**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-born  elogit = 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 /n  Calculate total number of new HRU transitions in the population:  TotalHRU = ƩnHRU |