



Child and Youth Health and Well-Being Indicators Project:
Appendix L—Gap Measures Rationale and Summary

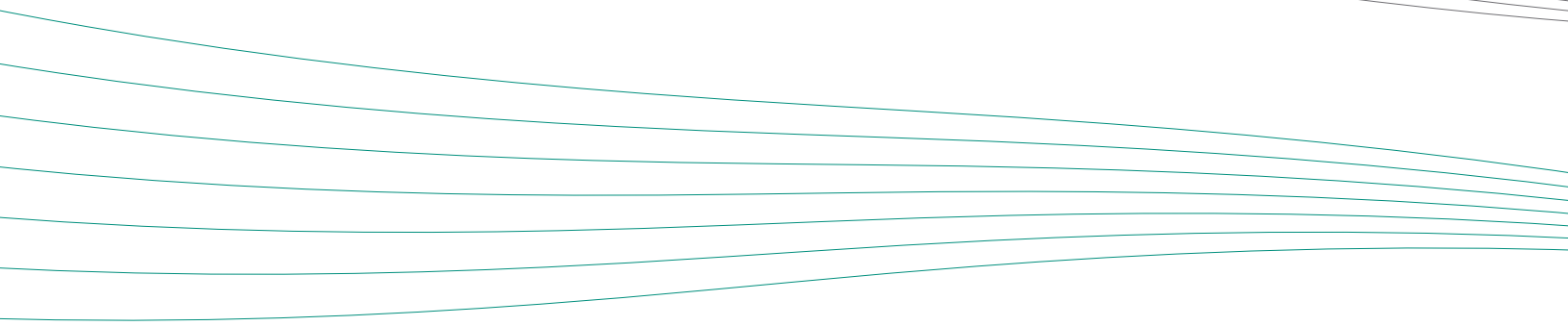
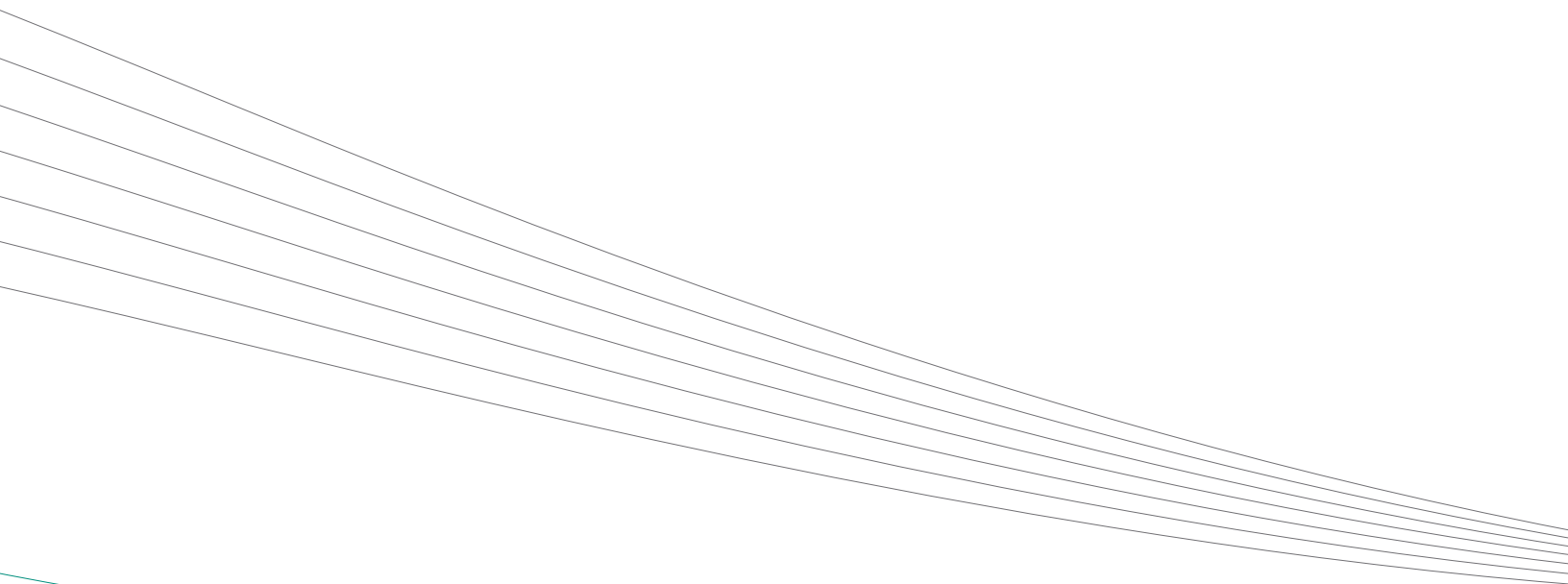


Office of the
Provincial Health Officer



Canadian Institute
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Appendix L—Gap Measures Rationale and Summary

The main objective of the BC Child Health and Youth Well-being indicators project was to identify and recommend indicators for inclusion in the PHO report. As part of that process, several indicators were identified as having potential for future reporting, but did not pass the evidence or data filters. Evidence may have been lacking due to the relative youth of the research conducted in the topic area, or confounding evidence in existing research. In some cases, the PWG made a decision counter to the recommendation, due to incomplete operationalization of an indicator, or a demonstrated lack of connection between the indicator, the concept, and the dimension. Furthermore, data sources—typically surveys—may have been assessed as not readily available, or provide sufficient sample size for BC, or provide regular enough information to support ongoing measurement.

The purpose of this document is to provide the rationale for each of the concepts that were recommended to be included in the PHO report as gap measures. The table in each section provides the evidence assessment criteria for each concept, taken from the evidence reviews.

Physical Health and Well-Being

Concept	Estimated Prevalence	Magnitude	Significance/ Impact	Modifiability	Data Availability/ Quality
Cause Specific Disability	72,600	Medium	High	Medium	Low
FASD	296,000	High	High	Medium	Medium
Sleep Levels	115,110	High	Medium	High	Low
Cause Specific ED Use	—	Unclear	Medium	High	Low

- **Cause Specific Disability.** The evidence review highlighted limited data sources for this indicator, specifically one that provides sufficient specific information on a given disability cause. There are two surveys conducted by Statistics Canada—The Canadian Community Health Survey and the Participation and Activity Limitation Survey—that provide global estimates of disability, but not of specific causes, and neither focus on the entire pediatric population, rather one focuses on younger children while the other focuses on adolescents.
- **Fetal Alcohol Spectrum Disorder.** Challenges associated with the comprehensiveness of FASD diagnoses were cited as the major factor for it to be recommended as a gap indicator. Stigma associated with behaviours likely to result in the diagnosis make it problematic to identify the true incidence. Therefore, it would be worthwhile investigating ways to improve both incidence and monitoring of FASD.
- **Sleep Levels.** Research shows a modest association between reduced sleep levels and obesity, though recent evidence appears to question the strength of the relationship. There is also evidence to suggest an association between sleep duration and some behavioural outcomes, specifically attention span and staying awake at school. However, the bulk of research on sleep deprivation outcomes seems to focus on the adult population. More recent research focusing on children demonstrating evidence between shortened sleep patterns and impaired bone mass or feelings of anxiety or depression. Data sources on sleep duration to date have primarily been self-reported from surveys, and these are not routinely collected,

and may not provide sufficient sample size to provide reasonable coverage of the BC pediatric population. However, the recent shifts in research focusing on bone mass or mental health issues suggest that this is an important area for future development. Investment in research to further understand this phenomenon is warranted.

- **Cause Specific Emergency Department Use.** The key factor that led to this concept being recommended as a gap measure is the lack of data on ED visits in BC. As stated, the National Ambulatory Care Reporting System (NACRS) is the best source of ED utilization. Unfortunately, there are not exhaustive data from this system in BC, as only three facilities current submit data to this system, held by the Canadian Institute for Health Information. At the time this report was being prepared, BC is implementing the NACRS system, with at least 15 facilities ready to submit data beginning April 1, 2012. As part of the recommendation to include this concept as a gap measure, the PHO is prepared to comment on the availability of NACRS data, encouraging as many facilities to submit data as possible, and to the degree possible, provide a greater depth of data.

Mental/Emotional Health and Well-being

Concept	Estimated Prevalence	Magnitude	Significance/ Impact	Modifiability	Data Availability/ Quality
Family Functioning	—	—	Low / Moderate	Low / Moderate	High
Spirituality	—	—	Moderate	Moderate	Unknown
Stress	—	—	—	—	—
Parental Mental Health Status	—	—	Moderate	Moderate	—

- **Family Functioning.** Research demonstrated the association between family functioning and mental/emotional well-being is related more to the interactions among family members as opposed to family form (e.g., parent gender). However, no specific indicator other than Divorce Rates was identified, and this measure speaks only to the fact that there is a breakdown in family form, and not necessarily in the quality of family interactions (though evidence does suggest there is a low to moderate relationship between divorce rates and child mental/emotional health).
- **Spirituality.** The evidence review recommended this as a gap indicator based on the conclusion that there are no known religiousness/spirituality measures currently in use in BC. However, the documented (though variable) statistically significant inverse relationship between religiousness/spirituality (definitional challenges notwithstanding) and mental/emotional health among adolescents (in particular relating to substance abuse) suggested that this is worthy of investigation for future measurement.
- **Stress.** Stress was identified as an important component of many of the concepts in the Mental/Emotional Health and Well-being dimension. As such, the PWG, on the advice of the PAC, added the concept of “stress” to the list of concepts to be included in the review process. Given its importance overall to mental and emotional well-being, combined with the fact that stress was identified as important among youth, it was decided, post-hoc, to assess whether the concept warranted further consideration. As this was a post-hoc decision additional resources were needed to make this assessment. There were other concepts also identified in this post-hoc process, and ultimately, given the lack of definitions for the concept, the PWG decided to assign it to the gap measure “bucket” so that it could be further addressed in the PHO report.

- Parental Mental Health Status.** The mental health evidence review confirmed that the psychopathology among parents is an important risk factor for mental health challenges among children and youth. Chief among these factors was perinatal health, specifically in the period post-delivery. Evidence suggests that the proportion of new mothers who experience such mental or emotional health issues is relatively small, and that the majority of experiences are very short term in duration, therefore unlikely to have a significant impact on the mental or emotional health of a new born. The challenge then, is to identify an indicator that addresses a more significant parental mental health issue that is likely to have more lasting impacts on children. There is a paucity of data on parental mental health, specifically as it relates to child and youth mental health, so it was recommended as a gap measure to focus on data collection opportunities.

Social Relationships

Concept	Estimated Prevalence	Magnitude	Significance/ Impact	Modifiability	Data Availability/ Quality
Neighbourhood Safety	196,867	High	High	Medium	High
Constructive Use of Time	386,703	High	High	High	High
Domestic Abuse/Neglect	—	—	—	—	—
Postnatal Parental Alcohol/ Substance Use	292,112	Medium	Medium	Medium	High

- Neighbourhood Safety.** Evidence indicates several connections between neighbourhood safety and various outcomes, including stress, obesity, and physical activity levels. For Canada, the primary data source on neighbourhood safety has been the National Longitudinal Survey on Children and Youth (NLSCY). Cycles 1 and 3 contained specific questions addressing this issue. However, the NSLCY has been suspended by Statistics Canada, and until another data source is available, there are no other data sources to provide current measures. Therefore, this concept, and its related indicator—Percentage of Children Living in Unsafe Neighbourhoods—were assigned to the gap category.
- Constructive Use of Time.** The evidence review highlighted significant positive outcomes related to extracurricular activities, markedly for youth in middle or high school. Activities including volunteerism, sports, arts, and music were all identified, in various studies, as having positive impacts on factors such as physical health, self-esteem, reduced alcohol consumption, and a higher sense of school belonging, among other outcomes. Data sources were also identified as being BC-specific, with good sample sizes that addressed one or two component parts of activities that could comprise constructive use of time. Therefore, the evidence associated with the concept was favourably reviewed. Unfortunately, the reviewer recommended an indicator—Percentage of Students Involved in Extracurricular Activities—that was ill-defined, and based on one data source that captured only one aspect of such activities. Therefore, the PWG decided to assign this measure to the gap category so that the PHO could develop recommendations as to how to best operationalize an indicator to represent the concept, and to identify an appropriate data source.

- **Domestic Abuse/Neglect.** The evidence review focused on Physical Abuse/Neglect and Sexual Abuse, as experienced by children and youth. The concept Domestic Abuse/Neglect was conceived to focus on *exposure to* abuse/neglect in the household (e.g., child or youth witnessing abuse from one parent to another). This concept was not conceptualized well in the reviews, but was considered important by youth. Therefore, the PWG decided to include it in the gap measure so that the PHO could identify methods to collect data on this topic.
- **Postnatal Parental Alcohol/Substance Use.** The evidence review focused on prenatal alcohol use and postnatal alcohol and drug use. While there was reasonable evidence to support use of either indicator, the prenatal focus on alcohol use was considered to be problematic, for the same reasons as FASD was assessed as incomplete. Validity of data on alcohol use during pregnancy is questionable, given the stigma associated with this behaviour. For postnatal alcohol and drug use, the recommendation of two measures was seen as problematic, given the low prevalence of illicit drug use overall, which would be even lower among parents. Notwithstanding the significant associations identified between parental alcohol/drug use (e.g., parenting ability, employability) and child health and well-being outcomes, the review highlighted that longitudinal data are needed to confirm these speculative associations.

Economic and Material Well-Being

Concept	Estimated Prevalence	Magnitude	Significance/ Impact	Modifiability	Data Availability/ Quality
Idle Youth	19,900	Medium	Low	Medium / High	Medium / High
Homelessness	2,730	Low	Medium	Medium	Low
Recreation Program Registrations	94,000	Medium	Low	Medium	Medium

- **Idle Youth.** It was generally confirmed in the literature that youth employment and participation in recreation programs/extracurricular activities can play a role in promoting health and well-being. Idle Youth was recommended as a gap measure based on the low data availability for the proposed indicator “youth not attending school or working”.
- **Homelessness.** In particular, the evidence review highlighted strong links between health outcomes and homelessness (e.g., increased incidence and prevalence of asthma and HIV/AIDS). As with other “gap” measures, the rate limiting step for inclusion as a core indicator was the lack of credible data sources. Surveys of street-involved youth do not accurately measure true homelessness, and surveys of homeless populations tend to vastly undercount youth, particularly those under age 13.
- **Recreation Program Registrations.** Similar to Idle Youth, there is sufficient evidence confirming a link between participation in extracurricular activities/recreation programs and positive health and well-being outcomes. The challenge again, is the availability of data. The PWG recommended working with the McCreary Centre Society to identify a measure that could be included in the BC Adolescent Health Survey.

Cognitive Development

Concept	Estimated Prevalence	Magnitude	Significance/ Impact	Modifiability	Data Availability/ Quality
Early Childhood Education	386,703	High	High	High	Low
Reading by an Adult	271,720	High	Medium	High	Low
School Attendance	< 119,000	Medium	High	Medium	Low

- **Early Childhood Education.** There is considerable and recent evidence to suggest a link between ECE participation and a variety of well-being measures (e.g., educational attainment, employability, earnings, welfare status). Unfortunately, the review noted that there is no standardized reporting of ECE enrollment, in particular one that would distinguish between programs that provide educational activities as opposed to those that simply provide day-care services.
- **Reading by an Adult.** The benefits of being read to by an adult was shown to help develop early literacy skills, contributing to school readiness, as well positively influence primary school reading achievement. Other tangible benefits seem to include social development in the primary school years as well. As with many other “gap” measures, the issue is one of data availability. Data exist from the NLSCY, but without ongoing data collection, ongoing monitoring will not be possible without development of an information source.
- **School Attendance.** As highlighted in the evidence review, there is a “consistent relationship between truancy and drug use, including drug use disorders as middle-age adults. Truancy is also associated with poorer academic achievement.” Clearly, there are implications for physical and emotional health, involvement with the justice system, and increased risk of experiencing negative economic outcomes. Absenteeism is not tracked in BC, so at this time, there is no way to report on it at a population level.

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