

## A POPULATION-BASED STUDY OF DEPRESSION IN PERSONS WITH PARKINSON'S DISEASE

T. Ernert<sup>1</sup>, K.M. Fiest<sup>2,3</sup>, J.V.A. Williams<sup>2</sup>, D. Lavorato<sup>2</sup>, A.G.M. Bulloch<sup>2,3</sup>, & S.B. Patten<sup>2,3</sup>

<sup>1</sup>Bachelor of Health Sciences, Biomedical Sciences major, University of Calgary, <sup>2</sup>Departments of Psychiatry, University of Calgary, <sup>3</sup>Community Health Sciences, University of Calgary  
tjernert@ucalgary.ca

### INTRODUCTION

Parkinson's disease (PD) is a chronic neurological condition that degenerates motor skills and degrades cognitive function over time [1,2,3]. Depression is commonly associated with PD, and can lead to decreased quality of life and increased health care utilization in persons with PD [1,2,3]. The goal of the current project is to estimate the prevalence of depression in PD disease patients and characterize this population in terms of demographics, differing diagnostic criteria and comorbidities.

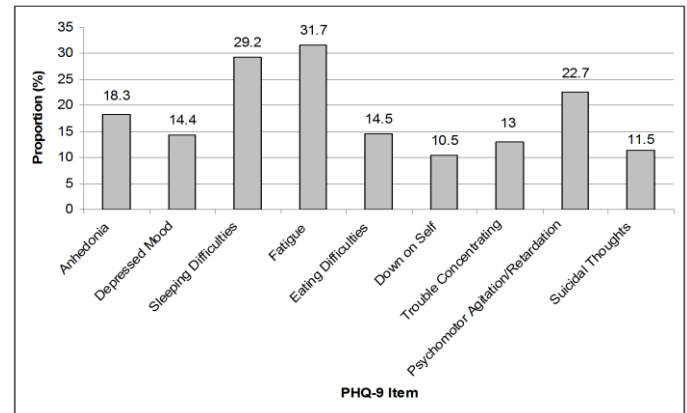
### METHODS

The Survey of Living with Neurologic Conditions in Canada (SLNCC) is a nationally representative, population-based survey of ~4,000 Canadians with at least one neurological condition. Data was collected from September 2011 to March 2012. Demographic variables, including age, sex, education, and other variables, such as general health, the health utility index, income and employment status, will be used to characterize the population. Depression will be identified using the Patient Health Questionnaire (PHQ)-9, which assesses depressive symptoms over the previous two weeks. The PHQ-9 questions map directly onto the DSM-IV-TR diagnostic criteria for a major depressive episode. The PHQ-9 will be scored according to cut-point and algorithm-based methods. Basic descriptive statistics will be used, along with logistic regression to quantify the magnitude of observed associations.

### RESULTS

Overall there was no difference in the prevalence of depression in PD between men and women. Slightly over half of the individuals affected by PD claim that their health is fair or poor, with 16% of them holding the belief that their quality of life is worse than being dead. 62.5% of patients believe that their PD symptoms are worse or much worse when compared to the time of initial diagnosis. 23.1% of persons with PD report symptoms of depression using the PHQ-9 cutpoint method and 13.6% when using the PHQ-9 algorithm scoring method. The most common symptoms of depression in PD are fatigue and sleeping difficulties. 11.5% of PD patients report

suicidal ideation, compared to 0.5% of persons in the general population.



**Figure 1.** This figure represents the responses of 358 Canadians with PD who were diagnosed with depression according to the PHQ-9.

### CONCLUSIONS

It was found that the prevalence of depression, using both the cutpoint and algorithm scoring methods are higher in PD than in the general population. In addition, a significantly greater proportion of persons with PD report suicidal ideation than the general population (Figure 1).

Most persons with PD report poor self-rated health and almost 1 in 5 report their current health state to be worse than dead. Two-thirds of persons report their PD symptoms to be worse or much worse than when they were first diagnosed.

Depression is highly prevalent in PD. Understanding the varying presentation of depression in PD is essential. Optimal recognition and treatment strategies for depression in PD are of the utmost importance.

### REFERENCES

1. Aarsland D, et al. *Nat Rev Neurol.* **8**(1):35-47, 2012.
2. Veazey C, et al. *J Neuropsychiatry Clin Neurosci.* **17**(3):310-23, 2005.
3. Dissanayaka NN, et al. *J Neurol Sci.* **310**(1-2):208-10, 2011.