At-a-glance

The 2017 Canadian Chronic Disease Indicators

*CCDI Steering Committee**

Following the first major review of the Chronic Disease and Injury Indicator Framework (CDIIF) since its inception in 2012, the 2017 edition is being released in this issue of *Health Promotion and Chronic Disease Prevention in Canada* (HPCDP) under its new name: Canadian Chronic Disease Indicators (CCDI; see Table 1).

Background

The Public Health Agency of Canada (PHAC) developed the Chronic Disease Indicator Framework in 2012 in order to improve access to current surveillance data by providing up-to-date, consistent, reliable and ongoing information on chronic disease and associated risk and protective factors. In 2014, the Framework was expanded to include injury, and was renamed Chronic Disease and Injury Indicator Framework (CDIIF). The CDIIF includes indicators based on six main domains: social and environmental determinants, maternal and child health risk and protective factors (RPFs), behaviour RPFs, risk conditions, disease prevention practices, and health outcomes/status. Its target audience is policy makers and public health professionals but it has broad applicability as a reference tool. The CDIIF is updated annually and made publicly available online through an interactive data tool and a downloadable summary document called "Quick Stats," and is published in the HPCDP Journal.

In early 2016, a steering committee was established to provide direction and make decisions related to the ongoing refinement, improvement and dissemination of the CDIIF and its related products. The steering committee is comprised of PHAC members with knowledge and expertise in domains covering the following topic areas: chronic disease (including mental illness); chronic disease RPFs; family violence and elder abuse; and maternal, child and youth health. While the initial set of indicators was determined by a core group and after broad internal and external stakeholder consultations, the committee undertook a comprehensive review of these indicators to identify gaps and areas for improvement.

Main changes to the CDIIF

As a result of their review, the steering committee took the following actions:

(1) *Refocussed the scope of the CDIIF to include only chronic disease and to exclude injury*, to reflect its original purpose and account for the inherent differences between chronic disease and injury in terms of risk factors, causes and outcomes.

(2) *Renamed the CDIIF to Canadian Chronic Disease Indicators (CCDI)* to reflect the change in scope and simplify the title.

(3) *Revised the existing content to address important gaps and emerging issues.* Nineteen new measures were added, 21 existing measures were deleted or replaced and many indicators were modified or merged.

- Additions included indicators that put more emphasis on social determinants and maternal and child health factors influencing the development of chronic diseases (such as community belonging, childhood poverty, weight gain, diabetes and hypertension during pregnancy, and preterm birth). Other indicators were added to include cannabis use (due to the upcoming legislative change in Canada), dementia, including Alzheimer's disease, exposure to second-hand smoke and the *Canadian 24-Hour Movement Guidelines for Children and Youth*.

- Changes were made to indicators related to multimorbidity and morbidity, contact with a health care professional and healthy eating and smoking.

- Deletions included redundant indicators, and all indicators related to intentional and unintentional injury, with the exception of suicide.

Future work

An in-depth review of indicators in the CCDI is anticipated to take place every three years. Data gaps identified for future consideration include resilience, social support, discrimination and stigma, built environment, prenatal smoking and alcohol consumption and developmental disorders.

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TABLE 1

CANADIAN CHRONIC DISEASE INDICATORS
QUICK STATS, 2017 EDITION

INDICATOR GROUP	INDICATOR MEASURE(S)	LATEST DATA[a]	DATA SOURCE (YEAR)
SOCIAL AND ENVIRONMENTAL DETERMINANTS			
Education	% of population that reports having less than a high school education, population aged 20+ years	12.1%	CCHS (2015)
Income	% of population living below low-income cut-offs, after tax, total population	9.2%	CIS (2015)
Childhood poverty	% of children living below low-income cut-offs, after tax, population aged < 18 years[b] (New)	8.6%	CIS (2015)
Employment	Average annual unemployment rate (% of labour force that was unemployed during reference period), population aged 15+ years	7.1%	LFS (2016)
Community belonging	% of population that reports a "very strong" or "somewhat strong" sense of belonging to their local community, population aged 12+ years (New)	67.9%	CCHS (2015)
MATERNAL AND CHILD HEALTH RISK AND PROTECTIVE FACTORS			
Family violence	% of population that reports experiencing any of three types of child abuse (physical abuse, sexual abuse or exposure to intimate partner violence) before the age of 15, population aged 15+ years	23.6%	GSS (2014)
Diabetes during pregnancy	Rate of pregnant women with diagnosed diabetes (pre-existing and gestational diabetes) (New)	81.7 per 1000 total births[c]	DAD (2015–2016)
Hypertension during pregnancy	Rate of pregnant women with diagnosed hypertension (pre-existing and gestational hypertension) (New)	68.1 per 1000 total births[c]	DAD (2015–2016)
Maternal weight during pregnancy	% of women who report gestational weight gain above recommended Health Canada guidelines (New)	48.9%	CCHS (2015)
Congenital heart defects	Rate of infants with congenital heart defects (New)	108.2 per 10 000 total births[c]	CCASS (2014)[d]
Preterm birth	% of live births with a gestational age at birth of less than 37 completed weeks (New)	8.0 per 100 live births	DAD (2015)
Breastfeeding	% of women who report exclusive breastfeeding of their child for at least the first 6 months of life, women aged 15+ years	31.7%	CCHS (2015)
Exposure to second-hand smoke	% of households with children aged < 15 years that report regular child exposure to environmental tobacco smoke at home	2.8%	CTADS (2015)
BEHAVIOURAL RISK AND PROTECTIVE FACTORS			
24-hour movement	% of children and youth who meet the 24-Hour Movement Guidelines, population aged 5 to 17 years (New)	9.5%	CHMS (2014–2015)
Physical activity	% of children and youth who meet physical activity recommendations by accumulating at least 60 minutes of moderate-to-vigorous physical activity per day (measured data), population aged 5 to 17 years	37.6%[e]	CHMS (2014–2015)
	% of adults who meet physical activity guidelines by accumulating at least 150 minutes of moderate-to-vigorous physical activity each week, in bouts of 10 minutes or more (measured data), population aged 18+ years	17.5%	CHMS (2014–2015)
Sedentary behaviour	% children and youth who report meeting sedentary behaviour recommendations by spending 2 hours or less per day watching television or using computers during leisure time, population aged 5 to 17 years	28.5%[e]	CHMS (2014–2015)
Sleep	% of population that reports obtaining the recommended amount of daily sleep, population aged 5+ years	65.5%	CHMS (2014–2015)
Nutrition	% of population that reports consuming fruit and vegetables at least 5 times/day, population aged 12+ years	31.5%[e]	CCHS (2015)
	% of children and youth who report drinking sugar-sweetened beverages daily, population aged 5 to 17 years	16.0%	CHMS (2014–2015)
Chronic stress	% of population that reports life to be "quite a bit" or "extremely" stressful most days in the last 12 months, population aged 12+ years	21.4%	CCHS (2015)
Alcohol use	% of population that reports exceeding low risk alcohol drinking guidelines for chronic drinking, population aged 15+ years	15.2%	CTADS (2015)
Smoking	% of population that reports being current smokers (daily or occasional), population aged 15+ years	13.0%	CTADS (2015)
Drug use	% of population that reported using cannabis at least once a week in the last 3 months, population aged 15+ years (New)	5.2%	CTADS (2015)
Main chronic disease risk factors prevalence	% of population that reports having at least one of four main chronic disease risk factors (tobacco smoking, physical inactivity, unhealthy eating and harmful use of alcohol), population aged 20+ years (New)	84.7%	CCHS (2015)
RISK CONDITIONS			
Obesity	% of children and youth that are obese (measured data), population aged 5 to 17 years	13.1%	CHMS (2014–2015)
	% of adults that are obese (measured data), population aged 18+ years	28.1%	CHMS (2014–2015)
Elevated blood glucose	% of population with elevated[f] blood glucose (measured data), population aged 18+ years	4.1%	CHMS (2014–2015)
Elevated blood cholesterol	% of population with elevated[f] blood cholesterol [TC:HDL-C ratio] (measured data), population aged 18+ years	18.7%	CHMS (2014–2015)
Hypertension	% of population with diagnosed hypertension, population aged 20+ years	25.1%	CCDSS (2013/14)[g]

INDICATOR GROUP	INDICATOR MEASURE(S)	LATEST DATA*	DATA SOURCE (YEAR)
DISEASE PREVENTION PRACTICES			
Contact with health care professional	% of population that reports having a regular healthcare provider, population aged 12+ years (New)	81.8%	CCHS (2015)
	% of population that reported consulting a dentist, dental hygienist or orthodontist at least once in the past 12 months, population aged 12+ years	68.5%	CCHS (2015)
Disease screening	% of women who report having had a mammogram at least once in the past 5 years, population aged 50 to 74 years	83.5%	CCHS (2012)
	% of women who report having had at least one Pap smear test in the past 3 years, population aged 25 to 69 years	79.7%	CCHS (2012)
	% of population that reports having had at least one fecal occult blood test, colonoscopy and/or sigmoidoscopy in the recommended time period, population aged 50 to 74 years	51.1%	CCHS (2012)
Vaccination (influenza)	% of population living with a chronic health condition that reported having a seasonal flu shot in the past 12 months, population aged 12+ years	50.0%	CCHS (2015)
HEALTH OUTCOMES/STATUS			
General health	% of population that reports their health is "very good" or "excellent," population aged 12+ years	62.0%	CCHS (2015)
	% of population that reports their mental health is "very good" or "excellent," population aged 12+ years	72.5%	CCHS (2015)
	Life expectancy at birth	83 years	CCDSS (2010/11–2012/13)
	Life expectancy at age 65	21.6 years	CCDSS (2010/11–2012/13)
	Health-adjusted life expectancy at birth	71.9 years	CCDSS (2010/11–2012/13)
	Health-adjusted life expectancy at age 65	16.6 years	CCDSS (2010/11–2012/13)
Morbidity—prevalence	% of population with diagnosed diabetes, population aged 1+ years	8.1%	CCDSS (2013/14)
	% of population that reports having diagnosed cardiovascular diseases (heart disease or stroke), population aged 20+ years	5.8%	CCHS (2015)
	% of population with diagnosed stroke, population aged 20+ years	2.7%	CCDSS (2013/14)
	% of population with diagnosed heart failure, population aged 40+ years	3.7%	CCDSS (2013/14)
	% of population with diagnosed ischemic heart disease, population aged 20+ years	8.5%	CCDSS (2013/14)
	% of population with diagnosed asthma, population aged 1+ years	11.1%	CCDSS (2013/14)
	% of population with diagnosed chronic obstructive pulmonary disease, population aged 35+ years	9.9%	CCDSS (2013/14)
	% of population that reports ever being diagnosed with cancer, population aged 12+ years (New)	7.1%	CCHS (2015)
	% of population that reports ever having symptoms consistent with at least 1 of 6 mental or substance use disorders,[h] population aged 15+ years	33.3%	CCHS (2012– MH)
	% of population that reports having diagnosed mood and/or anxiety disorders, population aged 12+ years	12.2%	CCHS (2015)
	% of population with diagnosed osteoarthritis, population aged 20+ years (New)	13.0%	CCDSS (2013/14)
	% of population with diagnosed osteoporosis, population aged 40+ years	11.7%	CCDSS (2013/14)
	% of population with diagnosed dementia, including Alzheimer's disease, population aged 65+ years (New)	7.1%	CCDSS (2013/14)
	% of population that reports having been diagnosed with at least 1 of the 5 major chronic diseases,[i] population aged 20+ years (New)	29.2%	CCHS (2015)
Multimorbidity	% of population that reports having been diagnosed with at least 2 of the 5 major chronic diseases,[i] population aged 20+ years (New)	6.9%	CCHS (2015)
	% of population that reports having been diagnosed with at least 2 of the 10 common chronic diseases,[j] population aged 20+ years	15.8%	CCHS (2015)
Morbidity—incidence	Rate of newly diagnosed diabetes cases, population aged 1+ years	593.1 per 100 000	CCDSS (2013/14)
	Rate of newly diagnosed asthma cases, population aged 1+ years	487.5 per 100 000	CCDSS (2013/14)
	Rate of newly diagnosed chronic obstructive pulmonary disease cases, population aged 35+ years	830.9 per 100 000	CCDSS (2013/14)
	Rate of newly diagnosed heart failure cases, population aged 40+ years	534.7 per 100 000	CCDSS (2013/14)
	Rate of newly diagnosed ischemic heart disease cases, population aged 20+ years	604.1 per 100 000	CCDSS (2013/14)
	Rate of newly diagnosed acute myocardial infarction cases, population aged 20+ years	224.4 per 100 000	CCDSS (2013/14)
	Rate of newly diagnosed osteoarthritis cases, population aged 20+ years (New)	886.8 per 100 000	CCDSS (2013/14)
	Rate of newly diagnosed hip fracture cases, population aged 40+ years	158.4 per 100 000	CCDSS (2013/14)
	Rate of newly diagnosed dementia cases, including Alzheimer's disease, population aged 65+ years (New)	1426.5 per 100 000	CCDSS (2013/14)
	Rate of all newly diagnosed cancer cases, total population	563.6 per 100 000[k]	CCR/NCIRS (2017)
Disability	% of population that reports being limited in their activities "sometimes" or "often" due to disease/illness, population aged 12+ years	32.7%	CCHS (2014)

INDICATOR GROUP	INDICATOR MEASURE(S)	LATEST DATA[a]	DATA SOURCE (YEAR)
Mortality	Death rate due to a major chronic disease (diabetes, cancer, cardiovascular diseases, chronic respiratory diseases), total population	473.0 per 100 000	CVSD (2013)
	Death rate due to cardiovascular diseases, total population	194.7 per 100 000	CVSD (2013)
	Death rate due to cancer, total population	213.7 per 100 000	CVSD (2013)
	Death rate due to chronic respiratory diseases, total population	44.7 per 100 000	CVSD (2013)
	Death rate due to diabetes, total population	20.0 per 100 000	CVSD (2013)
	Death rate due to suicide, total population	11.5 per 100 000	CVSD (2013)
	Death rate due to dementia, including Alzheimer's disease, total population (New)	61.8 per 100 000	CVSD (2013)
	Death rate within one year of hip fracture, population aged 40+ years that had a hip fracture (New)	230.4 per 1000	CCDSS (2012/13)
Premature mortality	Probability of dying between ages 30 and 69 years from one of the major chronic diseases (cardiovascular diseases, cancer, chronic respiratory diseases, diabetes)	10.4%	CVSD (2013)
	Probability of dying between ages 30 and 69 years from cardiovascular disease	3.0%	CVSD (2013)
	Probability of dying between ages 30 and 69 years from cancer	6.3%	CVSD (2013)
	Probability of dying between ages 30 and 69 years from chronic respiratory disease	0.6%	CVSD (2013)
	Probability of dying between ages 30 and 69 years from diabetes	0.4%	CVSD (2013)

Abbreviations: CCASS, Canadian Congenital Anomalies Surveillance System; CCDSS, Canadian Chronic Disease Surveillance System; CCHS, Canadian Community Health Survey; CCR, Canadian Cancer Registry; CHMS, Canadian Health Measures Survey; CIS, Canadian Income Survey; CTADS, Canadian Tobacco, Alcohol and Drugs Survey; CVSD, Canadian Vital Statistics–Death Database; DAD, Discharge Abstract Database; GSS, General Social Survey; HDL-C, high-density lipoprotein cholesterol; LFS, Labour Force Survey; MH, Mental Health; NCIRS, National Cancer Incidence Reporting System; TC, total cholesterol.

Note: Indicators/measures identified as data gaps: Prenatal smoking, prenatal alcohol drinking, developmental disorders (including autism spectrum disorder [ASD] and fetal alcohol spectrum disorder [FASD]), social support, resilience, discrimination and stigma and built environment.

[a] All rates in this table are crude and based on actual data, unless otherwise stated.

[b] Includes all children aged 0–17 years living in economic families and not living in economic families.

[c] Total births include live births and stillbirths.

[d] One year follow-up.

[e] This indicator has changed from previous editions; estimates are not directly comparable.

[f] This indicator captures people found to have elevated levels of the risk condition measured in a single fasting sample regardless of diagnosis status (excluding pregnant women).

[g] CHMS data exist for this indicator to present pan-Canadian rates of blood pressure status by diagnosis.

[h] The six mental or substance use disorders include major depressive episode, bipolar disorder, generalized anxiety disorder and abuse of or dependence on alcohol, cannabis or other drugs.

[i] The five main groups of chronic diseases include: cancer, diabetes, cardiovascular diseases (heart disease and/or stroke), chronic respiratory diseases (asthma and/or chronic obstructive pulmonary disease) and mood and anxiety disorders.

[j] The 10 chronic diseases included are heart disease, stroke, cancer, asthma, chronic obstructive pulmonary disease, diabetes, arthritis, Alzheimer's disease or other dementia, mood disorders and anxiety disorders.

[k] These numbers are projected estimates for 2017 that are based on the August 2015 CCR tabulation master file (1992–2013) and the NCIRS (1969–1991).

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For questions or comments, please contact us at: infobase@phac-aspc.gc.ca

Visit the Canadian Chronic Disease Indicators "online tool" to view additional data breakdowns (e.g. by sex, trends over time, etc.): http://infobase.phac-aspc.gc.ca/. Please note that the 2017 online tool will be released in September 2017.