

Yukon Government, Research Assistant, S18

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Overview

I research available epidemiological studies, data, and other literature about the burden of chronic disease within Canada, and specifically, within Yukon. In addition, I compile available data sources into an inventory to be used with future public health surveillance projects. Additionally, I will be conducting descriptive analysis using chronic disease data from Yukon hospitals.

Major Responsibilities & Projects

Chronic Disease Literature Review/Environmental Scan

I conducted a search for relevant publications and data relating to chronic disease in Canada. My scope included Chronic Obstructive Pulmonary Disease (COPD), Asthma, Dementia, Diabetes, and Cardiovascular Disease. I then wrote a report summarizing and synthesizing the literature in the following categories: Prevalence & Incidence, Geographic Distribution, Associated Risk Factors, Economic Burden, as well as the limitations of the available sources.

Yukon Chronic Disease Data Inventory

I conducted interviews with a wide range of programs and branches within Yukon Government to assess the scope, level of detail, quantity, and quality of chronic disease data that their area collects. This inventory will be used for future chronic disease public health surveillance projects within Yukon.

Analysis of Chronic Disease Data

We conducted a data pull for chronic disease data from Yukon hospitals. This involved planning the analysis and surveillance questions and identifying useful variables. I will then perform statistical analysis using Excel and R to gain insight into chronic disease trends and healthcare utilization rates within Yukon.

Developing Skills

Report Writing

Conducting my literature review developed my ability to critically analyze literature and summarize it within the context of a report. I learned how to identify the key information within publications and accurately and concisely present that information in a useful manner. This project also helped me to understand the difference between a direct summary of research in a report versus analyzing the information at a deeper level to be able to compare information across multiple sources.

Communication and Interpersonal Skills

Through my interviews of various Yukon Government employees, I have enhanced my ability to effectively communicate the goal and scope of my project. Each branch of government has a different role in their collection and use of chronic disease data. Therefore, even though my purpose for conducting the interviews remained relatively consistent, my approach and interview questions needed to be adjusted for each interview to obtain the required information and accurately communicate the goal and potential benefits of creating the inventory.

Quantitative Analysis Skills

My analysis of a chronic disease dataset will greatly increase my skills in data management and descriptive analysis. Before direct statistical methods can be applied to the data, it must be cleaned and shaped into a suitable format. Through the use of Excel and R, I will develop coding skills to conduct these processes as well as learn how to ensure accuracy and validity. Once the

data is ready for analysis, I will further develop skills in Excel and R to conduct statistical analysis and draw conclusions to proposed research questions.

Challenges

Time Management

When conducting my literature review, I ran into minor challenges with the provisioning of time for each chronic disease within my scope. Given that the topic was broad, I sometimes found myself spending too much time researching sources for one condition, when the time constraints dictated I should move on. To address this, I adopted an acceptable range for the number of sources I would use for each disease and progressed to the next once that amount had been reached.

Learning R and Excel

Due to limited previous experience with Excel and particularly with R, I thought it might be quite challenging to obtain the necessary skills to complete my work. Thankfully, my supervisors are both highly proficient in these programs and are able to provide both direct and indirect assistance. I obtained many helpful resources as well as setting up an arrangement in which they are accessible to me whenever I encounter issues.

Recommendations for Future Students

1. Take regular notes in meetings, whether they be progress meetings for your co-op work term, or others that you attend as educational opportunities. The public health professionals I have met and worked with in Yukon have had an incredibly rich range of interdisciplinary experience. This has allowed me to learn about how to improve my skills in my current role, as well as learn and reinforce my interest in the field of public health, all of which will be a great asset to me in the future.

2. Think about the health implications of current news events and within the context of your day to day life. Public health is a broad field that is affected by everything from climate change to immigration. By thinking about issues from this point of view, it will help you immensely in understanding the multitude of factors in play when working in public health surveillance.