

At-a-glance

The Physical Activity, Sedentary Behaviour and Sleep (PASS) Indicator Framework

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The Physical Activity, Sedentary Behaviour and Sleep (PASS) Indicator Framework is being released in this issue of *Health Promotion and Chronic Disease Prevention in Canada* (HPCDP).

Background

Physical activity surveillance in Canada has traditionally focussed on measuring and reporting on the most active end of the activity spectrum. Emerging research suggests that in addition to insufficient moderate-to-vigorous physical activity (MVPA), sedentary behaviour and inadequate sleep are also important risk factors for chronic disease. In order to create effective public health policy and program initiatives to target all levels of activity (MVPA, light physical activity, sedentary behaviour and sleep), the demand for reliable, nationally representative data and information on the patterns of all of these behaviours among Canadians has increased. As a result, the need for a broader, modernized approach to national physical activity surveillance, with the inclusion of sedentary behaviour, sleep and the proximal and distal factors that impact all of these behaviours, was identified as a priority for the Public Health Agency of Canada (PHAC) in 2014.

An important first step in modernizing PHAC's surveillance approach was the development of an indicator framework to identify and systematically organize key indicators for routine reporting. The PASS Indicator Framework was informed by the research literature and developed through

an iterative, consultative process with scientific experts and policy and program makers from across the country at various levels of government. In its final form, containing 55 unique indicators, the PASS Indicator Framework provides comprehensive, high quality information on the outcomes and risk and protective factors related to physical activity, sedentary behaviour and sleep for Canadian adults (aged 18+; see Table 1), children (aged 5–11 years; see Table 2) and youth (aged 12–17; see Table 2). The PASS Indicator Framework is centred around a conceptual model that incorporates a socioecological approach—addressing outcomes and factors at the individual and broader social and built-environment levels. It provides surveillance indicators and measures as well as calculated estimates using traditional and nontraditional data sources. Its target audience is key stakeholders such as provincial, territorial and regional public health officials as well as the federal Health Portfolio and other relevant government departments, organizations, ministries and public health units.

The PASS Indicators will be made publicly available on the PHAC Public Health Infobase website (infobase.phac-aspc.gc.ca) through an interactive data tool alongside the Canadian Chronic Disease Indicators and the Positive Mental Health Surveillance Indicator Framework. The interactive data tool can be used to monitor trends over time and offers the ability to break data down by key variables; it will support PHAC and stakeholders in targeting and monitoring intervention strategies. This

issue of the HPCDP Journal contains the first Quick Stats documents containing the PASS Indicators.

Future work

The PASS Indicators are evergreen. Although measures and data exist to report on many indicators identified within the Indicator Framework, there are still gaps, especially at the environmental levels. Active enhancement and data development using surveys and nontraditional data sources, including administrative databases, is currently underway, as is targeted research and surveillance to address these data gaps.

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TABLE 1

PHYSICAL ACTIVITY, SEDENTARY BEHAVIOUR AND SLEEP (PASS) INDICATORS QUICK STATS, ADULTS (AGED 18+), CANADA, 2017 EDITION

INDICATOR GROUP	INDICATOR(S)	MEASURE(S)	LATEST DATA	DATA SOURCE (YEAR)	
PHYSICAL ACTIVITY					
Individual	Physical activity guideline adherence	% of adults aged 18 to 79 years 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	17.5%	CHMS (2014–2015)	
	Total moderate-to-vigorous physical activity amount	Average number of minutes per day adults aged 18 to 79 years are engaged in moderate-to-vigorous physical activity	24.1 minutes	CHMS (2014–2015)	
	Occupational physical activity and active chores amount	Average number of hours per week adults report doing physical activities while at work, in or around their home or while volunteering	2.9 hours	CCHS (2015)	
	Leisure time physical activity amount	Average number of hours per week adults report doing sports, fitness or recreational physical activities, organized or non-organized, that lasted a minimum of 10 continuous minutes	1.8 hours	CCHS (2015)	
	Sports participation amount	% of population aged 15 or older who reported regularly participating in any sports during the past 12 months	26.0%	GSS (2010)	
	Active travel amount	% of adults who report walking or cycling to work or school	21.8%	CCHS (2014)	
		Average number of hours per week adults report using active ways like walking or cycling to get to places	1.7 hours	CCHS (2015)	
	Intention level	% of adults who, when thinking about the next six months, intend to be physically active	73.9%	PAM (2014–2015)	
	Enjoyment level	% of adults who report that physical activity is generally pleasant	87.0%	PAM (2014–2015)	
	Confidence level	% of adults who report they are confident that they could regularly do a total of 30 minutes or more of moderate physical activity three or four times a week	67.0%	PAM (2014–2015)	
	Physical literacy	In development			
	Physical health status	% of adults who report their health is “very good” or “excellent”	61.1%	CCHS (2015)	
	Mental health status	% of adults who report their mental health is “very good” or “excellent”	72.1%	CCHS (2015)	
Family/social environment	Level of peer and spousal support	In development			
	Community norms	In development			
	Presence and type of barriers for physical activity	In development			
Built/society environment	Community walkability	In development			
	Presence of parks and recreation facilities	% of adults who “somewhat agree” or “strongly agree” that their neighbourhood has several free or low cost recreation facilities, such as parks, walking trails, bike paths, recreation centres, playgrounds, public swimming pools, etc.	78.1%	CCHS RR (2011)	
	Presence of active transport infrastructure	% of adults who report their community has infrastructure that supports walking or biking (well-maintained sidewalks or designated areas for biking)	78.2%	CCHS RR (2011)	
	Shower access at work	% of adults aged 18 to 75 who report having access to showers or change rooms at or near work	45.6%	CCHS (2007–2008)	
	Community spending on sports and recreation programs	In development			
	Community spending on active transportation plans	In development			
SEDENTARY BEHAVIOUR					
Individual	Total sedentary time amount	Average number of hours per day spent sedentary, excluding sleep time, population aged 18 to 79 years	9.6 hours	CHMS (2014–2015)	
	Recreational screen time amount	Average number of hours per week adults aged 18 to 79 years report spending on a computer or tablet, e.g. watching videos, playing computer games, emailing or surfing the Internet	25.0 hours	CHMS (2014–2015)	
	Workplace sedentary time amount	In development			
	Non-active travel amount	In development			
	Awareness level	In development			
Family/social environment	Presence and type of barriers for reducing sedentary behaviour	In development			
	Work sedentary behaviour norms	In development			
Built/society environment	Supportive work policies	In development			

INDICATOR GROUP	INDICATOR(S)	MEASURE(S)	LATEST DATA	DATA SOURCE (YEAR)
SLEEP				
Individual	Nighttime sleep amount	Average number of hours adults aged 18 to 79 years report sleeping in a 24-hour period	7.2 hours	CHMS (2014–2015)
	Awareness about sleep benefits	In development		
	Sleep quality—sleep continuity	% of adults aged 18 to 79 years who report having trouble going to sleep or staying asleep “most of the time” or “all of the time”	24.9%	CHMS (2014–2015)
	Sleep quality—sleep efficiency	In development		
	Sleep hygiene—sleep timing	In development		
	Sleep hygiene—stress	In development		
	Sleep hygiene—physical activity	In development		
	Sleep hygiene—caffeinated beverage consumption	In development		
Family/social environment	Sleep routines	In development		
Built/society environment	Presence and type of barriers for sleep	In development		
	Electronic media in the bedroom	In development		
	Nocturnal environment noise	In development		

Abbreviations: CCHS, Canadian Community Health Survey; CCHS RR, Canadian Community Health Survey Rapid Response; CHMS, Canadian Health Measures Survey; GSS, General Social Survey; PAM, Physical Activity Monitor.

Note: “In development” refers to measures that are under development either because a data source is currently not available or because more research has to be done to identify a promising measure and data source.

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Visit the Physical Activity, Sedentary Behaviour and Sleep Indicators online: <http://infobase.phac-aspc.gc.ca/>

TABLE 2

PHYSICAL ACTIVITY, SEDENTARY BEHAVIOUR AND SLEEP (PASS) INDICATORS QUICK STATS, CHILDREN (AGED 5 TO 11) AND YOUTH (AGED 12 TO 17), CANADA, 2017 EDITION

INDICATOR GROUP	INDICATOR(S)	MEASURE(S)	LATEST DATA	DATA SOURCE (YEAR)	
PHYSICAL ACTIVITY					
Individual	Physical activity recommendation adherence	% of children and youth who meet physical activity recommendations by accumulating at least 60 minutes of moderate-to-vigorous physical activity per day	37.6%	CHMS (2014–2015)	
	Total moderate-to-vigorous physical activity amount	Average number of minutes per day children and youth are engaged in moderate-to-vigorous physical activity	57.0 minutes	CHMS (2014–2015)	
	24-hour movement	% of children and youth who meet the Canadian 24-Hour Movement Guidelines for Children and Youth	9.5%	CHMS (2014–2015)	
	School physical activity amount	Average number of hours per week youth in Grades 6 to 10 report taking part in physical activity that makes them out of breath or warmer than usual during class time at school	2.3 hours	HBSC (2014–2015)	
		Average number of hours per week that parents report children spend doing physical activity during class time	2.0 hours	CHMS (2014–2015)	
	Sports participation amount (leisure time)	% of Canadian parents who report that their children participated in sports in the last 12 months	74.2%	PAM (2014–2015)	
	Active play amount (leisure time)	% of children who accumulate 3 hours or less per week of active play (unstructured physical activity) outside of school	48.8%	CHMS (2014–2015)	
	Active travel amount	% of youth who report walking or cycling to work or school	53.0%	CCHS (2014)	
		Average amount of hours per week youth report using active ways like walking or cycling to get to places	3.3 hours	CCHS (2015)	
	Intention level	In development			
	Enjoyment level	% of youth who report they enjoy being physically active	In development		
	Confidence level	% of youth who report they are confident in their ability to be physically active	In development		
	Physical literacy	In development			
	Physical health status	% of youth who report their health is “very good” or “excellent”	72.6%	CCHS (2015)	
		% of parents who report the health of their child is “very good” or “excellent”	88.4%	CHMS (2014–2015)	
Mental health status	% of youth who report their mental health is “very good” or “excellent”	73.9%	CHMS (2014–2015)		
	% of parents who report their child's mental health is “very good” or “excellent”	In development			
Family/social environment	Level of parental support	% of Canadian parents who report “often” or “very often” playing active games with their children in the past year	36.1%	PAM (2014–2015)	
	Level of peer support	% of youth in Grades 9 and 10 who report that most of their friends “often” participate in organized sports activities with others	58.2%	HBSC (2014)	
Built/society environment	Perceived distance to school	In development			
	Level of community safety	% of Canadian parents who identify safety concerns as a barrier to children's physical activity	24.0%	PAM (2014–2015)	
	Community walkability	In development			
	Presence of parks and recreation facilities	% of youth who “somewhat agree” or “strongly agree” that their neighbourhood has several free or low cost recreation facilities, such as parks, walking trails, bike paths, recreation centres, playgrounds, public swimming pools, etc.	79.2%	CCHS RR (2011)	
	Presence of active transport infrastructure	In development			
	Supportive policies at school	% of schools that have a committee that oversees policies and practices concerning physical activity (e.g. health action team)	42.3%	HBSC (2014 - Admin)	
	Community spending on sports and recreation programs	In development			
	Community spending on active transportation plans	In development			

INDICATOR GROUP	INDICATOR(S)	MEASURE(S)	LATEST DATA	DATA SOURCE (YEAR)
SEDENTARY BEHAVIOUR				
Individual	Sedentary behaviour recommendation adherence	% of children and youth who report meeting sedentary behaviour recommendations by spending 2 hours or less per day watching television or using a computer during leisure time	28.5%	CHMS (2014–2015)
	Amount of sedentary time	Average number of hours per day children and youth spend sedentary, excluding sleep time	8.4 hours	CHMS (2014–2015)
	Recreational screen time amount	Average number of hours per week youth report spending on a computer or tablet, e.g. watching videos, playing computer games, emailing or surfing the Internet	4.2 hours	CHMS (2014–2015)
	Sedentary time at school	In development		
	Non-active travel amount	In development		
	Time spent outdoors	Average number of hours per day children spend outside	1.8 hours	CHMS (2014–2015)
Family/social environment	Parental awareness level	In development		
	Home screen time rules	In development		
Built/society environment	Presence of and access to electronic media	In development		
SLEEP				
Individual	Sleep recommendation adherence	% of children and youth who report meeting sleep recommendations by obtaining adequate sleep: 9 to 11 hours per night for ages 5 to 13 years and 8 to 10 hours per night for ages 14 to 17	70.7%	CHMS (2014–2015)
	Amount of sleep in 24-hour period	Average number of hours children and youth report sleeping in a 24-hour period	9.0 hours	CHMS (2014–2015)
	Daytime napping amount (5 years and under)	In development		
	Nighttime sleep amount	In development		
	Sleep quality—sleep continuity	% of children and youth who report having trouble going to sleep or staying asleep “most of the time” or “all of the time”	10.4%	CHMS (2014–2015)
	Sleep quality—sleep efficiency	In development		
	Sleep hygiene—sleep timing	In development		
	Sleep hygiene—stress	In development		
	Sleep hygiene—physical activity	In development		
	Sleep hygiene—caffeinated beverage consumption	In development		
Family/social environment	Home sleep rules and routines	% of parents who report they set regular bedtimes for their children and enforce them	In development	
Built/society environment	Electronic media in the bedroom	% of children and youth who report they have a television, computer or game console in their bedroom	In development	
	Nocturnal environment noise	In development		

Abbreviations: CCHS, Canadian Community Health Survey; CCHS RR, Canadian Community Health Survey Rapid Response; CHMS, Canadian Health Measures Survey; HBSC, Health Behaviours in School-aged Children; HBSC-Admin, Health Behaviours in School-aged Children Administrator Survey; PAM, Physical Activity Monitor.

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