE program in 2006 as opposed to 2002. However, those differences were not statistically significant. Given the consistency between staff perceptions and the trend from the retrospective chart reviews, a closer examination of the research methods was undertaken. That examination strongly suggested that current measures used on intake of CHOICE clients lack sensitivity to capture frailty and complexity in this population.
- Conclusions:** Results of the study, combined with the insensitivity of the measures and the significance of the issue of patient complexity for staffing, care, and budgetary concerns, suggest that a prospective study with the use of more sensitive measures is warranted.

### **Presentations:**

Samuel, S. (2007, May). *CHOICE Participants – An investigation into frailty and complexity*. Geriatric Grand Rounds, Glenrose Rehabilitation Hospital, Edmonton, AB.

Continued...

## **Samuel (continued)**

### **Presentations (continued):**

Samuel, S., & Dobbs, B. (2007, June). *CHOICE participants - An investigation into the changes in frailty and complexity*. Department of Family Medicine 5<sup>th</sup> Annual Family Medicine Research Day, University of Alberta, Edmonton, AB.

## Samuel & Dobbs

- Co-Principal Investigators:** **Shirley Samuel**, Division of Care of the Elderly, Department of Family Medicine, Faculty of Medicine and Dentistry, University of Alberta  
**Bonnie Dobbs**, Division of Care of the Elderly, Department of Family Medicine, Faculty of Medicine and Dentistry, University of Alberta
- Title:** *Investigating changes in frailty and complexity in individuals attending CHOICE (Comprehensive Home Option for Integrated Care of the Elderly)*
- Key Words:** Frailty; comorbidity; Activities of Daily Living (ADLs); adult day care
- Funding Agency:** Good Samaritan Society (\$5,000)
- Time Frame:** 2008 - 2009
- Purpose:** The purpose of the research is to investigate, using prospective methodology, the implementation of new tools for measuring frailty, comorbidity, and functional declines in participants attending the CHOICE program at two Edmonton locations.
- Setting:** Two CHOICE locations in Edmonton: Mount Pleasant and Good Samaritan Place
- Methods:** All CHOICE participants will be assessed for comorbidity, frailty, and the need for assistance with ADLs, with the measures administered to all *current* CHOICE participants at the beginning of the study (baseline) and every 3 months following baseline for the duration of the study. Measures include the Charlson CoMorbidity Index and the Cumulative Illness Rating scale (currently used and 'new' comorbidity measures, respectively), the Brief Frailty Tool and the Clinical Frailty Scale (currently used and 'new' frailty measures, respectively), and the Barthel Index and the Rapid Disability Rating Scale (RDRS) (currently used and 'new' ADL measures, respectively). In the absence of a 'gold standard' for each of these three domains of interest, the sensitivity of the new measures will be assessed by examining: 1) the relationship between the current and new measure for each domain identified (e.g., frailty, comorbidity, ADL functioning), 2) the difference in the sensitivity of the current and new measure in capturing change over time (e.g., differences in scores at 6, 12, 18, and 24 months vs. baseline), and 3) the relationship between old and new measures and clinical ratings of those domains.
- Results:** Not yet available
- Conclusions:** Not yet available

## **Sawchuk**

- Principal Investigator:** Lorelei Sawchuk, Faculty of Nursing, University of Alberta (Thesis Supervisors: Karin Olson and Donna Wilson, Faculty of Nursing, University of Alberta; Robin Fainsinger, Department of Medicine, Faculty of Medicine and Dentistry, University of Alberta)
- Title:** *The relationship between the referral palliative performance scale score and length of survival in palliative cancer patients referred to a hospice palliative care unit from an acute tertiary care hospital setting*
- Key Words:** Palliative care; hospice
- Funding Agency:** Non-funded thesis research
- Time Frame:** 2007
- Purpose:** The purpose of this study was to examine the relationship between the palliative performance score (PPS) and the length of survival (LOS) in palliative cancer patients referred to a hospice palliative care unit from an acute tertiary care hospital in Edmonton.
- Setting:** Referral to a Capital Health Regional Palliative Care Program (RPCP) hospice palliative care unit in Edmonton by the Royal Alexandra Hospital (RAH) palliative care consultants. Of the 57 hospice beds, 56 are divided among three specialty units within continuing care or long-term care facilities in the Capital Health Region of Edmonton and one bed is located within a nursing home in St. Albert.
- Methods:** Data were retrieved from the RPCP database for all palliative cancer patients referred to hospice by the RAH Palliative Care Program from March 1, 2002 to September 30, 2005. The sample was comprised of patients who were at least 18 years of age at the time of referral, had a documented PPS score at the time of the referral, had a documented cancer diagnosis, had a documented date of death, and agreed to be transferred to a hospice palliative care bed at the site of their choice when one became available. Data extracted from the charts included the referral PPS score (a tool used to measure the physical status of patients in the five domains: ambulation, activity, and evidence of disease, self-care, intake, and level of consciousness), gender, age, cancer diagnosis, palliative status at the time of admission, date of referral to hospice, and date of death. Comparisons were made between the 326 patients who lived less than 60 days and the 66 patients who lived 60 days or greater.
- Results:** The majority of patients with lower PPS scores had a higher rate of mortality than those with higher PPS scores. Younger patients were more likely to die within 60 days. No significant gender differences emerged.

Continued...

### **Sawchuk (continued)**

**Conclusions:**

This study found a significant relationship between the referral PPS scores of palliative cancer patients who were referred to a hospice palliative care unit in Edmonton and who lived less than 60 days and those who lived 60 days or greater. Older aged individuals lived longer when examining the impact of age, gender, cancer diagnosis, and palliative status at the time of consult on length of survival.

**Thesis:**

Sawchuk, L. (2007). *The relationship between the referral Palliative Performance Scale score and length of survival in palliative cancer patients referred to a hospice palliative care unit from an acute tertiary care hospital setting* (Thesis (M.N.)--University of Alberta).

**Simpson, Featherstone, Stempfle, Leung, & Law**

**Principal Investigator:** Scot Simpson, Faculty of Pharmacy & Pharmaceutical Sciences, University of Alberta

**Co-Investigators:** Travis Featherstone, Faculty of Pharmacy & Pharmaceutical Sciences, University of Alberta  
Ryan Stempfle, Faculty of Pharmacy & Pharmaceutical Sciences, University of Alberta  
Hugo Leung, Faculty of Pharmacy & Pharmaceutical Sciences, University of Alberta  
Ernest Law, Faculty of Pharmacy & Pharmaceutical Sciences, University of Alberta

**Title:** *Characterizing the use of acetylsalicylic acid in a long-term care facility*

**Key Words:** Acetylsalicylic acid (ASA); cardiovascular risk; assisted living

**Funding Agency:** Non-funded

**Time Frame:** 2007

**Purpose:** The purpose of this cross-sectional study was to describe acetylsalicylic acid (ASA) use for cardiovascular risk reduction in elderly residents of a long-term care facility. The specific objectives were 1) to identify the proportion of residents with indications for acetylsalicylic acid use to reduce the risk of cardiovascular events, 2) to determine the proportion of residents using acetylsalicylic acid, and 3) to compare the use rate with local, provincial and national averages.

**Setting:** Terra Losa Assisted Living Facility

**Methods:** Study participants were individuals who lived in a privately owned assisted living facility and received their medication from a single community pharmacy. Facility charts and medication profiles were reviewed to identify indications and contraindications for ASA use. Indications for ASA use were defined by current clinical practice guidelines for diabetes, heart failure, post-myocardial infarction, peripheral vascular disease, and stroke. Contraindications were identified from the product monograph in Access Medicine.

**Results:** Charts for 92 residents (18 male (20%); mean age 83 ± 9.5 years) were reviewed. All residents (100%) had an indication for ASA to reduce the risk of cardiovascular disease. Of the 92 individuals, 41 had no contraindications for ASA use. Of the 41 residents who could be using ASA, 21 (51%) were taking ASA regularly, 8 (20%) used an alternative antiplatelet or anti-thrombotic agent, and 12 (29%) were not using any agents.

**Conclusions:** Compared to other groups where ASA use to lower cardiovascular risk is approximately 34%, residents in this facility were more likely to be using ASA or an alternative antiplatelet or anti-thrombotic agent. However, 29% of these residents were not using any antiplatelet or anti-thrombotic agent despite having an indication and no contraindications.

Continued...

**Simpson et al. (continued)**

**Presentation:**

Simpson, S. (2008, March). *Characterizing the use of acetylsalicylic acid in a long-term care facility*. Canadian Society of Hospital Pharmacists Banff Seminar, Banff, AB.

## **Strang, Koop, Nordstrom, & Thompson**

- Principal Investigator:** Vicki Strang, Faculty of Nursing, University of Alberta
- Co-Investigators:** Priscilla Koop, Faculty of Nursing, University of Alberta  
Marlene Nordstrom, Capital Health  
Betty Thompson, CapitalCare
- Title:** *Coping while waiting placement for caregivers of persons with dementia*
- Key Words:** Family caregiving; family nursing; coping with dementia; health care system
- Funding Agency:** Alzheimer Care Research Grant, CapitalCare (\$14,994)
- Time Frame:** Funding received in 1999; article published in 2006
- Purpose:** The purpose of this project was to explore prospectively family caregivers' experiences while they waited placement of family members with dementia in long-term care and how they coped during this period of waiting and transition. Specific research questions were:
- 1) What is the experience of family caregivers while waiting placement of their family member with dementia?
  - 2) How do family members cope while waiting placement of their family member with dementia?
  - 3) What is the relationship between the services used by caregivers and their perception of how they are coping?
  - 4) How does the respite experience influence caregiver coping during this waiting period?
- Setting:** Initially waiting for long-term care placement in one of CapitalCare's facilities
- Methods:** This prospective study involved both qualitative and quantitative methods. A total of 41 volunteer caregivers whose dementia family members were on the CAPS waiting list for placement in one of CapitalCare's facilities were interviewed at least once. In the qualitative component, interviews were conducted with 29 caregivers at entry to the placement wait-list and at 3- to 4-month intervals thereafter. Final interviews, with 15 caregivers, were conducted shortly after admission. In the quantitative components, caregivers completed a questionnaire focusing on caregiving at the same time intervals as the qualitative component.
- Results:** Themes that emerged in the qualitative interviews while waiting were identified as crisis as initiator, the need for synchronicity, control, and reciprocity. After placement, the themes included deeply bonded relationships, attempting continuity, and sorting out the change. The caregivers demonstrated the challenges of transitions to long-term care. They experienced a dissonance associated with protecting and maintaining the relationship as it had been in the past while realizing and making decisions in the present related to their inability to continue with the physical demands of caregiving.

Continued...

## **Strang et al. (continued)**

### **Results (continued):**

As they relinquished the physical aspects of care, the interrelational component of caregiving, deeply rooted in family history, continued. They stayed fully engaged and vigilant trying to maintain a standard of physical care that would preserve, at least in some measure, the dignity of their family member. If they witnessed satisfactory physical care and saw at least some measure of dignity preservation in the institution, the caregivers became more relaxed and accepting of the placement. The opposite, however, was also evident. If the institutional care was unacceptable to the caregivers, their concern, vigilance, and ambivalence continued or even escalated. In the quantitative component, the most significant finding was that the caregivers indicated that they were sleep deprived at all data collection intervals and that, overall, they had low levels of service utilization.

### **Conclusions:**

The findings provide new insight into family caregiver experience during and after placement of a family member with dementia in long-term care. The tension that has been identified between staff and families in continuing care settings might be a reflection of the staff not fully recognizing the unchanging nature of the relationship within the caregiver dyad. This tension might also arise out of dissonance between the institutional culture of the long-term care setting and the intimate nature of the relationship within the dyad. The researchers argue that clinicians must recognize that wherever services are provided, at home before placement or in an institution after placement, family caregivers must be incorporated as full partners in care. It must be the clinician's responsibility to place realistic and appropriate expectations on them [family caregivers] during this transitional process, whether at home or in the nursing home. As the current study indicated, clinicians have a key role in promoting the well-being of the person directly receiving the care and the family caregiver surrendering it. During this transitional period, particularly, there must be open communication between clinicians and caregivers. Creating a welcoming and "homey" environment after placement provides caregivers the opportunity to feel more comfortable and at ease when they visit and conveys sensitivity to the caregivers' feelings of ambivalence toward placement. Implications for research are discussed.

### **Journal Article:**

Strang, V., Koop, P., Dupuis-Blanchard, S., Nordstrom, M., & Thompson, B. (2006). Family caregivers and transition to long-term care. *Clinical Nursing Research, 15*(1), 27-45.

### **Report:**

Strang, V.R., Koop, P.M., Nordstrom, M., & Thompson, B. (2003). *Coping while waiting placement for caregivers of persons with dementia*. Final report submitted to The Capital Care Group, Edmonton, AB.

Continued...

### **Strang et al. (continued)**

#### **Presentations:**

- Strang, V. (2002, November). *Chronic illness and home-based palliative family caregiving*. Institute of Nursing, University of Witten/Herdecke, Germany. (invited workshop)
- Strang, V. (2003, April). *Family caregiving and home-based palliative care*. Alberta Association of Gerontology, Edmonton Chapter, Edmonton, AB. (invited presentation)
- Strang, V. (2004, February). *Family caregivers waiting placement of cognitively impaired persons*. CapitalCare Foundation People and Progress Conference, Edmonton, AB. (invited presentation)
- Strang, V. & Koop, P. (2002, April). *Waiting placement of cognitively impaired persons: The dance of caregiving*. The 8<sup>th</sup> International Qualitative Health Research Conference, Banff, AB.
- Strang, V., Koop, P., Nordstrom, M., Thompson, B., & Jackman, D. (2002, June). *Family caregiver coping while waiting placement of persons with cognitive impairment*. Strategic Directions: 2002 Best Practices Conference, Edmonton, AB.

**Van Soest, Cleary, Milke, Wark, Schalm, & Maisey**

**Principal Investigator:** Deanna Van Soest, CapitalCare

**Co-Investigators:** **Stuart Cleary**, Department of Speech Pathology and Audiology, Faculty of Rehabilitation Medicine, University of Alberta  
**Doris Milke**, CapitalCare  
**Connie Wark**, CapitalCare  
**Corinne Schalm**, CapitalCare (now with Shepherd's Care Foundation)  
**Suzanne Maisey**, CapitalCare (now with Shepherd's Care Foundation)

**Title:** *The effects of relocation stress on the food and fluid intakes of continuing care residents with dementia*

**Key Words:** Food and fluid intake; relocation; long-term care; dementia

**Funding Agency:** CapitalCare

**Time Frame:** 2005 - 2008

**Purpose:** The purpose of this project was to examine the impact of a new environment on food and fluid intake and disruptive mealtime behaviours.

**Setting:** Mewburn Veterans Centre (with 2 cafeteria style dining areas that served 140 residents at this old, hospital type long-term care facility) and Kipnes Centre for Veterans (with 8 small, homelike dining rooms each seating 15 housemates at this new facility).

**Methods:** The researchers measured light and sound in the dining areas, weighed food and fluid servings to determine consumption, and observed residents during the evening meal to describe behaviours and the social environment. All measures were completed for 10 dementia residents on six occasions pre-move and six occasions post-move.

**Results:** Not yet available

**Conclusions:** Not yet available

**Presentation:**  
Van Soest, D., Milke, D. L., Maisey, S., & Knopp, A. (2007, November). *The effects of relocation on the mealtime experience*. 36<sup>th</sup> Annual Scientific and Educational meeting of the Canadian Association on Gerontology, Calgary, AB.

Note: This is a sub-study of the Maisey et al. project.

## Vieira

<b>Principal Investigator:</b>	<b>Edgar Ramos Vieira</b> , Post-doctoral Fellow, Faculties of Nursing and Rehabilitation Medicine, University of Alberta (Supervisors: Anne Sales and Patricia Marck, Faculty of Nursing, University of Alberta)
<b>Title:</b>	<b><i>Exploring mobility and falls prevention with older adults in long term care</i></b>
<b>Key Words:</b>	Mobility; aging; long-term care; safety; injury prevention; quality improvement
<b>Funding Agency:</b>	Alberta Heritage Foundation for Medical Research (AHFMR) Post-doctoral Fellowship
<b>Time Frame:</b>	2008 - 2011
<b>Purpose:</b>	<p>The purpose of this post-doctoral research is to develop new methods for comprehensively assessing risks for resident falls during self and assisted transfers among older adults in long-term care (LTC). Questions to be addressed include:</p> <ol style="list-style-type: none"><li>1) What risks for falls during transfers are perceived by older adults and their caregivers?</li><li>2) What safety strategies do residents and caregivers try to employ during transfers?</li><li>3) What new information emerges from combining the following assessment methods: visual inquiry; proactive risk assessment; and biomechanical assessment?</li><li>4) How does this new information compare with existing risk assessment for falls based on standardized instruments currently in use in LTC facilities?</li></ol>
<b>Setting:</b>	Good Samaritan Society's Southgate Care Centre
<b>Methods:</b>	<p>The project integrates a socio-ecologic perspective on fall prevention with quantitative estimation of problem prevalence, qualitative videography and visual narration, and proactive risk assessments (PRA). Several steps are involved: 1) identify the first sample of newly admitted residents, caregivers, and family; issues of risk dependence, prevalence, assessment of mobility; risks specific to transfers; use of data from the Resident Assessment Instrument-Minimum Data Set 2.0; interaction with occupational therapy (OT), physical therapy (PT), and nursing staff to evaluate multidisciplinary risk assessment strategies (gait, strength, self-care, dependence); visual inquiry; video-recordings; interviews; elicitation; analysis, synthesize the findings from the different components of the research, combining all data for a holistic picture of risk, including proactive risk assessments; 2) identify second sample (long stay residents) and follow processes in Step 1; and 3) team meetings, interdisciplinary conferences, joint meetings with decision-makers to describe options and alternatives for possible interventions; discuss possible intervention designs.</p>
<b>Results:</b>	Not yet available
<b>Conclusions:</b>	Not yet available

**Vieira, Berean, Ballash, Caveny, Lehman, Paches, & Yuen**

<b>Principal Investigator:</b>	<b>Edgar Ramos Vieira</b> , Glenrose Rehabilitation Hospital
<b>Co-Investigators:</b>	<b>Colleen Berean</b> , Glenrose Rehabilitation Hospital <b>Lauralee Ballash</b> , Glenrose Rehabilitation Hospital <b>Penny Caveny</b> , Glenrose Rehabilitation Hospital <b>Ron Lehman</b> , Glenrose Rehabilitation Hospital <b>Debra Paches</b> , Glenrose Rehabilitation Hospital <b>Doris Yuen</b> , Glenrose Rehabilitation Hospital
<b>Title:</b>	<b><i>Falls prevention initiative at the Glenrose Rehabilitation Hospital</i></b>
<b>Key Words:</b>	Patient falls; older adults; rehabilitation; prevention; risk assessment; interventions
<b>Funding Agency:</b>	Alberta Health Services (\$30,000)
<b>Time Frame:</b>	2008 - 2010
<b>Purpose:</b>	An inter-disciplinary team was formed to develop a program to reduce the number of falls on a geriatric unit at the Glenrose Rehabilitation Hospital (GRH) in Edmonton. The objectives of this project are to: 1) review the literature on risk assessment tools for falls among older adults in rehabilitation settings comparable to the geriatric unit at the GRH; 2) review the literature regarding the risk factors for falls among older adults with similar characteristics to the patients on the GRH geriatric unit under study; 3) develop a specific risk assessment tool for the context and types of patients on the participating unit linked with specific interventions to prevent falls; 4) implement the use of the tool and interventions; and, 5) evaluate the effectiveness of the falls prevention program.
<b>Setting:</b>	Glenrose Rehabilitation Hospital
<b>Methods:</b>	This project has been developed as a participatory approach including frontline health professionals, managers, and researchers on the design and implementation of the project. The participatory character is also highlighted by conducting interviews with other staff members, as well as patients and their families to help identify the risks for falls and potential interventions to prevent them. The mixed-method design will also include review of patient health data and information available in the literature to arrive at the context-driven risk assessment tool and recommendations for interventions. Finally, the program will be evaluated from an epidemiological standpoint to assess if it will result in a decrease in harm from falls.
<b>Results:</b>	Not yet available
<b>Conclusions:</b>	Not yet available

## Warren, Turpin, & Milke

- Principal Investigator:** Sharon Warren, Faculty of Rehabilitation Medicine, University of Alberta
- Co-Investigators:** Karen Turpin, Northern Alberta Multiple Sclerosis Patient Care and Research Clinic  
Doris Milke, CapitalCare
- Title:** *Chronic pain in persons with Multiple Sclerosis (MS) residing in continuing care centres of CapitalCare*
- Key Words:** Chronic pain; multiple sclerosis; long-term care; day support program
- Funding Agency:** CapitalCare Foundation (\$20,000)
- Time Frame:** 2005 - 2007
- Purpose:** The purpose was to describe the experience of chronic pain among persons with Multiple Sclerosis (MS) who are clients of CapitalCare.
- Setting:** CapitalCare long-term care facilities and day support programs
- Methods:** Forty-one persons with MS (either residing in a continuing care centre or attending a day support program of CapitalCare) were interviewed, using both standardized instruments and questions developed specifically for this study.
- Results:** Fifty-six per cent of clients with MS reported having experienced chronic pain at sometime since being diagnosed; of those, 74% were presently in pain. Average pain intensity score was 13 out of 45 (highest score) on the McGill Pain Questionnaire. The most common pain sites were legs, hips, and back, in that order. On the MS Related Symptoms Scale, pain was reported as the sixth most common symptom after leg weakness, arm weakness, fatigue, forgetfulness, and spasms, in that order. However pain was ranked the most bothersome symptom, just ahead of leg weakness. Greater fatigue and more urinary tract infections (from the MS Related Symptoms Scale), plus having fewer visitors per week among those in centres, were significantly associated with ever having experienced chronic pain. Difficulty swallowing (also from the Symptoms Scale) and more urinary tract infections were associated with greater pain intensity. Participants rated staff-provided medications as variably effective in controlling pain, but were frequently unable to identify what pain medications they were on. Interventions like ice, physiotherapy, massage, and pillows or wedges for support were not considered particularly helpful.
- Conclusions:** The results suggest the need to measure chronic pain in persons with MS on a more formal basis as well as to educate them on their pain and other medications, including side effects. Effective control of urinary tract infections and problems swallowing should lead to less pain.

Continued...

## **Warren, Turpin, & Milke (continued)**

### **Reports:**

Warren, S., et al. (2007, March). *Chronic pain in persons with Multiple Sclerosis (MS) residing in continuing care centres of CapitalCare*. Final report submitted to CapitalCare, Edmonton, AB.

### **Presentations:**

Turpin, K., Warren, S., Milke, D., Warren, K. G., Christopherson, J., & Rust, T. (2007, May). *Pain in persons with MS residing in long term care: Traits and treatments*. Annual meeting of the Consortium of MS Centres: The Challenges of Care and Research in Multiple Sclerosis, Washington, DC. Abstract published in *International Journal of MS Care*, 2007, 9(2), 48.

Turpin, K., Warren, S., Milke, D., Warren, K., Christopherson, J., & Rust, T. (2006, September). *The WHOQOL-BREF: A pivotal tool in the quest for suitably assessing the quality of life of persons with Multiple Sclerosis in continuing care*. 22<sup>nd</sup> Congress of the European Committee for Treatment and Research in Multiple Sclerosis, Madrid, Spain. Abstract published in *Multiple Sclerosis*, 2006, 12(1), 85.

Warren, S., Turpin, K., Milke, D., Warren, K., Christopherson, J., & Rust, T. (2006, September). *Multiple sclerosis in continuing care residents: Impact of MS symptoms on quality of life*. 22<sup>nd</sup> Congress of the European Committee for Treatment and Research in Multiple Sclerosis, Madrid, Spain. Abstract published in *Multiple Sclerosis*, 2006, 12(1), 35.

Warren, S., Warren, K. G., Turpin, K., Milke, D., Rust, T., & Christopherson, J. (2006). *Chronic pain in persons with MS residing in continuing care centres of The CapitalCare Group*. Presentation to Best Practice Committee, The CapitalCare Group, Edmonton, AB.

## Watanabe

- Principal Investigator:** Haru Watanabe, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta (Supervisors: Lili Liu, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta; Suzanne Maisey, CapitalCare)
- Title:** *Environmental change and depression in long-term care residents: A study using the Minimum Data Set*
- Key Words:** Environmental change; residents; depression
- Funding Agency:** Non-funded, MSc (OT) capping project
- Time Frame:** 2006 - 2007
- Purpose:** The purpose of this project was to examine the Depression Rating Scale (DRS) scores of veteran residents after relocation to a new purpose-built long term-care facility. In addition to comparing the DRS scores to chart diagnoses of depression, the validity of the DRS was compared to the Cornell Scale for Depression in Dementia (CSDD).
- Setting:** Mewburn Veterans Centre (a traditional institutional long-term care facility) and the Kipnes Centre for Veterans (a purpose-built long-term care facility)
- Methods:** This project consisted of secondary analysis of MDS 2.0 data collected in 2005. The sample consisted of 45 male residents who moved from the Mewburn Veterans Centre into the Kipnes Centre for Veterans. Their mean age was 83.2 years, and 33 were diagnosed with dementia. Two depression scales and chart reviews were used as data collection tools.
- Results:** The pre-move and post-move DRS scores were not significantly different. Based on DRS scores, 20 (in 2005) and 22 (in 2006) were identified as having depression. A diagnosis of depression was recorded in the charts of only 6 residents in 2005 and 7 in 2006. The correlation between the DRS scores and the CSDD scores was low.
- Conclusions:** The lack of significant differences in pre-move and post-move DRS scores may reflect no change in rates of depression or the scales' limited sensitivity to relocation. The argument that the DRS is not a strong indicator of clinically identified depression in patients with dementia is supported by the low correlation with CSDD and discrepancy with chart diagnoses.
- Presentations:**
- Liu, L., Watanabe, H., & Maisey, S. (2007, February). *Validity of Resident Assessment Instrument (RAI) Depression Rating Scale (DRS) for use with veterans in a purpose-built long-term care facility*. RAI Day Translating Information in Action, Edmonton, AB. (poster)

Continued...

**Watanabe (continued)**

**Presentations (continued):**

Watanabe, H. (2007, April). *Environmental change and depression in long-term care residents: A study using the Minimum Data Set*. Department of Occupational Therapy (University of Alberta) – MScOT (Course Based) Presentation, Edmonton, AB.

Watanabe, H. (2007). *Environmental change and depression in long-term care residents: A study using the Minimum Data Set*. CapitalCare, Edmonton, AB.

Watanabe, Nekolaichuk, Amigo, Burton-Macleod, de Kock, Faily, Fainsinger, Lowe, Mirhosseini, Oneschuk, Tarumi, Thai, Wolch, Dunn, Johnston, Myers, & Strasser

**Co-Principal Investigators:** **Sharon Watanabe**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta  
**Cheryl Nekolaichuk**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta

**Co-Investigators:** **Pablo Amigo**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta  
**Sarah Burton-Macleod**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta  
**Ingrid de Kock**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta  
**Joan Faily**, Community Consultation Team, Edmonton Regional Palliative Care Program  
**Robin Fainsinger**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta  
**Sonya Lowe**, Department of Symptom Control and Palliative Care, Cross Cancer Institute  
**Noush Mirhosseini**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta  
**Doreen Oneschuk**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta  
**Yoko Tarumi**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta  
**Vincent Thai**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta  
**Gary Wolch**, Division of Palliative Care Medicine, Department of Oncology, Faculty of Medicine and Dentistry, University of Alberta  
**Christina Dunn**, Intensive Palliative Care Unit, Foothills Medical Centre  
**Laureen Johnston**, Department of Oncology, Faculty of Medicine, University of Calgary  
**Jeff Myers**, Department of Family and Community Medicine, Faculty of Medicine, University of Toronto  
**Florian Strasser**, Oncology and Palliative Care, Kantonsspital, St. Gallen, Switzerland

**Title:** *A multi-centre validation study of two numerical rating scale versions of the Edmonton Symptom Assessment Scale (ESAS) in palliative care patients*

Continued...

**Watanabe et al. (continued)**

<b>Key Words:</b>	Symptom assessment; instrument development
<b>Funding Agency:</b>	Canadian Institutes of Health Research (\$47,206)
<b>Time Frame:</b>	2008-2009
<b>Purpose:</b>	The ESAS is a widely used tool for self-reporting of symptom intensity by patients with advanced illness. The objectives of this study are: 1) to compare patients' responses between the two numerical rating scale versions of the ESAS (i.e. ESAS and ESAS-r) and 2) to obtain patients' opinions regarding ease of understanding and use of the ESAS (current version) and ESAS-r (revised version).
<b>Setting:</b>	Cancer centre (Cross Cancer Institute, Toronto-Sunnybrook), hospice (Edmonton General, Norwood, St. Joseph's), acute care hospital (RAH, UAH), Palliative Care Unit (GNCH, Foothills, St. Gallen)
<b>Methods:</b>	Cognitively intact, consenting patients who have been referred to a palliative care service complete the current version of the ESAS and a revised version of the ESAS (ESAS-r), in the presence of a research assistant or nurse. Thereafter, patients are asked structured questions to elicit their opinions of the two versions of the ESAS, their preferences for one version over the other, and suggestions for modification. Quantitative data will be analyzed using descriptive statistics. Patients' qualitative responses will be analyzed using content analysis. To compare patients' responses between the ESAS and ESAS-r, intraclass correlation coefficients will be calculated.
<b>Results:</b>	Not yet available
<b>Conclusions:</b>	Not yet available

## Wielandt

- Principal Investigator:** Patricia M. Wielandt, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta
- Title:** *Identification of characteristics of long term care residents' functional abilities, assistive technology use and activity participation: Analysis of the Resident Assessment Instrument (RAI) 2.0 data*
- Key Words:** Long-term care; functional ability; assistive technology (AT); activity participation
- Funding Agency:** Knowledge Brokering Group, *Evidence and policy in long term care, building a bridge with knowledge brokering* (\$5,000) (see Johnson et al.)
- Time Frame:** 2007 - 2008
- Purpose:** The purpose of this project was to determine whether there were any associations between residents' functional abilities, assistive technology (AT) use, and amount of time spent in activities.
- Setting:** A long-term care facility
- Methods:** This project involved retrospective analysis of MDS: RAI data for one quarter April 1 - June 20, 2007 for 137 residents were undertaken. Due to the large amount of missing data, analyses were limited to frequencies and percentages.
- Results:** The sample was predominantly female (67%) with a mean age of 79.5 years. They took on average 9.21 medications over a 7 day period. They were awake most of the time, predominantly in the afternoon. Almost 85% had short term memory problems. Over half knew the location of their room, staff members' names and faces and that they resided in a nursing home facility. Fifty percent were 'moderately impaired' when it came to decision-making about their daily life. Few had hearing (14%) or visual limitations (22%). Almost half were usually able to understand when information was presented to them. Over two-thirds were restrained with the use of 'other rails' on a daily basis.
- Their functional profile was such that the majority was totally dependent in the following activities: bed mobility, transfers, locomotion on unit, locomotion off unit, dressing, toilet use and personal hygiene. Most residents were unable to walk independently in their room (68%) or in the corridor (64%). For most activities, residents usually only needed the assistance of one other person. However, during transfers, at least two persons were required to assist most of the time. During meal times, almost half of the residents required set up assistance only. Most had no range of movement limitations or loss of voluntary movement in the neck, arm, hand, leg, or foot. During transfers, over half used bed rails to assist with

Continued...

## **Wielandt (continued)**

### **Results (continued):**

the completion of this task. Over a quarter also needed activities to be broken down into subtasks in order to assist with task completion. Almost three quarters were considered not to have any functional rehabilitation potential. While it was impossible to determine exact numbers regarding mobility AT use, it appears that small numbers used either a wheelchair or smaller mobility items.

Most residents spent between 'less than one third of their time' to 'one to two thirds of their time' engaged in activity participation. They mostly preferred the day or activity room as a setting to engage in activities. For most, there had been no change in the past 7 days regarding the extent of their involvement in activities and their preference was not to change their routine. Residents preferred activities such as talking to others, being involved with music, watching television, walking or wheeling outdoors, and participating in reading and writing tasks. The majority were involved in an Alzheimer's and special behaviour symptom programs.

### **Conclusions:**

Recommendations were made regarding improvement of collection of RAI data, particularly the task segmentation and modes of locomotion components.

### **Report:**

Wielandt, P. (2008). *Identification of characteristics of long term care residents' functional abilities, assistive technology use and activity participation: Analysis of the Resident Assessment Instrument (RAI) 2.0 data*. Final report submitted to the Knowledge Brokering Group, Edmonton, AB.

### **Presentation:**

Abstract under review

## **Wilson & Visram**

- Principal Investigator:** Donna Wilson, Faculty of Nursing, University of Alberta
- Co-Investigator:** Alysha Visram, Undergraduate student, Faculty of Nursing, University of Alberta
- Title:** *A descriptive-comparative study of medication use by seniors prior to and following admission to an inpatient continuing care facility*
- Key Words:** Long-term care; medication
- Funding Agency:** Caritas Research Foundation (\$1,200)
- Time Frame:** 2007 - 2008
- Purpose:** The purpose of this project was to describe and compare the number and types of medications prior to admission to a continuing care centre and those 3 months after admission.
- Setting:** A long-term care facility
- Methods:** Chart reviews of all residents who died in 2006 after having been a continuing care resident, those who had admission medications listed, those who had a review of their medications completed with a revised medication list, those who were admitted directly from the community, and those aged 65+ were completed. Only 11 of 225 available charts met all the inclusion criteria. Data were extracted, using a standardized data collection form.
- Results:** A significant reduction in medication and potential interactions following admission were reported. However, there were no major differences in the types and dosages of medications prior to and following the admission medication review, with the most common prescribed medications being in the alimentary, cardiovascular, and nervous system classifications.
- Conclusions:** While acknowledging the small sample size, the researchers conclude that a major benefit of nursing homes is their medication review on admission as polypharmacy is common in community-dwelling seniors.
- Thesis:**  
Visram, A. (2008). *A descriptive-comparative study of medication use prior to and following admission to an in-patient continuing care facility*. (BScN Honours project, Faculty of Nursing, University of Alberta).

## INDEX OF INVESTIGATORS

<p style="text-align: center;"><b>A</b></p> <p>Amigo, P. .... 110            Anderson, C. .... 19            Anderson, M. .... 91            Andison, E. .... 58            Atkins, M. .... 66            Austin, W. .... 21</p> <p style="text-align: center;"><b>B</b></p> <p>Ballash, L. .... 105            Balt, L. .... 21            Bayles, K. .... 46            Beaupre, L. .... 24, 26, 83            Beck, C. .... 33            Berean, C. .... 105            Bourgoin, A. .... 19            Brown, C. A. .... 27, 29            Burton-Macleod, S. .... 110</p> <p style="text-align: center;"><b>C</b></p> <p>Caveny, P. .... 105            Chaudhury, H. .... 31            Chobanuk, J. .... 32            Chuck, A. .... 33            Cinats, J. .... 24            Cleary, S. .... 35, 36, 48, 49, 54, 58, 67, 103            Cummings, G. .... 37, 41</p> <p style="text-align: center;"><b>D</b></p> <p>de Kock, I. .... 110            Degner, L. .... 41            Dobbs, B. .... 44, 95            Dopson, S. .... 41            Draper, K. .... 58            Ducharme, M. .... 58            Duebel, T. .... 58            Dunn, C. .... 110</p> <p style="text-align: center;"><b>E</b></p> <p>Eliasziw, M. .... 71            Elliott, K. .... 91            Estabrooks, C. .... 39, 41, 58, 91</p> <p style="text-align: center;"><b>F</b></p> <p>Faily, J. .... 110            Fainsinger, R. .... 110            Featherstone, T. .... 98            Francis, A. .... 49</p>	<p style="text-align: center;"><b>G</b></p> <p>Gillespie, M. .... 51</p> <p style="text-align: center;"><b>H</b></p> <p>Hagen, B. .... 71            Haugen, L. .... 58            Heller, B. .... 44            Hogan, D. .... 71            Hopper, T. .... 35, 46, 48, 49, 51, 54, 58, 61            Hunter, K. .... 57, 81</p> <p style="text-align: center;"><b>J</b></p> <p>Johnson, C. .... 58            Johnston, D. W. C. .... 24, 26            Johnston, L. .... 110            Jones, C. .... 61            Jones, C.A. .... 24, 26            Jurczak, S. .... 62</p> <p style="text-align: center;"><b>K</b></p> <p>Kadlec, G. .... 51            Katz, D. .... 51            Kendall, T. S. .... 75            Kinjerski, V. .... 63            Knopp, A. .... 75            Koop, P. .... 100            Krachuk, A. .... 84            Kwong See, S. .... 87</p> <p style="text-align: center;"><b>L</b></p> <p>Lai, V. .... 51, 58, 91            Lants, G. H. .... 21            Laschinger, H. .... 41            Law, E. .... 98            Lehman, R. .... 105            Leung, H. .... 98            Leung, S. .... 19            Liu, L. .... 49, 65, 67, 91            Lowe, S. .... 110</p> <p style="text-align: center;"><b>M</b></p> <p>Mager, D. .... 66            Mahmood, A. .... 31            Maisey, S. .... 58, 65, 67, 91, 103            Mallidou, A. .... 69            Mansell, L. .... 51, 58, 91            Marcy-Edwards, D. .... 51            Marin, A. .... 70</p>
--	---

Maxwell, C. .... 58, 71, 90, 91  
 Mayan, M. .... 65  
 McFall, G.P. .... 73  
 McGilton, K. .... 41  
 McGinnis, R. .... 81  
 McIntosh, D. .... 58  
 Menec, V. .... 41  
 Michaud, P. .... 58  
 Mielke, K. .... 61  
 Milke, D. ... 33, 36, 49, 51, 54, 58, 65, 67,  
 73, 75, 103, 106  
 Miller, J. .... 77  
 Mirhosseini, N. .... 110  
 Misiaszek, J. .... 36  
 Mitchell, A. .... 21, 29, 39  
 Miyazaki, M. .... 77  
 Moore, K. .... 57, 81  
 Morgan, D. .... 41  
 Morrish, D. .... 83  
 Mujumdar, S. .... 26, 83  
 Myers, J. .... 110

## N

Nekolaichuk, C. .... 110  
 Neumann, I. .... 75, 91  
 Nordstrom, M. .... 51, 100  
 Norton, P. .... 41

## O

Olson, K. .... 84  
 Oneschuk, D. .... 110

## P

Paches, D. .... 105  
 Parboosingh, J. .... 71  
 Pederson, K. .... 54  
 Predy, G. .... 86  
 Pregitzer, L. .... 51  
 Profetto-McGrath, J. .... 41

## Q

Quddusi, T. .... 84

## R

Rowe, M. .... 51  
 Rust, T. .... 87  
 Rycroft-Malone, J. .... 41

## S

Sadowski, C. .... 19  
 Sales, A. .... 39, 41, 58, 89, 90, 91  
 Samuel, S. .... 93, 95

Saunders, L. D. .... 24  
 Sawchuk, L. .... 96  
 Schalm, C. .... 51, 58, 67, 91, 103  
 Scharfenberger, A. .... 24  
 Schmaltz, H. .... 71  
 Senthilselvan, A. .... 24  
 Shaw, S. .... 51  
 Simpson, S. .... 98  
 Skrypnek, B. .... 63  
 Smith, M. .... 41  
 Spiers, J. .... 37  
 Steinkey, E. .... 70  
 Stempfle, R. .... 98  
 Stewart, N. .... 41  
 Stokes, E. .... 86  
 Strain, L. .... 44, 58, 71  
 Strang, V. .... 21, 100  
 Strasser, F. .... 110

## T

Tarumi, Y. .... 110  
 Taylor, P. .... 51  
 Teare, G. .... 41, 71, 90  
 Thai, V. .... 110  
 Thompson, B. .... 21, 100  
 Tomoeda, C. .... 46  
 Turpin, K. .... 106

## V

Van Soest, D. .... 35, 36, 49, 54, 67, 103  
 Vieira, E. R. .... 104, 105  
 Visram, A. .... 114  
 Voaklander, D. .... 57

## W

Wark, C. .... 49, 51, 67, 75, 103  
 Warren, S. .... 58, 91, 106  
 Watanabe, H. .... 108  
 Watanabe, S. .... 110  
 Wielandt, P. .... 112  
 Wilson, D. .... 26, 70, 114  
 Wilson, V. .... 54  
 Wodchis, W. .... 71  
 Wojcik, A. .... 66  
 Wolch, G. .... 110

## Y

Yaremchuk, B. .... 58  
 Yuen, D. .... 105

## Z

Zimmerman, D. .... 71

