

# Does a Dementia Unit Reduce Polypharmacy in a Veterans Pavilion?

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**Interprofessional Patient Care Team**

# Objectives

- To determine the effect an institutional environmental change has on medication usage in a veterans pavilion.
- Secondary measures studied include:
  - nursing satisfaction as a result of this change
  - any measureable benefits to cognition in the demented residents pre vs post change as measured by sMMSE testing

# Abstract

This project examines the effect the creation of a dementia wing and reconfiguring of the remaining rooms has on a population of veterans. We are also looking at the effect this environmental change has had on nursing job satisfaction.

There is widespread support for the behavioral management of cognitive impairment while at the same time minimizing the role of pharmacological treatment. (Zarit et al 1990). This move theoretically should enable staff to optimize such behavioral approaches in a more "ideal environment". Behavioral and psychological symptoms (BPSD) can occur in 60-80% of patients with Alzheimer's disease (Eastwood and Reisberg 1996). They are aggression, delusions, hallucinations, apathy, anxiety and depression, and are clinically managed with a variety of psychotropic drugs such as antipsychotics, antidepressants, antiepileptic drugs and benzodiazepines (Finklel et al 1996).

What will be the impact of this move on polypharmacy? This is a unique research opportunity because it gives much needed data on a captive population who have not been studied this way previously. This study may have tremendous impact on current nursing home practice / design in our province.

# Primary Questions:

## Research Question 1

1. Does the usage of medications for the same residents with dementia differ between staying in a long -term care facility and after transfer to the dedicated dementia unit?
2. Does the usage of medications for the residents with and without dementia differ in a long term care facility if the wandering dementia residents are present vs if they are absent?
3. If polypharmacy is reduced, which residents demonstrate the most in polypharmacy reduction? (Dementia unit residents or regular unit residents? If regular unit residents, the residents without dementia or those with dementia?)

# Methodology

- **Research Question 1:**

- Comparison of subgroups: the number and doses of medications (regular & as needed); the types of medications used (antipsychotics, anxiolytics, sedatives, bowel meds etc.).
- Time points: prior to moving some residents to the Dementia Unit (May/June 2009), 6 months post-move, one year post-move, and the final time point will be 18 months post-move (November/December 2010).



## Secondary Question: Research Question 2

- How does the move into a Dementia Unit affect cognitive scores of the residents in all the affected units?

# Methodology

- **Research Question 2:**

- Cognitive scoring as per routine annual review with the sMMSE (standardized Mini Mental Status Exam) of each resident
- Time points: pre-move, at 6 months post-move, 12 months post-move, and at 18 months post-move. Pre and the various post move scores will be compared.
- Frailty scores and dementia types will also be compared between the groups



## Secondary Question: Research Question 3

- Is there a measurable impact on the overall nursing satisfaction when a Dementia Unit is established in a Veterans Pavilion?

# Methodology

- **Research Question 3:**

- The effects on nursing job satisfaction will be measured using the modified Measure of Job Satisfaction (mMJS) questionnaire (Chou et al. 2002)
- Time points: pre-move and 12 months post-move

# Data Analysis

- Qualitative and quantitative analyses will be performed:
  - Quantitative data will be analyzed using the Statistical Package for the Social Sciences (SPSS)
  - Qualitative data will be subjected to constant comparative analysis for categories, constructs, domains, and general themes

## Current Status of the Study

- Study is fully supported by the Newfoundland & Labrador - Centre for Applied Health Research (NL-CAHR)
- Study has received ethics approval from the Human Investigation Committee (HIC)
- Study began in May 2009. Data collected: May/June 2009, Nov/Dec 2009, May 2010, and Nov/Dec 2010
- Study data currently being collected



**Caribou Memorial Veterans Pavilion**





**Veterans Pavilion**





**Dementia Unit – Veterans Pavilion**





**A war veteran / VP resident**





**Dementia Unit**



# Preliminary Data

Final data collection will end in Dec 2010

Pre move May 2009

VP2 beds/room  
3x6  
2x2  
1x4  
Total=26

VP2 beds/room  
3x6  
2x2  
1x4  
Total=26

Post Move May 2009

VP2 beds/room  
2x7  
1x7  
Total=21

VP3 beds/room  
2x7  
1x7  
Total=21

VP2S  
beds/room  
1x14

Deaths since move  
May 2009 – Dec 2010

VP2 +VP3  
29(42)

VP2S  
3(14)

Average Age  
VP2  
87.5

Average Age  
VP3  
87.9

Average Age  
VP2S  
87.9

Average Length of Stay (months)  
2007 14.8  
2008 16.7  
2009 16.9  
2010 17.9 ( to October)



sMMSE

VP2S

1.2 point drop at 12 month point