**Supplementary 1: Logistic formula used to calculate the original Pra**


**Logistic formula for estimating the original Pra score**

$$Pra = \frac{e^{BX}}{1 + e^{BX}}$$

Where;

$e^1$=2.718 or e is the exponential

$BX$= -1.802 +0.327$X_1$ +0.340$X_2$ +0.552$X_3$ +0.770$X_4$ +0.390$X_5$ +0.545$X_6$

+0.318$X_7$ -0.738$X_8$ +0.255$X_9$ 0.327$X_{10}$ +0.559$X_{11}$ +0.257$X_{12}$ +0.319$X_{13}$


Predictor variables: 0=absent 1=present ($X_1$ very good general health, $X_2$ good general health, $X_3$ fair general health, $X_4$ poor general health, $X_5$ presence of coronary artery disease, $X_6$ any hospital admission in the past year, $X_7$ >6 physician visits in the past year, $X_8$ no informal caregiver available, $X_9$ age 75-79 years, $X_{10}$ age 80-84 years, $X_{11}$ age 85+ years, $X_{12}$ male sex, $X_{13}$ presence of diabetes)

**Supplementary 2: Logistic formula used to calculate the modified Pra**

**Logistic formula for estimating the modified Pra score**

$$P = \frac{e^I}{1 + e^I}$$

Where:

*P* = Probability of at least one emergency admission

*e* = Natural logarithm

*I* = $B_0$ + Σ, $B_y$ $X_y$, ($B_0$ = - 1.73, a constant from the logistic regression equation; $X_y$ = 0 or 1, according to the presence or absence of the risk factor; $B_y$ = the regression coefficient (log adjOR) of the risk factor detailed below).

| Predictor variable | $B_y$ (log adjOR) | Adjusted Odds Ratio (95% CI) |
|---|---|---|
| Age 75-79* | 0.441 | 1.55 (1.23, 1.96) |
| Age 80-84* | 0.664 | 1.94 (1.43, 2.64) |
| Age 85 and above* | 1.020 | 2.77 (1.71, 4.49) |
| Male gender | 0.185 | 1.20 (0.99, 1.46) |
| Hospitalised in past year | 0.168 | 1.18 (0.91, 1.54) |
| Six or more doctor visits | 0.554 | 1.74 (1.40, 2.1 5) |
| Included in diabetes registry | 0.330 | 1.39 (1.00, 1.94) |
| Included in coronary heart disease registry | 0.058 | 1.06, 0.81, 1.39) |
| RxRisk-V Score 1-2[#$] | 0.413 | 1.51 (1.17, 1.95) |
| RxRisk-V Score 3-4[#$] | 0.586 | 1.80 (1.35, 2.38) |
| RxRisk-V score >4[#$] | 1.032 | 2.81 (2.06, 3.83) |

*Dummy variable, reference category is age 70-74. #Dummy variable, reference category is RxRisk-V Score of 0. [$]The Chronic Disease score which is a precursor of the RxRisk-V was used in the original validation study.