

# Introduction to Using Linked Data for Research

A one-day course that provides an introduction to administrative data and data linkage.

This course will discuss the application of linked administrative data to real world problems, and outline how data linkage can be used to provide valuable, policy-relevant evidence. This course will consist of lectures and group discussions.

This course is designed for policy makers, researchers, managers, analysts, and others working in the public sector with an interest in generating evidence. No knowledge of data linkage is required; however, basic familiarity with research methods is an asset.

**Registration fees** (include food, course materials, and certification of completion): CA\$265, CA\$165 for students

Registration: https://events.eply.com/Introtolinkeddata
Please Register EARLY - space is limited!
Enquires: ann.greenwood@popdata.bc.ca

#### A University of Melbourne short course, presented with support from:

UBC Transformative Health and Justice Research Cluster, UBC School of Population and Public Health, PopData BC, and the Peter Wall Institute for Advanced Studies.

When: September 27th, 2019 from 9:00am - 4:30pm (registration from 8:30am)

Where: HSBC Hall (C680) at UBC Robson Square -800 Robson Street Vancouver BC V6Z 3B7

Facilitators: Prof Stuart Kinner, Dr Jesse Young, & Prof Kim McGrail



## **Course Outline**

#### Module 1: Administrative Data and Data Linkage

In this module you will gain an understanding of the diverse types of administrative data that can potentially be used for research. You will learn what data linkage is, and gain a basic understanding of how data can be linked for research purposes. We will explore some of the strengths and limitations of using linked data for research, including some of the key practical and methodological considerations associated with data linkage. The session will conclude with some examples of research using linked data, and discussion of how these studies have informed policy or practice.

#### Module 2: Acquiring Data

In this module we will introduce the key concepts involved in scoping the data required to answer a question of interest. The module will introduce design concepts such as bias, censoring, sampling and missingness, and you will learn how to critically appraise administrative data resources. The module will cover practical considerations such as ethics and privacy principles, and will provide an overview of a typical data acquisition process.

#### Module 3: Data Management

In this module we will provide an overview of the data management process as it relates to linked data. This will include the key steps prior to, and immediately after, gaining access to linked data. We will discuss the basic manipulation of data, including identifying the layout of your data, methods of transferring between long and wide formats, and considerations when combining datasets. We will detail the basics of data security followed by advice on setting up data analysis sessions to maximise the transferability and repeatability of

research studies. Finally, we will discuss some common pitfalls of linked data, focusing on free-text, coded and date-time variables.

### Module 4: Generating and Communicating Results

This module will provide an overview of the unique considerations involved in generating and communicating results from linked administrative data. The module will introduce common approaches and techniques for the analysis of linked data, and the reasoning behind them. We will provide an overview of data analysis techniques commonly applied to big data, and common strengths and limitations associated with analysis of linked data. The module will introduce practical ways of communicating results that maximise impact beyond the research sector, and equip you with the basic knowledge to engage with and contribute to data linkage research.