

Online Supplemental Materials for

Burden of health morbidities and associated health care costs in the Australian Genetics of Depression Study using the medication-based Rx-Risk Comorbidity Index

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Table S1. Prevalence of each inferred comorbidity category by sample and sex.

Comorbidity Category	AGDS			10PCT		
	Male (<i>n</i> = 4196)	Female (<i>n</i> = 11694)	Total (<i>n</i> = 15890)	Male (<i>n</i> = 775683)	Female (<i>n</i> = 860795)	Total (<i>n</i> = 1636478)
Alcohol dependency	2.6%	1.7%	1.9%	0.50%	0.29%	0.4%
Allergies	0.0%	0.060%	0.0%	0.022%	0.039%	0.0%
Anticoagulants	7.6%	6.7%	7.0%	6.9%	6.8%	6.9%
Antiplatelets	6.7%	2.1%	3.3%	9.0%	6.6%	7.7%
Anxiety	29.9%	33.2%	32.3%	9.1%	12.3%	10.8%
Arrhythmia	1.8%	0.69%	1.0%	2.7%	2.0%	2.4%
Benign prostatic hyperplasia	2.6%	0.026%	0.7%	1.2%	0.011%	0.6%
Bipolar disorder	6.6%	5.6%	5.8%	0.39%	0.44%	0.4%
Chronic air disease	24.3%	29.6%	28.2%	18.4%	23.0%	20.8%
Congestive heart failure	23.6%	12.9%	15.7%	20.9%	17.8%	19.3%
Dementia	0.095%	0.034%	0.1%	0.39%	0.49%	0.4%
Depression	89.2%	91.3%	90.7%	18.7%	27.1%	23.1%
Diabetes	10.1%	8.9%	9.2%	8.6%	7.3%	7.9%
Epilepsy	10.3%	10.0%	10.1%	3.2%	3.4%	3.3%
Gastroesophageal reflux disease	35.9%	36.6%	36.4%	26.1%	28.7%	27.5%
Glaucoma	2.6%	1.3%	1.6%	2.5%	2.4%	2.5%
Gout	6.0%	1.0%	2.3%	6.6%	1.6%	4.0%
Hepatitis B	0.024%	0.0%	0.0%	0.078%	0.037%	0.1%
Hepatitis C	0.12%	0.026%	0.1%	0.087%	0.035%	0.1%
HIV	0.83%	0.009%	0.2%	0.26%	0.057%	0.2%
Hyperkalaemia	0.0%	0.0%	0.0%	0.000%	0.000%	0.0%
Hyperlipidaemia	28.6%	14.2%	18.0%	23.6%	19.2%	21.3%
Hypertension	10.2%	7.7%	8.4%	9.1%	10.7%	9.9%
Hyperthyroidism	0.36%	0.56%	0.5%	0.25%	0.79%	0.5%
Hypothyroidism	3.7%	10.3%	8.5%	1.8%	7.7%	4.9%
Incontinence	1.7%	2.0%	1.9%	1.0%	1.6%	1.3%
Inflammation/pain	39.0%	40.8%	40.3%	28.8%	29.0%	28.9%
Irritable bowel syndrome	1.1%	1.6%	1.4%	0.90%	1.0%	1.0%
Ischaemic heart disease: Angina	3.9%	1.7%	2.3%	4.1%	2.9%	3.5%
Ischaemic heart disease: Hypertension	23.0%	15.6%	17.5%	17.2%	16.0%	16.6%
Liver failure	0.55%	0.47%	0.5%	1.4%	1.5%	1.4%
Malignancies	1.6%	2.6%	2.4%	2.1%	2.6%	2.4%
Malnutrition	0.0%	0.0%	0.0%	0.012%	0.010%	0.0%
Migraine	3.6%	8.2%	7.0%	1.2%	3.3%	2.3%
Osteoporosis/Pagets	1.8%	2.5%	2.3%	1.8%	5.3%	3.6%
Pain	48.1%	52.1%	51.0%	35.3%	36.2%	35.8%
Pancreatic insufficiency	0.26%	0.51%	0.4%	0.23%	0.28%	0.3%
Parkinsons disease	2.3%	2.0%	2.1%	1.2%	1.1%	1.1%
Psoriasis	2.3%	1.5%	1.7%	1.5%	1.2%	1.3%
Psychotic illness	17.9%	16.3%	16.7%	4.1%	3.7%	3.9%
Pulmonary hypertension	0.0%	0.009%	0.0%	0.011%	0.024%	0.0%
Renal disease	0.24%	0.21%	0.2%	0.43%	0.45%	0.4%

Smoking cessation	6.6%	5.7%	5.9%	7.1%	5.4%	6.2%
Steroid-responsive disease	21.4%	26.5%	25.2%	14.6%	18.0%	16.4%
Transplant	0.29%	0.32%	0.3%	0.19%	0.129%	0.2%
Tuberculosis	0.024%	0.017%	0.0%	0.021%	0.017%	0.0%

Abbreviations: 10PCT, 10% Sample of the Australian PBS Claims Database; AGDS, Australian Genetics of Depression Study. Prevalence rates greater than 10% are highlighted in bold.

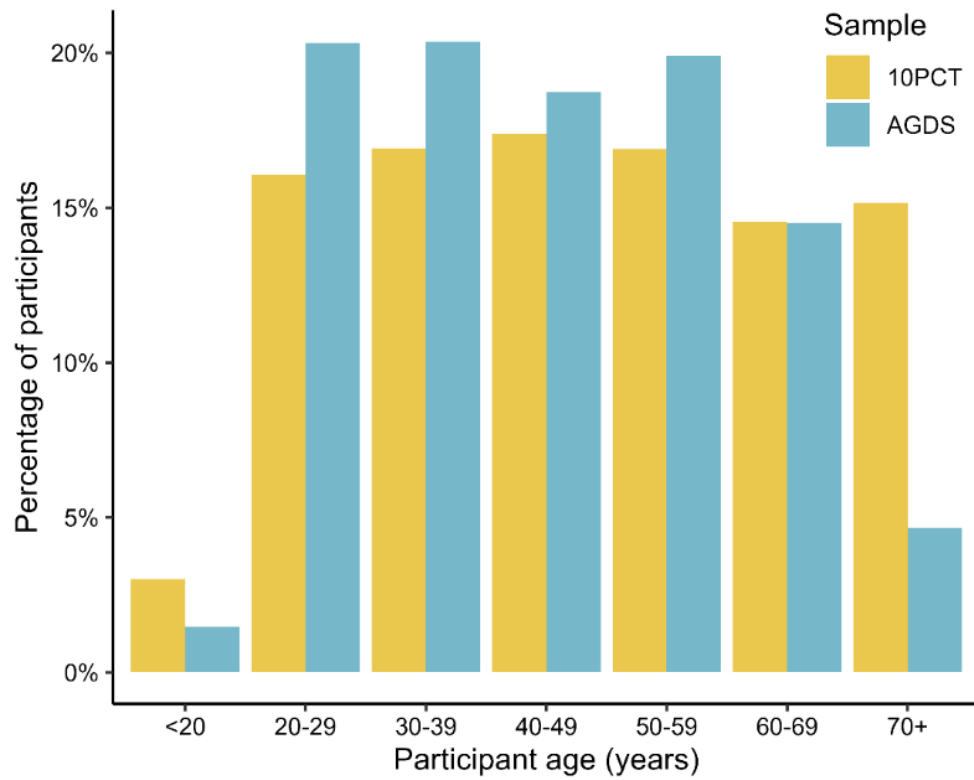


Figure S1. Distribution of participant age by sex in the Australian Genetics of Depression Study (AGDS) and 10% Sample of the Australian PBS Claims Database (10PCT) samples.

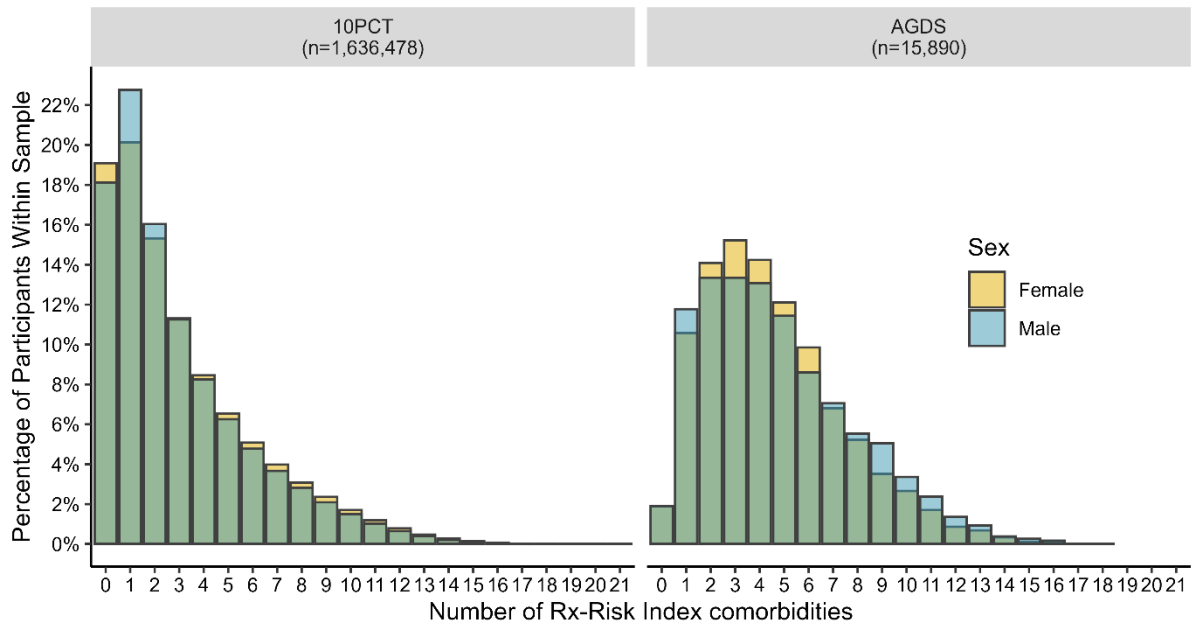


Figure S2. Distribution of the number of Rx-Risk Index comorbidities^a by sex in the Australian Genetics of Depression Study (AGDS) and 10% Sample of the Australian PBS Claims Database (10PCT) samples. Where the percentage of male (grey) and female (yellow) participants overlap the bar plot is green.

^aDefined as the number of different comorbidity categories mapped by prescriptions dispensed between 01/07/2013 and 31/12/2017, possible range 0-46.

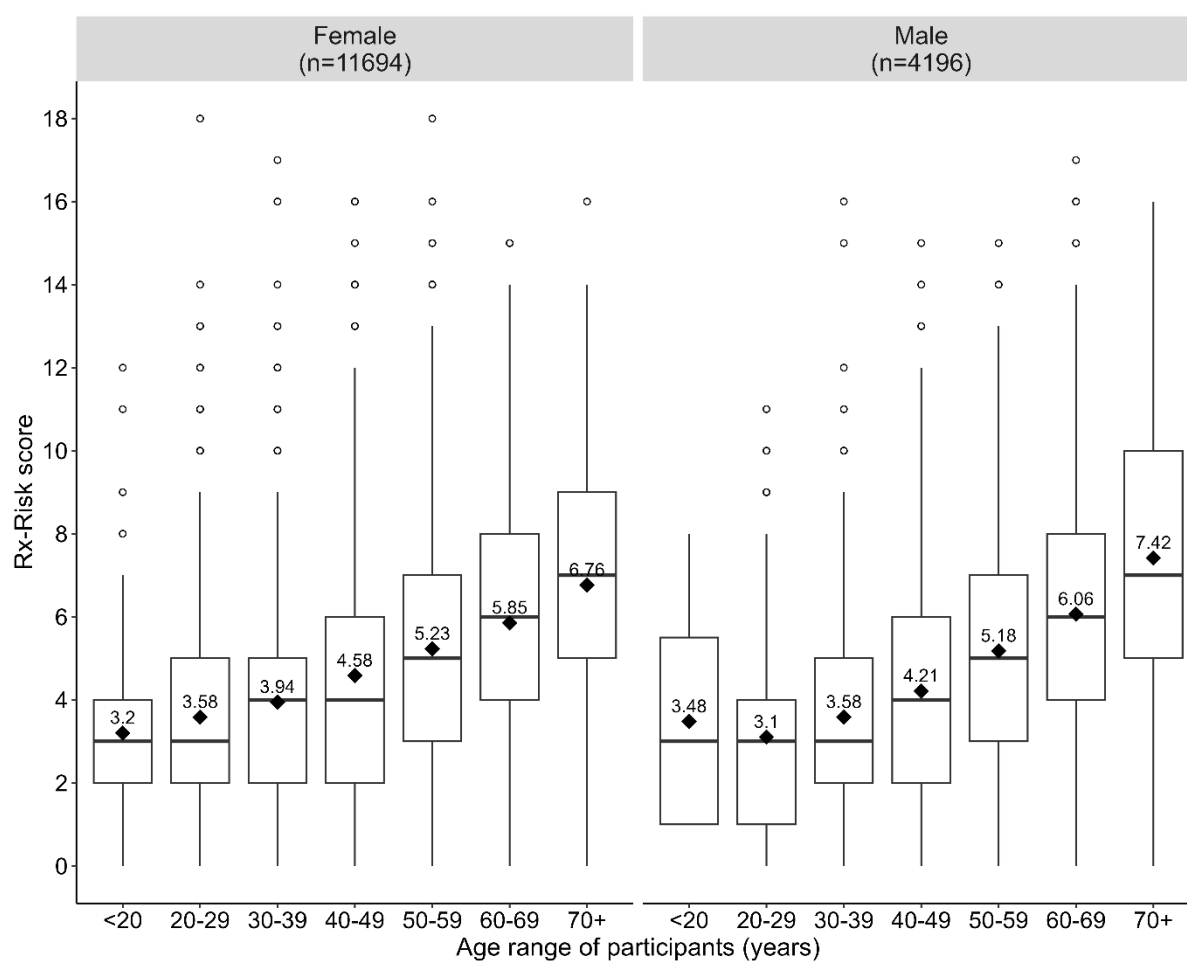


Figure S3. Box plots of Rx-Risk scores^a by sex and age range of Australian Genetics of Depression Study participants. Black diamonds and numbers represent the mean Rx-Risk score for each age range. The black bar represents the median.

^aDefined as the number of different comorbidity categories mapped by prescriptions dispensed between 01/07/2013 and 31/12/2017, possible range 0-46.

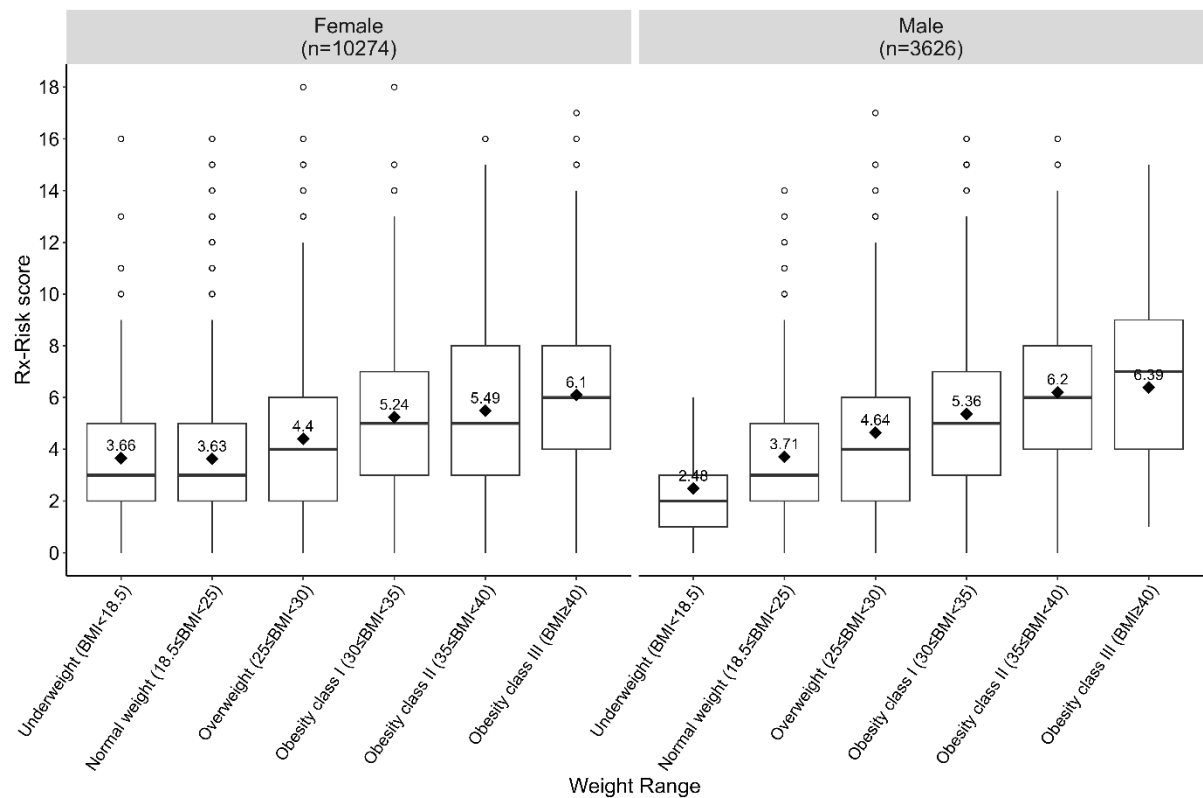


Figure S4. Box plots of Rx-Risk scores^a by sex and self-reported obesity level by Australian Genetics of Depression Study participants. Black diamonds and numbers represent the mean Rx-Risk score for each obesity class. The black bar represents the median.

^aDefined as the number of different comorbidity categories mapped by prescriptions dispensed between 01/07/2013 and 31/12/2017, possible range 0-46.

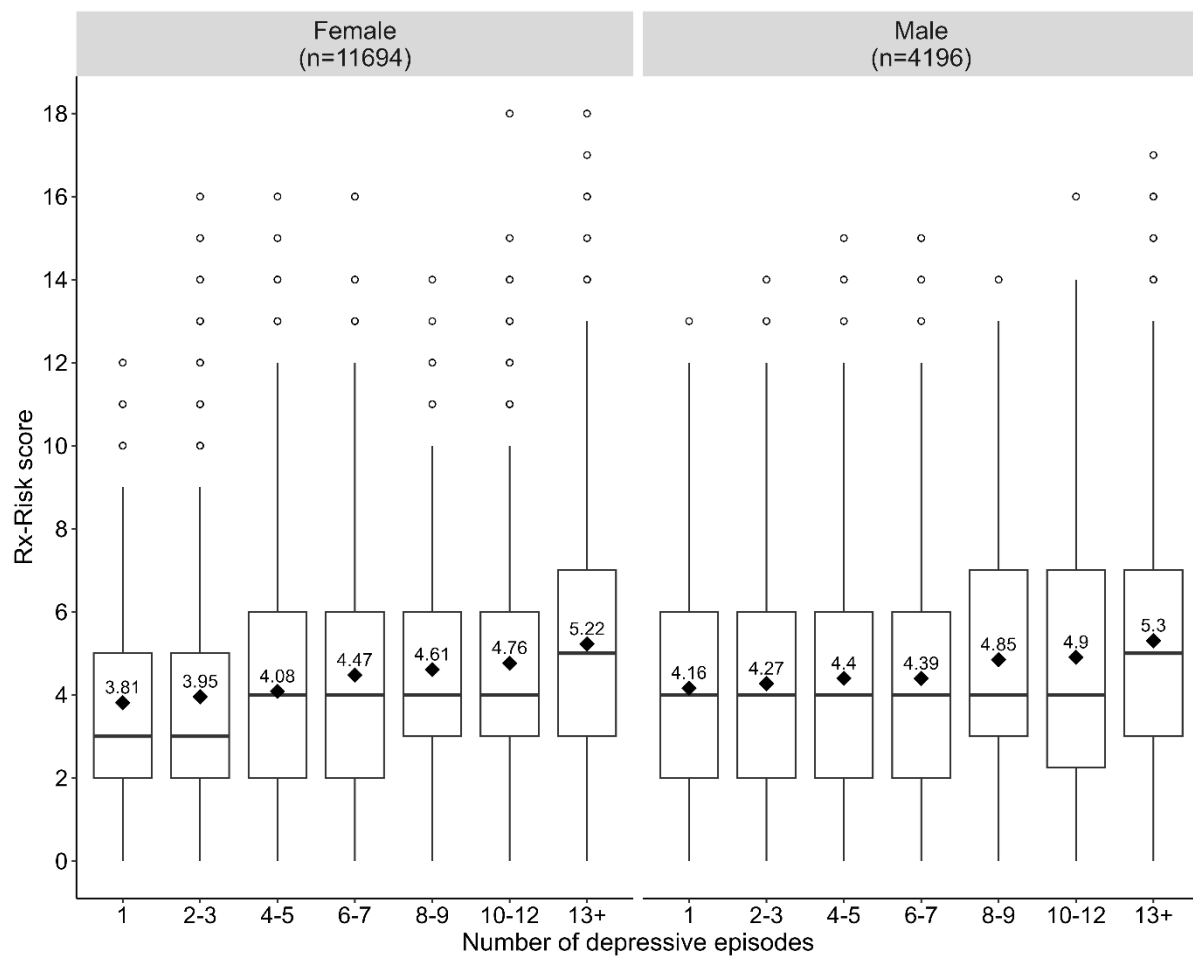


Figure S5. Box plots of Rx-Risk scores^a by sex and the self-reported number of depressive episodes experienced by Australian Genetics of Depression Study participants. Black diamonds and numbers represent the mean Rx-Risk score for each depressive episode range. The black bar represents the median.

^aDefined as the number of different comorbidity categories mapped by prescriptions dispensed between 01/07/2013 and 31/12/2017, possible range 0-46.

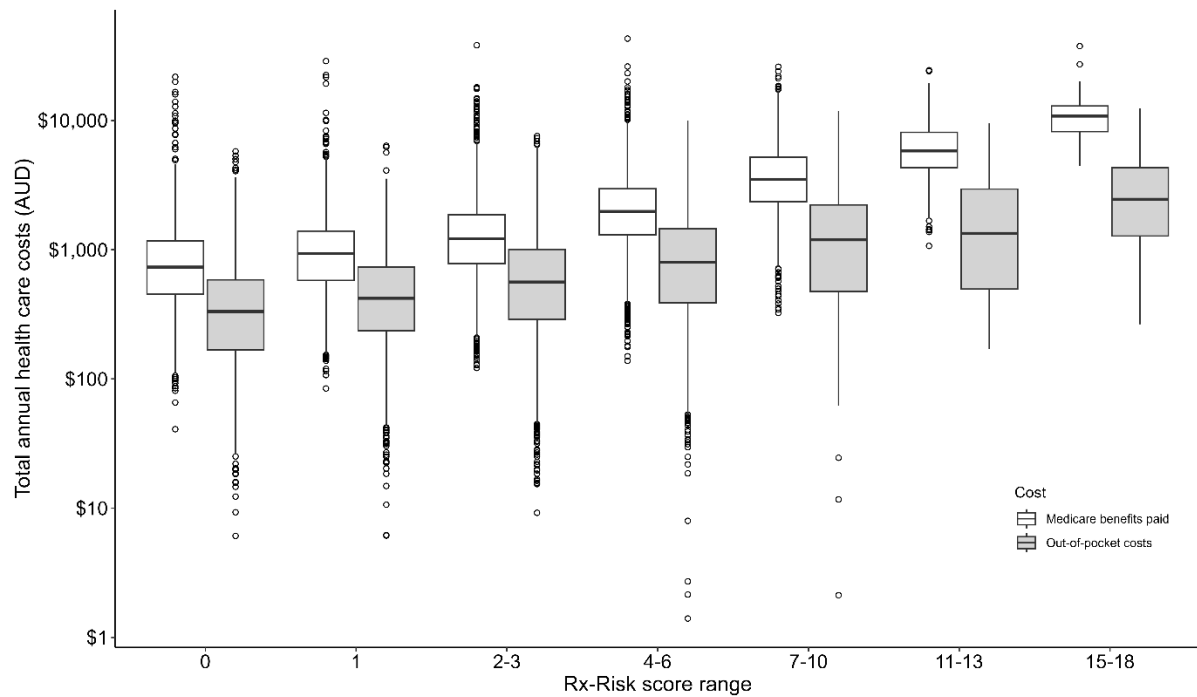


Figure S6. Box plots of annual out-of-pocket costs and Medicare benefits paid by Rx-Risk score^a of Australian Genetics of Depression Study participants. The black bar represents the median.

^aDefined as the number of different comorbidity categories after excluding depression mapped by prescriptions dispensed between 01/07/2013 and 31/12/2017, possible range 0-46.