

Population Characteristics by Model and High-Risk Threshold

Characteristic	Full sample	80% threshold			90% threshold			95% threshold			Model 1-3 intersection		
		Model 1: Full data access	Model 2: Primary care data	Model 3: Hospital data	Model 1: Full data access	Model 2: Primary care data	Model 3: Hospital data	Model 1: Full data access	Model 2: Primary care data	Model 3: Hospital data	80% threshold	90% threshold	95% threshold
SUMMARY STATISTICS													
n (Sample size)	263,328												
n (HR group size)		52,666	52,670	52,707	26,333	26,333	26,372	13,167	13,173	13,189	31,103	12,725	5,121
% (Model agreement)											59	48	39
n (Patients readmitted to hospital)	23,966	13,132	11,712	12,306	8,834	7,451	8,153	5,503	4,508	5,205	8,991	4,851	2,453
HR group probability cut-off		12.7	13.1	12.0	20.1	19.1	18.2	29.1	25.9	26.8			
Positive predictive value (PPV)		24.9	22.2	23.3	33.5	28.3	30.9	41.8	34.2	39.5	28.9	38.1	47.9
Sensitivity		54.8	48.9	51.3	36.9	31.1	34.0	23.0	18.8	21.7	37.5	20.2	10.2
C-statistic (overall)		0.77	0.74	0.75	0.77	0.74	0.75	0.77	0.74	0.75			
SPECIAL POPULATIONS													
Frail elderly ¹	11.2	42.3	39.1	34.4	54.1	52.5	42.1	61.6	62.9	49.1	50.1	63.5	72.5
Multi-morbid (2+ conditions)	23.8	55.9	62.8	61.6	61.7	69.3	62.7	65.0	73.4	68.6	69.6	72.1	78.3
Fair/poor self-reported health	13.3	39.5	43.2	27.5	48.1	58.0	32.5	53.7	65.9	37.6	42.7	54.4	64.1
Super-utilizers ²	3.6	13.4	8.0	14.3	20.6	9.6	22.3	30.1	11.1	31.9	13.1	18.7	25.3
Died in prediction year	1.1	4.4	3.9	4.2	6.9	5.6	6.4	9.9	7.6	9.3	5.7	8.8	12.7
SELECT RISK FACTORS													
Age (years)													
45-64	58.3	16.4	10.9	12.0	12.7	7.0	9.7	10.6	4.3	7.1	5.2	3.5	2.3
65-84	37.7	64.8	69.5	68.2	58.7	58.3	58.6	53.7	45.4	54.2	63.4	44.8	34.1
85+ years	4.0	18.7	19.6	19.7	28.6	34.7	31.7	35.7	50.3	38.7	31.4	51.7	63.5
Male	46.1	54.8	57.1	56.3	55.5	56.9	56.4	56.4	55.9	56.3	57.0	56.2	56.5
Annual income <\$30,000	29.0	53.2	53.1	50.3	54.7	55.9	52.6	55.1	56.5	53.7	55.5	56.3	56.7

Remoteness: outer/remote/ very remote	11.2	13.3	13.8	14.0	13.2	13.5	13.5	12.5	13.1	12.2	13.7	13.2	12.6
Most disadvantaged (IRSD)	20.8	31.9	33.6	32.9	33.3	35.7	34.3	34.0	36.7	35.7	34.9	36.9	38.4
Non-English speaker	9.5	9.8	9.7	8.9	9.8	10.1	9.5	9.8	10.7	9.6	9.5	10.0	10.6
Indigenous													
Not married	30.5	44.0	45.7	44.2	47.9	50.8	49.4	50.4	56.1	52.3	49.2	55.7	60.0
Socially isolated	6.3	6.9	7.4	6.4	7.0	7.7	6.6	7.2	7.8	6.4	6.7	6.9	7.3
# chronic conditions													
0	41.1	14.4	11.0	12.4	12.0	8.5	10.4	10.3	7.3	9.3	9.2	6.6	5.2
1	35.1	29.7	26.2	26.0	26.2	22.2	26.9	24.6	19.2	22.1	21.2	21.3	16.5
Heart disease	11.7	30.3	33.3	32.0	35.5	39.7	35.0	38.9	44.5	39.3	38.8	43.7	49.1
High blood pressure	35.5	55.9	61.2	59.9	57.3	63.0	59.5	58.1	64.3	61.5	63.1	62.5	64.8
Cancer (excluding skin cancers)	15.6	27.9	29.6	32.3	29.8	32.1	33.1	31.4	33.8	35.1	34.0	35.2	38.1
Stroke	3.1	9.9	10.5	10.1	12.7	13.9	11.8	14.7	16.7	14.6	13.4	16.4	20.3
Diabetes	8.9	20.6	23.7	21.5	23.2	27.5	22.2	24.1	29.4	24.0	25.5	26.7	28.6
Blood clot	4.6	10.5	10.8	11.0	12.0	12.6	11.8	13.4	14.0	13.6	12.9	14.2	16.4
Asthma	12.6	18.0	18.9	18.9	19.3	20.6	18.8	20.5	22.1	20.1	20.2	21.1	23.6
Parkinson's disease	0.6	1.8	1.9	1.8	2.3	2.6	2.0	2.8	3.0	2.5	2.3	2.9	3.5
# medications													
0	35.8	10.5	7.7	13.8	8.7	6.0	12.4	7.8	4.8	11.1	7.5	6.0	4.4
1-4	57.6	69.6	70.1	69.6	66.4	63.7	68.7	64.1	59.4	67.5	67.9	64.1	60.7
5+	5.1	18.1	20.5	15.3	23.1	28.5	17.4	26.3	34.1	19.9	22.9	28.0	33.2
Missing	1.5	1.7	1.8	1.4	1.8	1.8	1.5	1.8	1.7	1.5	1.7	1.9	1.7
Depression or Anxiety	16.3	19.5	19.6	16.0	20.2	20.7	16.3	20.4	21.3	16.2	17.7	18.3	19.1
Body mass index													
Underweight	1.2	2.3	2.4	1.8	2.9	3.1	2.1	3.3	3.9	2.3	2.5	3.2	3.8
Obese	20.7	23.7	23.9	22.2	22.5	22.9	20.6	21.3	20.8	19.9	22.4	19.3	17.8
Smoker	7.1	8.7	8.9	5.3	8.4	8.5	5.2	8.1	7.9	5.0	6.1	5.4	5.5

Unsafe alcohol intake	18.4	15.1	14.8	17.1	13.7	12.5	15.2	12.6	10.6	14.1	14.2	11.7	9.9
Self-reported health													
Excellent/very good	50.6	16.6	10.9	28.5	12.3	7.4	23.9	10.1	4.5	20.1	12.2	8.5	4.9
Good	32.6	37.3	38.3	39.2	32.6	27.1	38.1	29.3	21.8	36.4	38.4	29.5	23.2
Missing	3.5	6.6	7.7	4.8	6.9	7.5	5.5	7.0	7.8	5.9	6.8	7.5	7.8
Severe functional limitation	13.4	45.5	39.3	32.3	56.3	51.5	39.6	63.1	60.6	45.8	46.8	59.6	68.7
2+ falls in last 12 months	9.3	21.1	18.3	16.1	25.7	22.4	19.1	29.6	26.3	21.9	21.2	25.9	30.1
# hospitalisations in last 6 months													
0	84.8	62.3	74.1	59.4	50.6	70.9	46.6	37.3	68.3	33.7	62.0	52.5	42.2
1	11.7	24.3	18.0	26.3	28.8	19.5	31.0	32.6	20.5	34.4	24.9	28.8	32.5
# ED visits in last 6 months													
None	91.8	73.1	84.4	71.2	59.7	81.3	56.2	43.3	78.2	39.6	74.3	63.3	49.3
4+	0.3	1.4	0.8	1.4	2.6	1.1	2.7	4.7	1.5	4.9	1.4	2.2	3.9
Admitted to hospital via ED ³	4.2	17.4	10.9	18.7	28.0	14.3	30.8	41.3	17.9	44.5	18.4	28.9	43.1
1-2 days length of stay ⁴	20.4	37.7	28.3	41.4	40.5	28.9	44.2	41.0	28.9	41.5	38.2	39.7	38.3
# previous GP visits in last 6 months													
0	6.5	4.1	4.9	4.6	4.8	6.6	5.9	5.1	8.4	7.1	5.8	8.0	8.9
12+	16.6	52.7	39.1	39.9	62.6	44.8	47.5	69.4	47.9	53.5	49.7	56.6	61.3

¹ Age 65+ years with either severe functional limitations or at least two falls

² At least two hospital admissions in last 6 months

³ Hospitalisations in last 6 months

⁴ Last hospitalisation