

Appendix 2: Covariables and data sources used in the Population Health Model (POHEM) for cardiovascular disease (CVD)

| CVD risk factors<br>(# categories) | Data sources                            | POHEM covariates (# categories) |                         |         |            |               |               |            |  |              |                   |                    |                               |                      |
|------------------------------------|---|---------------------------------|-------------------------|---------|------------|---------------|---------------|------------|--|--------------|-------------------|--------------------|-------------------------------|----------------------|
|                                    |   | Demographics                    |                         |         |            |               | SES           |            | Chronic disease profile and Biophysical measures |              |                   |                    | Health behaviours             |                      |
|                                    |   | Initial data source             | 5 years age groups (16) | Sex (2) | Region (5) | Ethnicity (2) | Immigrant (2) | Income (4) | Education (4)                                    | Diabetes (2) | Heart disease (2) | Blood pressure (5) | Total cholesterol and HDL (5) | BMI/previous BMI (4) |
| Blood pressure*(5)                 | Imputed using CHHS (1990)               | √                               | √                       |         |            |               |               |            |  | √            |                   | √                  | √                             |                      |
| Total cholesterol and HDL* (5)     | Imputed using CHHS (1990)               | √                               | √                       |         |            |               |               |            |  | √            | √                 |                    | √                             |                      |
| Obesity (4)                        | NPHS (1996/97 - 2004/05)                | √                               | √                       | √       |            |               | √             | √          |  |              |                   |                    | √†                            |                      |
| Diabetes (2)                       | NPHS (1996-97)                          | √†                              | √‡                      |         | √          | √             |               | √          |  | √            | √                 |                    | √†                            | √                    |
| Smoking (3)                        | CHS (1979), NPHS (1994) and CCHS (2008) | √                               | √‡                      | √       |            |               |               |            |  |              |                   |                    |                               |                      |

**Notes:** CCHS= Canadian Community Health Survey, CHHS= Canadian Heart Health Study, CHS= Canadian Health Study, HDL= high-density lipoprotein, HS= health status, HUI= health utilities index, NPHS=Nation Population Health Survey, SES= socioeconomic status.  
 \*Co-evolving risk factors.  
 †Characteristics that are strongly predictive of the outcome (CVD risk factor).  
 ‡Models were constructed separately for males and females.