Appendix 1: Data sources

Statistics Canada Census projections from CANSIM — Information related to the population structure over time was obtained from CANSIM, a tool developed by the Demography Division at Statistics Canada. This tool is used to project future numbers of new births and immigrants. In addition, death rate (number of deaths) was projected by age, sex and year of birth using Vital Statistics data available at Statistics Canada. In POHEM: cardiovascular disease, CANSIM and Vital Statistics data were used to initialize and update the population structure over time.

Canadian Community Health Survey — The Canadian Community Health Survey is a cross-sectional survey started in 2000/01 with a sample size of 131,535. It was initially repeated every two years but as of 2009, data are collected on an ongoing basis to provide annual estimates. The Canadian Community Health Survey was designed to be representative of the Canadian household population aged 12 years and older and elicited a wide range of self-reported information related to health status, health care utilization and health determinants. The Canadian Community Health Survey and sampling strategies have been described in detail elsewhere.[1] The Canadian Community Health Survey 2000/01 survey was used to define the initial subject population of the POHEM: cardiovascular disease model that was projected forward in time by the simulation.

Canadian Heart Health Survey — The Canadian Heart Health Survey are cross-sectional surveys conducted separately in each of the ten provinces between 1986 and 1992. These surveys were designed to gather information on risk factors associated with cardiovascular disease for individuals aged 18-74 years and had a combined sample size of 23,129. Unlike the Canadian Heart Health Survey, the Canadian Heart Health Survey also collected physical measures such as blood pressure and cholesterol. The Canadian Heart Health Survey and sampling strategies have been described in detail elsewhere.[2] In POHEM: cardiovascular disease the Canadian Heart Health Survey data set was used to initialize blood pressure and cholesterol variables and to impute values of blood pressure and cholesterol into the Canadian Heart Health Survey to allow the risk transitions for these risk factors to be updated yearly.

National Population Health Survey — The National Population Health Survey is a longitudinal survey started in 1994/95 with a sample of 17,276 individuals aged 12 years and older. The survey is conducted every two years and currently has 18 years of follow-up. Like the CCHS, the NPHS elicited a wide range of self-reported information related to health status, health care utilization and health determinants. The National Population Health Survey and sampling strategies have been described in detail elsewhere.[3;4] In POHEM: cardiovascular disease, the National Population Health Survey data set was used to model risk factors related to health behaviour and diabetes prevalence.

Canadian Health Measures Survey — The Canadian Health Measures Survey is a cross-sectional survey started in 2007. In cycle 1 of the Canadian Health Measures Survey, data were collected at 15 sites across Canada from March 2007 through February 2009.[5] Cycle 2 data were collected at 18 sites between August 2009 and November 2011. The survey covered the population aged 6 to 79 years living in private households. It was designed to provide sex-

specific, statistically reliable, national estimates of conditions for which prevalence was at least 10% for five age-groups: 6 to 11, 12 to 19, 20 to 39, 40 to 59, and 60 to 79 years.[5] The Canadian Health Measures Survey does not include residents of Indian Reserves or Crown lands, institutions and certain remote regions, or full-time members of the regular Canadian Forces. Of the households selected for inclusion in either the CHMS cycle 1 or 2, the overall response rate was 53.5%—meaning that in 53.5% of selected households, the sex and date of birth of all household members were provided by a household resident. In each responding household, one or two members were selected to participate in the survey; for the age group 20 to 79 years, 89.3% of selected household members completed the household questionnaire, and 83.3% of the responding household members participated in the subsequent examination component of the survey. The household questionnaire collected information about a wide range of self-reported information related to health status, chronic disease status and health behaviours. The examination portion of the survey collected physical measures of health including blood and urine samples, as well as measures of blood pressure, lipid levels, physical fitness and body mass index.[5]

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