



AcceSS and Equity in Transplantation

MENTAL ILLNESS IN PATIENTS WITH KIDNEY FAILURE IN AOTEAROA NEW ZEALAND: A DESCRIPTIVE ANALYSIS

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Background

- Mental illness is **common** in kidney failure
- Underappreciated → **inequity**
- Sociodemographic factors not a focus in literature to date



Study objective

To describe prevalence of mental illness in the kidney failure population of Aotearoa including pertinent sociodemographic and clinical characteristics, as well as clinical outcomes.

ASSET-linked data platform

Study cohort

NZBS

Ministry of Health data

ANZDATA

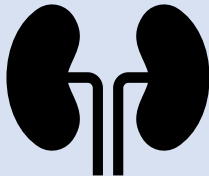


Ever waitlisted or worked up for transplant

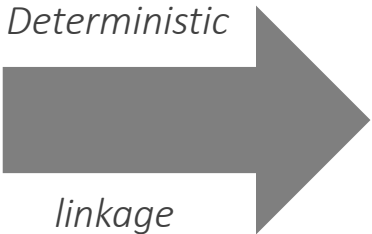


Dialysis & kidney transplant

ANZLKD



Living kidney donors



Hospital admissions & outpatient



National Non-Admitted Patient Collection Data

National Minimum Dataset

Cancer Registry



Mental health



Programme for integration of mental health data (PRIMHD)

Death Register



Prescriptions



Pharmaceutical Claims Database

Inclusion Criteria / Definitions

- Persons ≥ 18 years of age
- Incident kidney failure in Aotearoa from:
 - 1st July 2008 → 31st December 2019
- Mental illness – at least 2 occasions in 1 year for:



Prescription medication use



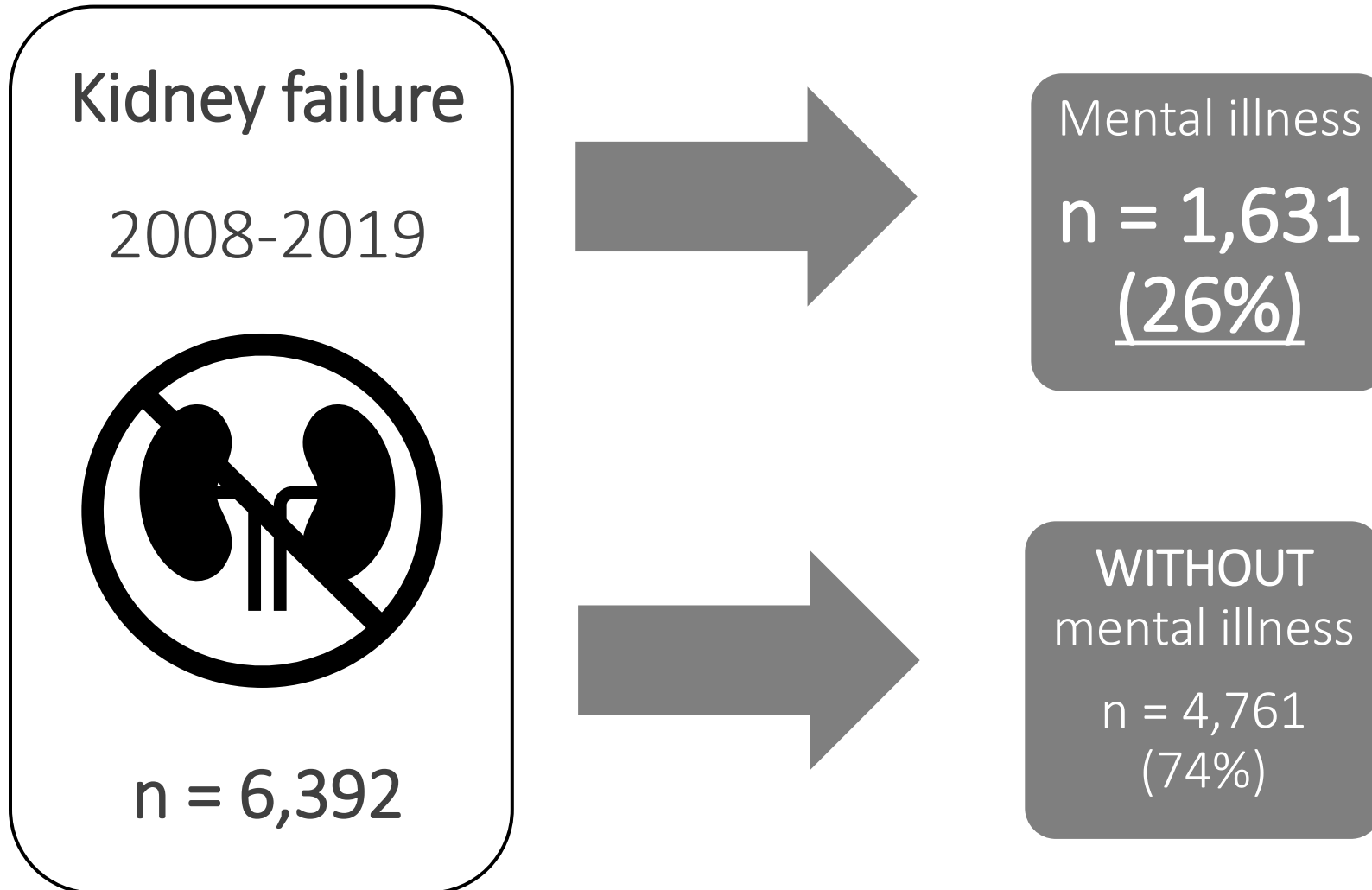
Mental health service activity

- **Moderate** – antidepressant prescription and/or community/residential treatment
- **Severe** – antipsychotic prescription and/or inpatient treatment

Analysis

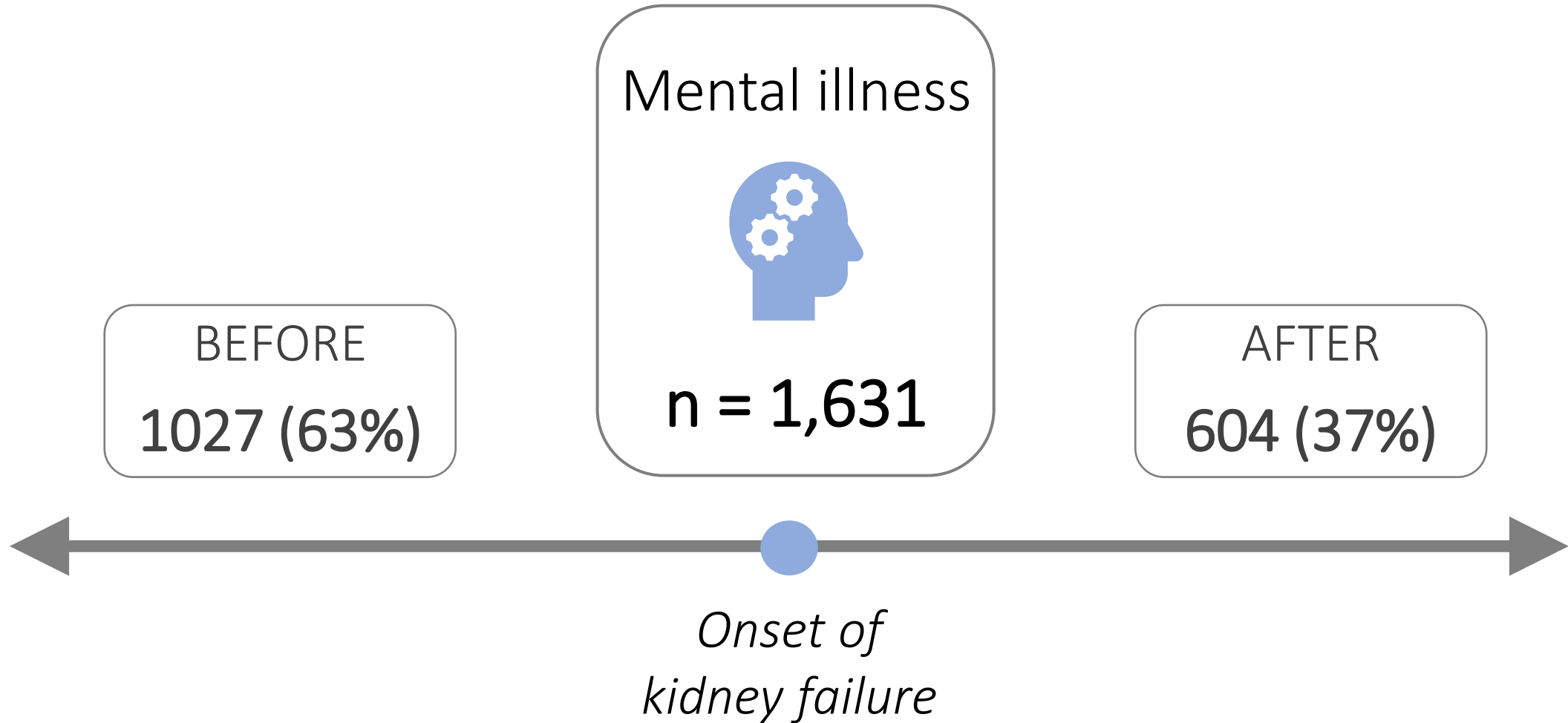
- **Descriptive:**
 - Prevalence and characteristics of mental illness
 - Sociodemographics
 - Clinical factors
- **Logistic regression:**
 - Identify significant associations with mental illness
 - Outcomes
 - Waitlisting, Transplantation, Death

Mental illness in kidney failure

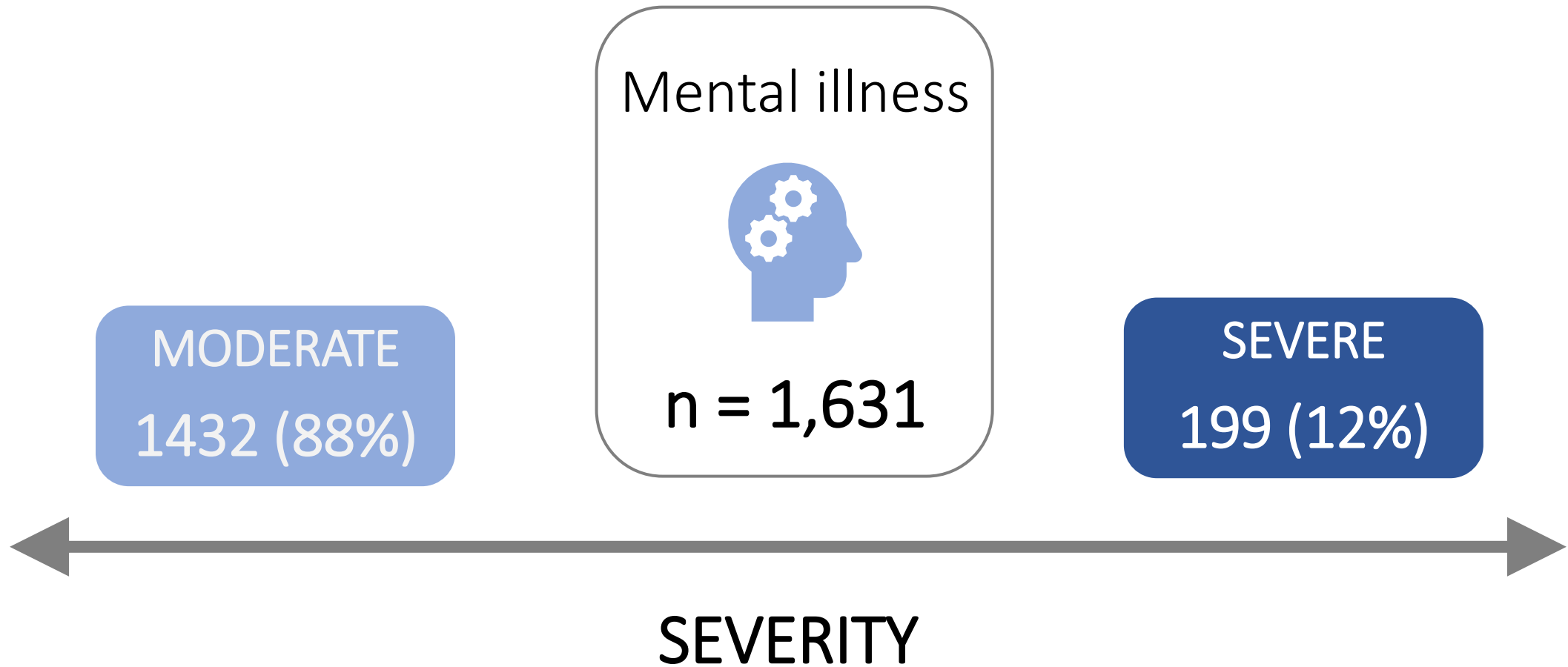


Mental illness in kidney failure

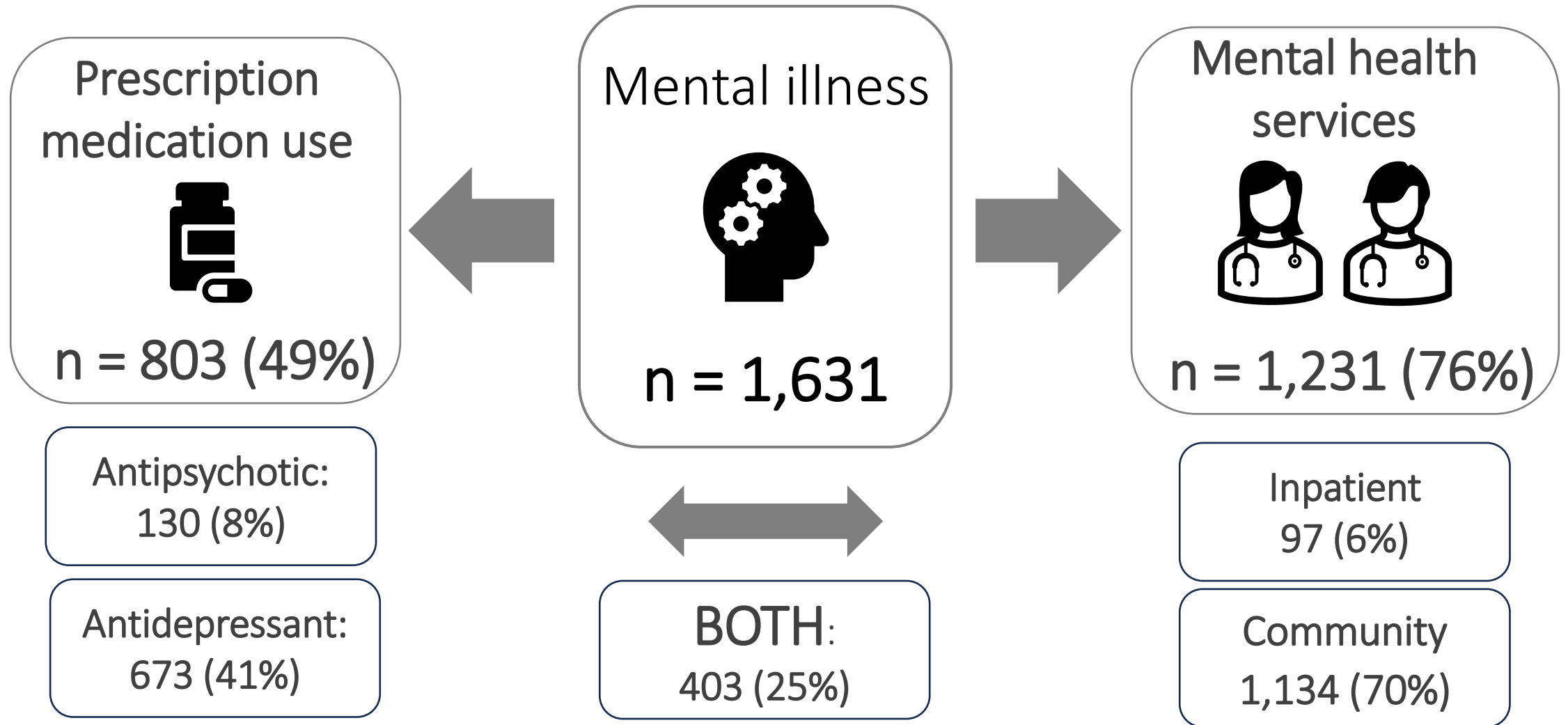
(Not adjusted for sampling time frame)



Mental illness in kidney failure



Mental illness in kidney failure



Study cohort characteristics

| | | Mental illness (%) (n = 1631) | No mental illness (%) (n = 4761) |
|-----------------------------|-------------------|----------------------------------|-------------------------------------|
| <i>Age</i> | 18-34 | 13 | 6 |
| | 35-54 | 40 | 28 |
| | 55-74 | 42 | 55 |
| | 75+ | 4 | 11 |
| <i>Sex</i> | Female | 41 | 39 |
| | Male | 59 | 61 |
| <i>Ethnicity</i> | Maori | 30 | 31 |
| | Pasifika | 14 | 24 |
| | Asian | 8 | 9 |
| | European | 46 | 35 |
| | Other | 2 | 1 |
| <i>Deprivation Quintile</i> | 1 | 10 | 8 |
| | 2 | 13 | 12 |
| | 3 | 15 | 15 |
| | 4 | 22 | 22 |
| | 5 (most deprived) | 40 | 43 |

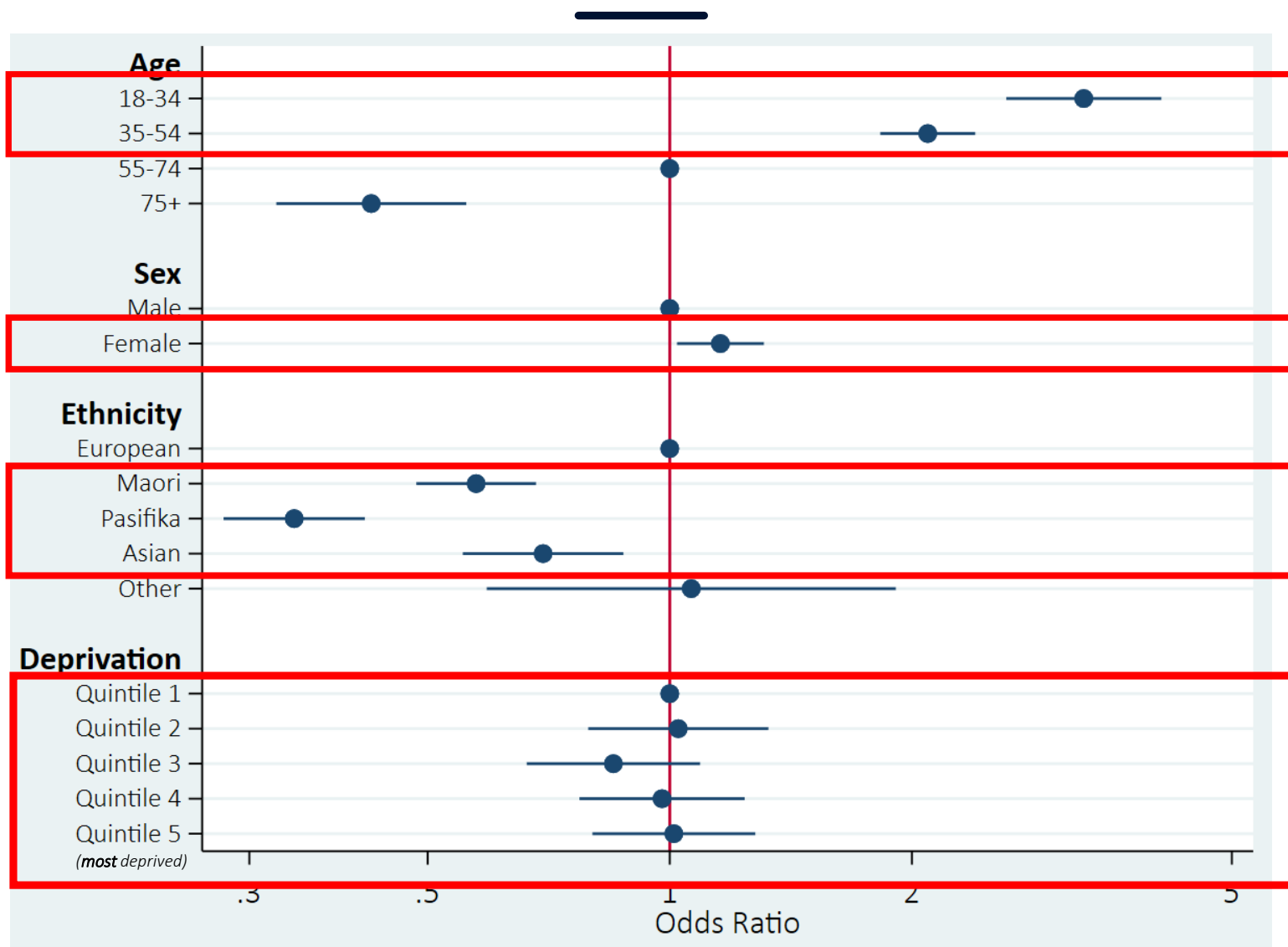
Study cohort characteristics

| | | Mental illness (%) (n = 1631) | No mental illness (%) (n = 4761) |
|--------------------------------|-----------------------------|----------------------------------|-------------------------------------|
| <i>Cause of kidney failure</i> | Diabetes | 45 | 51 |
| | Glomerulonephritis | 23 | 19 |
| | Hypertension | 7 | 11 |
| | Polycystic Kidney Disease | 6 | 5 |
| | Other | 20 | 16 |
| <i>Comorbidities</i> | Chronic Lung Disease | 14 | 14 |
| | Coronary Artery Disease | 23 | 26 |
| | Peripheral Vascular Disease | 10 | 13 |
| | Cerebrovascular Disease | 11 | 10 |
| | Diabetes | 52 | 59 |
| <i>BMI</i> | Underweight | 5 | 3 |
| | Normal | 21 | 17 |
| | Overweight | 29 | 28 |
| | Obese | 46 | 52 |
| <i>Smoking</i> | Ever smoked | 59 | 54 |
| | Never smoked | 41 | 46 |

Study cohort characteristics

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|-------------------------|---------------------|----------------------------------|-------------------------------------|
| <i>Initial Modality</i> | Haemodialysis | 56 | 55 |
| | Peritoneal Dialysis | 39 | 41 |
| | Transplant | 6 | 5 |
| <i>Dialysis Setting</i> | Hospital/Satellite | 56 | 54 |
| | Home | 44 | 46 |
| <i>Parent Centre</i> | Whangarei | 6 | 5 |
| | Waitemata | 9 | 7 |
| | Auckland | 15 | 12 |
| | Middlemore | 18 | 21 |
| | Waikato | 18 | 20 |
| | Taranaki | 2 | 3 |
| | Hawkes Bay | 4 | 5 |
| | Palmerston North | 5 | 5 |
| | Wellington | 12 | 11 |
| | Christchurch | 8 | 7 |
| | Dunedin | 4 | 4 |

Logistic regression - Sociodemographics

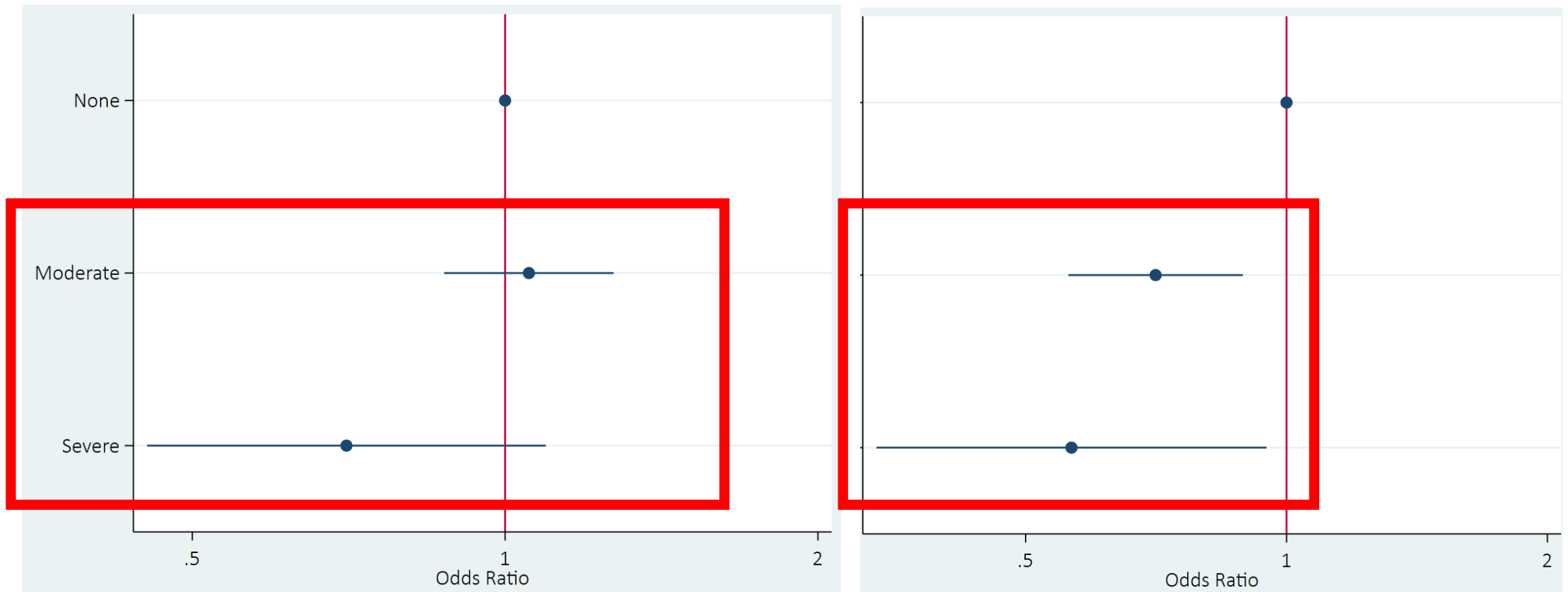


Logistic regression

Mental illness **BEFORE** kidney failure

Waitlisted

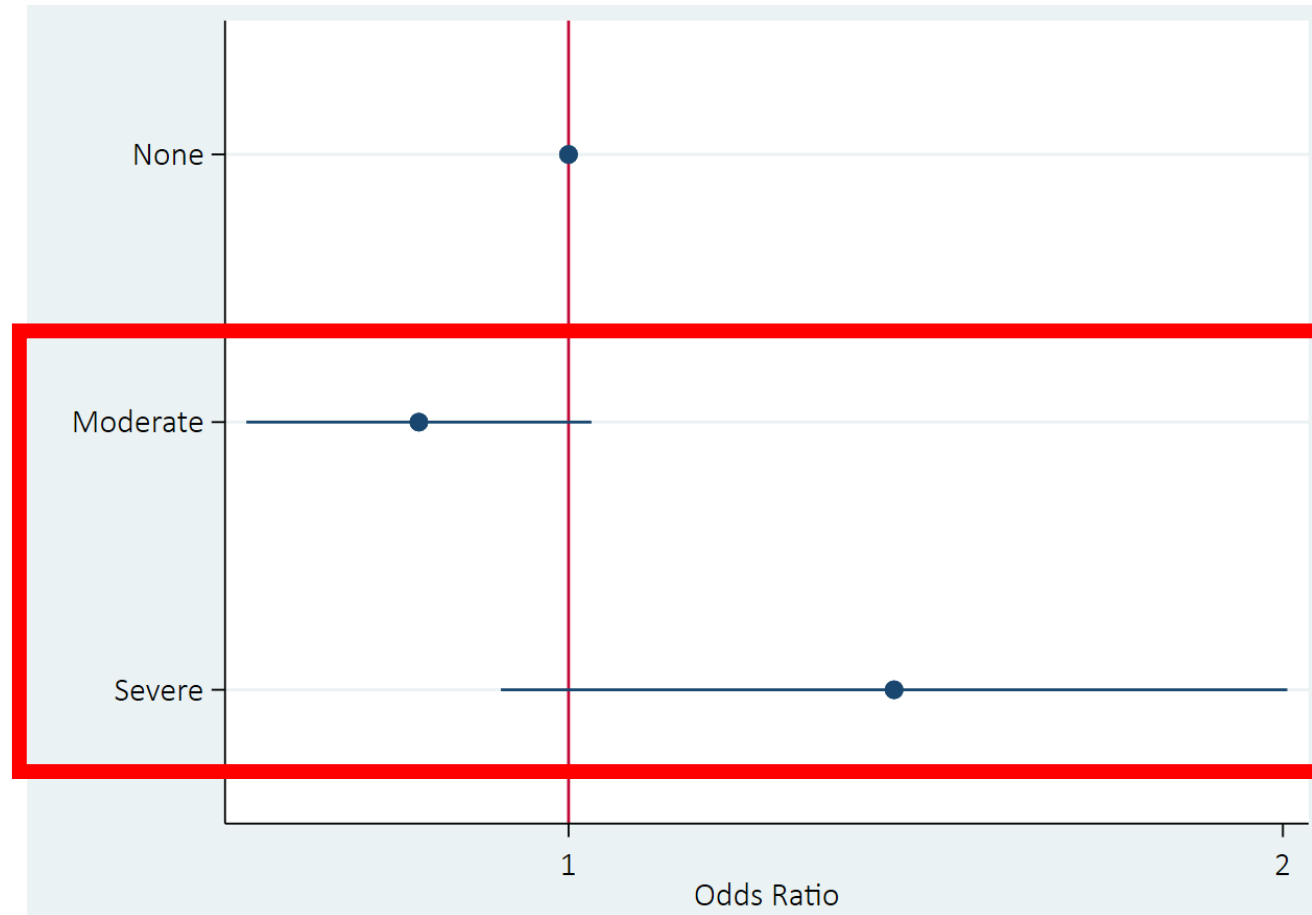
Transplanted



Logistic regression

Mental illness BEFORE kidney failure

Death



Conclusions

- Mental illness affects 1 in 4 with kidney failure in Aotearoa
 - Mostly of **moderate** severity
- Odds of treated mental illness were:
 - **Higher** in younger people and females
 - **Lower** in those of Maori, Pacific, and Asian ethnicity
- **Lower** odds of transplantation with **pre-existing** mental illness
- Further research into impact of mental illness:
 - Before vs. after kidney failure on outcomes using a survival model
 - In those with poorer social determinants of health
 - On waitlist transitions

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 Donation
 Evidence



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Thank you

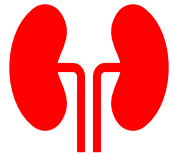


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Questions

