

# Degree of Psychiatrists Involvement in Treating MDD

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PSYC 513

- Determine how **differences in the history of individuals diagnosed with Major Depression Disorder (MDD)** are related to **the degree to which a psychiatrist was involved care.**

## Protocol Synopsis

- Determine **costs and mortality rates** associated with psychiatrist involvement, independent of severity

- Depression = **adverse health outcomes** -> increased utilization of health care services
  - E.g. cardiovascular disease, metabolic, viral, and infectious diseases, increased mortality, and higher health care expenditures!
- Drug interactions
- “Psychiatrist Effects”

## Background & Rationale

- Understand patterns of care utilization and demographic variables of patients with MDD that are predictive of the degree of psychiatrist involvement in care
- Determining differences in mortality rates based on psychiatrist involvement
- Determining differences in health care costs based on psychiatrist involvement

## **Objectives**

Objective 1: Understand patterns of care utilization and demographic variables of patients with MDD that are predictive of the degree of psychiatrist involvement in care

- Exploratory
- Uncover predictors of involvement
  - Service Utilization patterns (i.e, types of services, the severity ratings associated with services)
  - Demographic variables

## **Hypothesis and Associated Research Questions**

### **Objective 1**

Objective 2 & 3: Determining differences in mortality rates and costs, based on psychiatrist involvement

- Controlling for severity of illness, it is expected that those who have more psychiatrist involvement in care will experience lower rates of mortality, and require less health care funds allocated to their care.

## **Hypothesis and Associated Research Questions**

### **Objective 2 & 3**

- All individuals with records in the **Island Health Enterprise Data Warehouse (EDW)**, who have received **Ambulatory Psychiatric Consultation Services**
  - **Palette code 84**
  - **Dx MDD**
  - **n = 22,634 (>?)**
- Previous encounters and clinical focus, psychiatrist involvement, demographic variables
- Subdivided into groups
  - **“Primary”** - care guided by psychiatrist who is involved in diagnosis, case management, and treatment plan
  - **“Consult”** - one consultation only
  - **“Control”** - no psychiatrist involvement
    - \*dependent on data
- **Excluded:** Individuals receiving mental health services from psychologists & comorbid mental health Dx.

**Design,  
methodology**

**Cohort**

Objective 1: Understand patterns of care utilization and demographic variables of patients with MDD that are predictive of the degree of psychiatrist involvement in care

- Multinomial logit model

Psychiatrist involvement (category) ~  
severity + service utilization + demographic  
variables

**Design,  
methodology**

Statistical  
Analyses



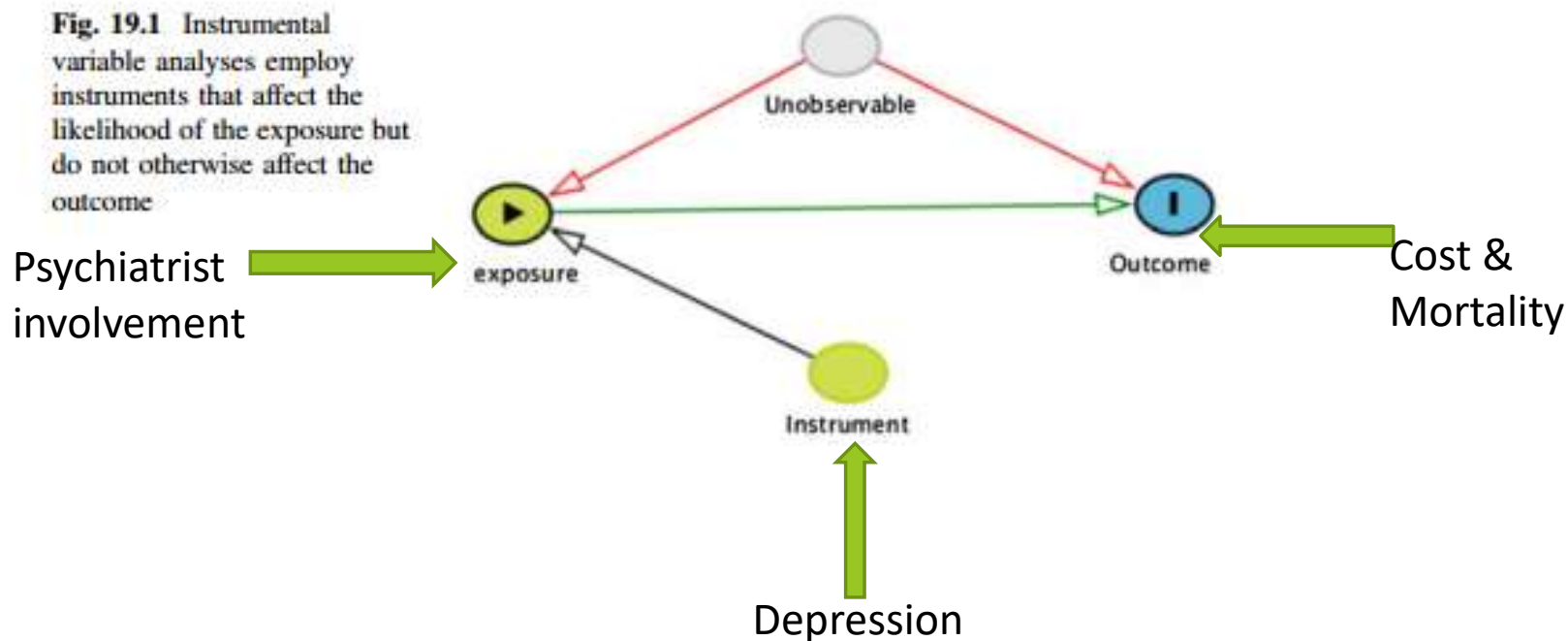
Objective 2 & 3: Determining differences in mortality rates and costs, based on physician involvement

## Design, methodology

## Statistical Analyses Continued

- Instrumental variable analyses (IVAs)
  - Severity of illness adjustment
  - “Natural” experiment

**Fig. 19.1** Instrumental variable analyses employ instruments that affect the likelihood of the exposure but do not otherwise affect the outcome



- Primary care data missing, compromising generalizability
  - i.e. those individuals who have MDD dx., not being treated through Island Health secondary/ tertiary care may be meaningfully different
- Private care data missing, compromising exclusion criteria
  - Many psychologists are private practitioners
- Beyond severity, there may be other confounding variables that account for the degree of psychiatrist involvement not included in the model (therefore, IVA criteria is not met)
  - E.g. accessibility of psychiatrists, personality factors, etc.
- Lifestyle variables are unaccounted for
  - E.g. physical activity and diet alter outcomes
  - Possibly approximated in severity rating (i.e. healthier = less severe MDD)

Limitations

Missing  
Data

## Questions and Discussion