**Appendix. High Resource User Population Risk Tool (HRUPoRT) algorithm**

­Application:

 The HRUPoRT algorithm is applied to population survey data (e.g., Canadian Community Health Survey).

Apply exclusion criteria:

 HRUPoRT estimates are restricted to individuals who are 18 years and older.

Logistic formula for calculating probability of 5-year transition to high resource user status:

 Apply the formula to all respondents in the population survey that meet the inclusion criteria.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| logit =**- 5.0742**+**0.3617**\*has chronic condition+**0**\*no chronic condition+**0.2425**\*male+**0**\*female+**0.1202**\*aged 30-39+**0.9213**\*aged 40-49+**1.6306**\*aged 50-59+**2.3558**\*aged 60-69+**2.8083**\*aged 70-79+**3.6188**\*aged 80++**0**\*aged <30+**0.5256**\* bottom income quintile+**0.4035**\*income quintile 2+**0.2000**\* income quintile 3+**0.2267**\* income quintile 4+**0.3841**\*missing income quintile+**0**\*highest income quintile-**0.2426**\*non-white ethnicity+**0.00983**\*missing ethnicity+**0**\*white ethnicity+**0.2926**\*former heavy smoker+**0.1296**\*former light smoker+**0.4579**\*current heavy smoker+**0.2569**\*current light smoker-**0.0661**\*missing smoking status+**0**\*non-smoker-**0.2661**\*food secure-**0.7921**\*missing food security+**0**\*food insecure+**0.4080**\*Fair general health+**1.0628**\*Poor general health+**0.1470**\*missing general health+**0**\*excellent/very/good general health+**0.1131**\*BMI 30.0-34.9 +**0.0753**\*BMI 25.0-29.9+**0.6384**\*BMI ≥40.0+**0.0174**\*BMI <18.5+**0.0959**\*BMI missing | +**0.3624**\*BMI 35.0-39.9+**0**\*BMI 18.5-24.9-**0.0105**\*heavy drinker-**0.0757**\*moderate drinker+**0.0420**\*non-drinker+**0.0619**\*missing alcohol status+**0**\*light drinker+**0.1766**\*Bottom physical activity quartile-**0.0110**\*Physical activity quartile 2+**0.0172**\*Physical activity quartile 3+**0.3490**\*missing physical activity+**0**\*Highest physical activity quartile-**0.2358**\*Immigrant <10 years -**0.0375**\*Immigrant ≥10 years+**0.1781**\*missing immigrant status+**0**\*Canadian-bornelogit = exp(logit)prob = elogit / ( 1 + elogit)  nHRU = prob \* survey weights

|  |  |
| --- | --- |
| **Variable** | **Definition** |
| prob | Risk of HRU transition (calculated by HRUPoRT algorithm) |
| nHRU | Expected number of new HRU transitions |

Calculate average HRU risk for the population: MeanRisk = Ʃprobi /nCalculate total number of new HRU transitions in the population:TotalHRU = ƩnHRU |