DEMENTIA

Vancouver Island Electronic Health Record Data Protocol Proposal

University of Victoria

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OUTLINE

➤ Introduction

➤ Protocol Proposal : Idea

➤ Background and Rationale

➤ Objectives

➤ Cohort

➤ Major Research Questions

➤ Data Management

INTRODUCTION : DEMENTIA IS EXPENSIVE

Prince, M. J. (2015). *World Alzheimer Report 2015: the global impact of dementia: an analysis of prevalence, incidence, cost and trends.*

➤ The global cost of dementia was estimated at $818bn USD in 2015 (Prince et al., 2015; Wimo et al., 2017)

  ➤ It is estimated to cross 1 Trillion by 2018

➤ Dementia is costly, early detection methods, treatments, and more information are needed

  ➤ Electronic Health Records = untapped source

Source: Forbes 2015 ranking

$742 bn USD   *$357 bn USD*   *$368bn USD*

PROPOSAL

➤ Drug induced delirium is temporary & costs 16,000-20,000 per patient

➤ Drug induced dementias are reversible & estimated to comprise up to 12% of all dementia cases (Moore et al., 1999)

➤ What is the relationship between cancer and dementia?

OBJECTIVES

➤ Evaluate and identify co-morbidities and chronic diseases that may result in an increased risk of dementia.

➤ Assess whether there is a common temporal appearance of diseases resulting in dementia.

➤ Identify rates of dementia within the subgroups of cancer, cancer plus chemotherapy, transplant patients and other chronic diseases.

➤ Identify types of chemotherapy and whether there are subgroups within this population that are protected from, or at increased risk of, dementia.

EXAMPLE RESEARCH QUESTIONS

➤ What are the co-morbidities associated with dementia?

➤ Factor analysis (Poblador-Plou et al., 2014)

➤ After accounting for number of chronic conditions, do the number of medications affect the risk of dementia? (Lai et al., 2012)

➤ What are the rates of dementia and rates of dementia after cancer? (consider age at death)

➤ What are the rates of dementia after cancer vs rates of dementia after cancer and chemotherapy?

➤ Are there different health outcomes associated with type of chemotherapy drug?

➤ Does the number of medications being taken affect risk of dementia?

➤ What are the rates of drug induced dementia? (and which drugs?)

➤ What are the health outcomes after transplants? (recurrence, chronic diseases, dementia).

➤ What are the health outcomes after cancer? (recurrence of the same cancer, chronic diseases, dementia)

COHORT

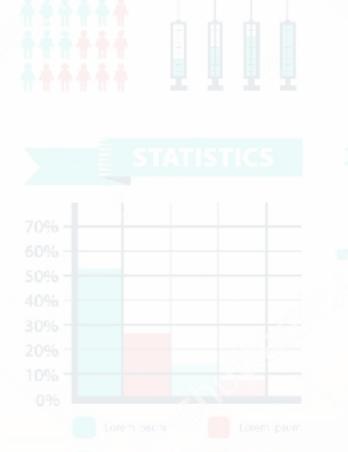Cohort is defined as the inclusion of individuals who have:

➤ a dementia diagnosis or encounter

➤ a drug induced dementia or delirium diagnosis

➤ undergone a

    ➤ transplant (palette 99)

    ➤ chemotherapy, or

    ➤ cancer (palette 76 and 36)

DATA ELEMENTS

➤ RAI Neurological

➤ RAI Summary

➤ DAD diagnosis

➤ Secondary diagnosis (contributor to time in acute care)

➤ Sequence and duration for events

➤ Oncology encounters (palette 76 and 36)

➤ Transplant encounters (palette 99)

➤ Pharmacy data (palette code 81)

➤ Vital statistics

➤ Morgue (palette code 66)

➤ Cause of death

DATA MANAGEMENT

SAFE

➤ All data is housed within the Island Health Secure Research Environment

➤ Data is de-identified using Safe Harbour methodology

➤ Research access to the research-ready de-identified data provided by an Island Health Data Warehouse Specialist is provided through a secure data portal. No data leaves.

It's just the beginning

THANK YOU

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&

Stanley Robertson

QUESTIONS?