CANADA'S REPORT CARD ON PHYSICAL ACTIVITY FOR CHILDREN AND YOUTH – 2006

It is our great honour to dedicate the 2006 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth to Dr. Oded Bar-Or, an international pioneer and leading expert in the field. This report card serves as a legacy to his long-time volunteer commitment to Active Healthy Kids Canada and recognizes his esteemed career and outstanding contribution as a scholar, practitioner and advocate for active, healthy living among children and youth.

ACKNOWLEDGEMENTS

We thank all those who have contributed to the development of the 2006 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth. Contributors are recognized below in alphabetical order:

Meghan Arbour	Deakin University, Australia
Jane Arkell	Active Living Alliance for Canadians with a Disability
Mike Arthur	Nova Scotia Department of Health Promotion and Protection
Michelle Brownrigg	Active Healthy Kids Canada
Christa Costas-Bradstreet	Coalition for Active Living
Jean Côté	Queen's University
Cora Craig	Canadian Fitness and Lifestyle Research Institute
Rachel Deans	Active Healthy Kids Canada
Christine Flammer	Canadian Diabetes Association
Larry Frank	University of British Columbia
Lise Gauvin	University of Montreal
Helen Haresign	Dietitians of Canada
Ian Janssen	Queen's University
Sharon Jollimore	Canadian Parks and Recreation Association
Johanne Lacombe	Go for Green
Cheryl Moyer	Canadian Cancer Society
Stephanie Plante	University of Windsor
Stephen Samis	Heart and Stroke Foundation of Canada
John Spence	University of Alberta
Mark Tremblay	University of Saskatchewan
Doug Willms	University of New Brunswick

We gratefully acknowledge the financial support received for the 2006 Report Card from Canadian Tire Corporation, Kellogg Canada, the Heart and Stroke Foundation of Canada, the Canadian Cancer Society and the Canadian Institutes of Health Research – Institute for Population and Public Health.

We are also grateful for the valuable in-kind support provided by our partners at Go for Green, the Canadian Parks and Recreation Association (CPRA), Dietitians of Canada, the Ontario Physical and Health Education Association and the Coalition for Active Living.

TABLE OF CONTENTS

A DAY IN THE LIFE: PHYSICAL ACTIVITY AND CANADA'S CHILDREN AND YOUTH

Each day as Canadian children and youth move through the various social settings and structures in their lives – home, school and community – much of the time they are not moving enough.

Each day these settings and structures facilitate or inhibit the opportunities for these children and youth to participate in a physically active lifestyle.

Through analysis of nationwide data, key research studies and a national action planning forum that engaged the input of leaders across sectors – academic, government, non-government (non-profit and charitable) and corporate – Active Healthy Kids Canada and its partners created this 2006 assessment of how we are working collectively as a nation to support active, healthy living among the youngest members of our society. Different data sources examine different age ranges, but overall the report card examines opportunities from the early years through adolescence.

REPORT CARD TIME: CANADA'S OVERALL GRADE FOR 2006 D

The first annual Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth, released in May 2005, was a snapshot of the state of physical activity behaviours and opportunities for children and youth in Canada. Last year's report card, which gave the nation a grade of D, sounded the alarm and underscored the need for action.

One year later, the overall picture is still not good, as we continue to maintain this failing grade. Clearly, much-needed grade improvements in some of the indicators cannot occur in a one-year time frame, but we must maintain our focus on the need for physical activity as an essential contributor to the healthy physical, social and emotional development of Canada's children and youth.

Although the overall grade this year remains the same a last year's, the 2006 Report Card reveals new data and includes new indicators. Together, these demonstrate areas in which we are not improving, areas in which we are actually getting worse and promising areas on which we can build. New indicators have been added as new data have become available or further analysis of previous indicators has created the opportunity to be more descriptive. In each category area, some of the relevant strategic priorities and directions from the Coalition for Active Living's Pan-Canadian Physical Activity Strategy are noted. Many health promoting organizations active in particular issue areas related to physical activity have endorsed and supported this strategy with their advocacy.

Most importantly, the report card closes with specific recommendations for action. Collectively we can take these actions right now to start making a difference while we act on some of the larger recommendations and strategies that will also help improve the grade of future report cards.

For detailed information regarding report card methodology, primary data sources and the report card development process, refer to the Appendix.

GETTING TO THE SUBJECT: REPORT CARD CATEGORIES AND INDICATORS

CATEGORY: PHYSICAL ACTIVITY AND INACTIVITY

The assessment of physical activity and inactivity among children and youth in Canada was based on examining indicators relating to daily physical activity levels, screen time and participation in both organized and unstructured sport. Data in all areas can be improved in future by taking a closer look at disparities. In particular, data about physical activity for children with disabilities are lacking.

The assessment of physical activity levels is based on current guidelines and data sets derived from self-report studies of *leisure-time physical activity only* and are averages over time (week, month, year).

Similarly, the data currently available for screen time pertain only to television and computer use; the data do not yet reflect the use of other electronic devices with screens, such as hand-held video games and cellular phones.

The data for sport participation reflect only prevalence and do not reflect measures of quality or assess how physically active children and youth actually are when participating in sport. Additional research is cited to provide further insight, but national data sets that fully explore these issues are not currently available.

The grade assignments are based primarily on the analysis of the past five cycles of the National Longitudinal Survey of Children and Youth, the 2003 Canadian Community Health Survey, the 2001/02 Health Behaviour in School-aged Children Survey and the 2005/06 Tell Them From Me survey.

INDICATOR: PHYSICAL ACTIVITY LEVELS

Grade: D

We are still in a situation where less than half of Canadian children and youth are physically active daily to a degree of energy expenditure that meets the guidelines for healthy growth and development. This finding is consistent across children and youth in rural, urban and Aboriginal communities.[12]

Most Canadian kids are not moderately active (e.g., walking) or vigorously active (e.g., running, climbing, swimming) for 90 minutes each day, as recommended by Canada's Physical Activity Guidelines for Children and Youth.

A significant gender gap exists: compared with boys, girls consistently report less daily physical activity. The differential ranges from 10% to 15%, depending on the data source.

A nationwide analysis of children and youth examined the relationship between socio-economic status (SES) and participation in physical activity, looking at both *individual-level variables* of SES (measures of material wealth and perceived family wealth) and *area-level variables* of SES (unemployment rate, average employment income and percentage of adult residents with less that high school education).

Physical activity levels are lower among children and youth whose families report lower material wealth and perceived family wealth, but unemployment rates, education level and average employment income are not variables that correspond with lower levels of physical activity.[3] The Progress of Canada's Children report from the Canadian Council on Social Development has consistently identified poverty as a barrier to participating in physical activity through recreation.

In a study of equal-sized groups of high SES and low SES children and youth, the low SES children and youth more frequently cited the need for an increase in accessible, affordable, safe physical activity opportunities in quality facilities.

Both high SES youth and low SES youth cite lack of time as one of the key reasons they do not engage in more physical activity.[4]

In assessing physical activity, perhaps the most important consideration is viewing it as part of daily living, rather than simply as a leisure time activity. One study compared the physical activity of Canadian children and youth in the general population with children and youth in Old Order Mennonite communities, whose way of life today is comparable to that of three or four generations ago. The study was designed to assess how social changes, manifested in the progressive impact of labour-saving technology and sedentary multimedia opportunities, may affect the day-to-day physical activity behaviour of average Canadian children and youth.

Old Order Mennonite children are more active and more physically fit than children living a contemporary lifestyle, despite having very low SES and no physical education or institutionalized sport opportunities. This demonstrates that lifestyle-embedded, unstructured and "incidental" physical activity is critical.[56]

Taking a closer look at how active or inactive children and youth are through the course of daily living in their home, school, work and community environments may indicate how physical activity levels can be increased through more active approaches to day-to-day living, rather than by trying to pay for and "schedule in" time to be active.

INDICATOR: SCREEN TIME

Grade: D-

The D- grade for this indicator demonstrates a decline from a C- grade in 2005, as further analysis and trends indicate that non-school-related screen time is increasing among children and youth.

The American Academy of Pediatrics and the Canadian Paediatric Society (CPS) both recommend that screen time – use of television and computer combined – in children and youth be limited to no more than two hours per day, and the CPS suggests only one hour per day for preschoolers.[7] Recent research, based on the Health Behaviour in School-aged Children Survey,[8] is the first in Canada to assess an aggregate of television and computer screen time among Canadian children and youth.

Less than 20% of Canada's children and youth are meeting the medical guideline of two hours or less of screen time daily. These results are pervasive across gender and income level.

More than half of children and youth are watching two to four hours of television daily, and approximately a third are spending two hours or more on leisure-related computer use.

Trends over time indicate that television viewing has remained consistent while non-school-related computer use is on the rise. Children of lower income families report higher television time, while those in higher income families report more computer time.

Market research provides a projection of the increase in screen time. For example, the video game industry in the United States grew from $6.6 billion in 2000 to $9.4 billion in 2001 according to the NPD Group, a research organization that tracks gaming companies. A June 2003 Deloitte & Touche report states that technological improvements will spur further growth in gaming, increasing the number of devices that can support games from 415 million this year to 2.6 billion by 2010. The use of other forms of electronic entertainment can also be assumed to be on the rise.

There is no accessible data available that tracks time in front of the increasingly popular "mini-screens" – hand-held video games and cellular phones. Whether it is time spent playing games, text messaging or accessing wireless Internet, screen time is an important area that has yet to be explored. Another new trend to watch is products that have come on to the market that mix technology and physical activity, such as dance-based video games. Considering that the technical age cannot be reversed, the effect of these innovations on activity levels should be explored.

Substantive evidence reveals that excessive screen time not only contributes to inactivity, but is linked to various other health issues such as unhealthy eating, obesity, body and self-image issues, anti-social behaviour and risky sexual behaviour.[9] For example, in the first hour of prime time television, three out of four programs contain sexual messages (as many as eight incidences per hour) and the most common video games are combat related. Time spent watching television is correlated with exposure to advertising of unhealthy foods and unhealthy snacking.[10 11]

Some studies indicate that more time spent in front of a screen reduces opportunity for physical activity, but further research is needed to explore this relationship.[12] Research does show that children and youth who watch more than two to three hours of television daily are more likely to be overweight or obese.[13] The links between screen time and physical activity and overall physical and psychological well-being need to be monitored.

INDICATOR: PARTICIPATION IN ORGANIZED SPORT

Grade: C-

INDICATOR: PARTICIPATION IN UNSTRUCTURED SPORT

Grade: C

Analysis of data from the National Longitudinal Survey of Children and Youth and the school survey Tell Them From Me reflects some interesting perspectives in relation to sport participation among Canadian children and youth. The 2005 Report Card did not distinguish between organized and unstructured sport in its assessment, but notable differences exist between these two forms of participation, and the 2006 Report Card has evolved to reflect them.

Participation in organized sport is defined in the data gathered as "conducted with a coach or instructor present" and so can include broader forms of physically active recreation, while unstructured sport is defined as not involving a coach or instructor.

Between 40% and 50% of children and youth in Canada participate in organized sport at least two to three times per week.

Considering that access to structured sport – which involves scheduling, transport, cost and facility/equipment – is possible for children and youth for a good portion of the week, this holds some promise as one means of physical activity participation.

Organized sport has been demonstrated to contribute to overall development, as it is an activity that can be enjoyable while also requiring concentration and effort. Such an activity creates an optimal context for positive development.[14]

While slightly fewer girls than boys participate in organized sport (Figure 1), a more notable disparity occurs in relation to family income: fewer children and youth from low SES families participate in organized sport in comparison with those from high SES families (Figure 2). This finding lowers the grade for this indicator. Given the benefits of organized sport described above, and many others well documented in other literature, ensuring equitable participation among all children and youth is crucial.

Figure 1: Participation in Sports or Physical Activity with a Coach (Gender)

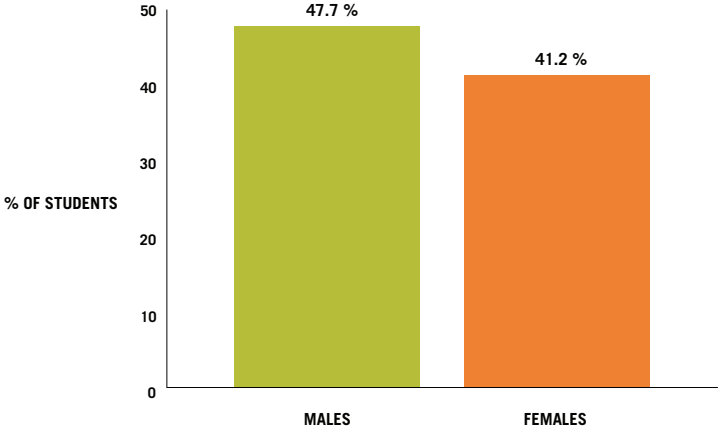
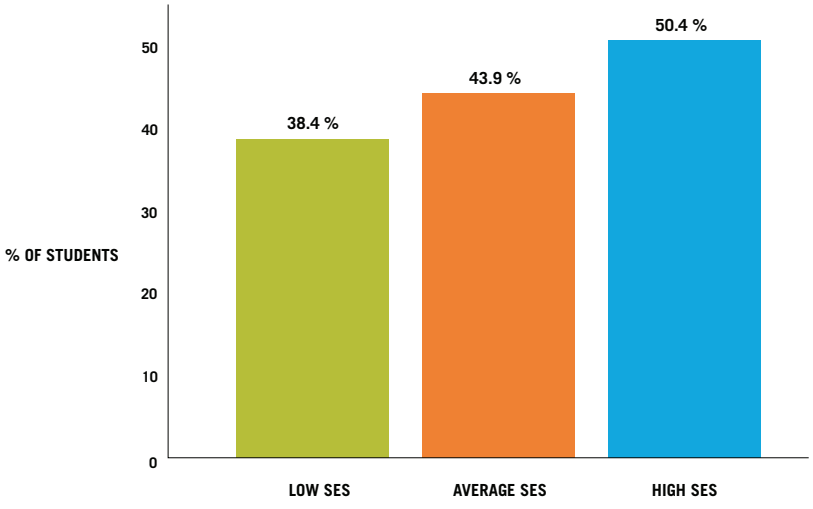


Figure 2: Participation in Sports or Physical Activity with a Coach (SES)



Nearly two-thirds of children and youth in Canada participate in unstructured sport at least two to three times per week.

As unstructured sport can occur in the home or neighbourhood, it is hoped that children and youth will participate more often than the minimum of two to three times per week. The perspective on reported measures for unstructured sport is different from that for organized sport.

There is a relatively small difference in the reported rate across SES (Figure 4), but there is a significant disparity in relation to gender as girls are nearly 20% less likely than boys to participate in unstructured sport (Figure 3). This disparity lowers the grade for this indicator.

Figure 3: Participation in Sports or Physical Activity without a Coach (Gender)

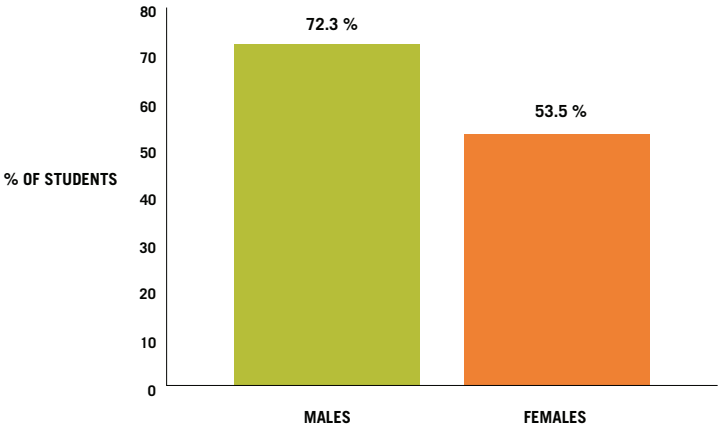
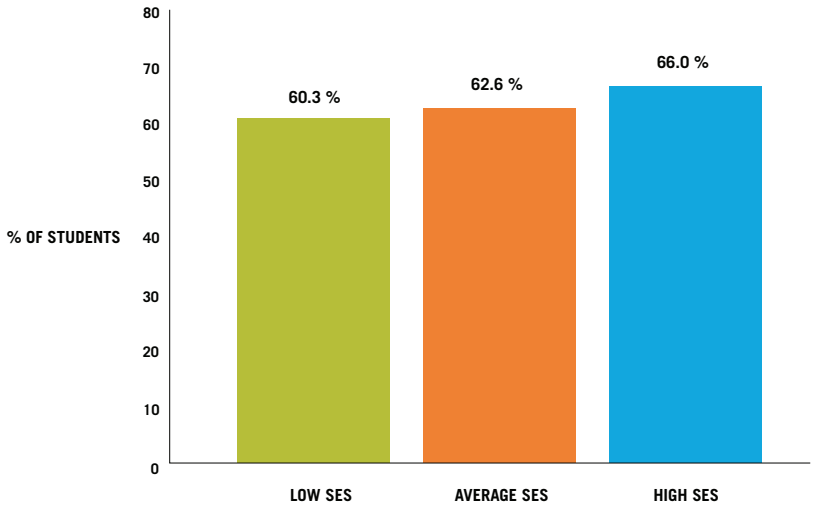


Figure 4: Participation in Sports or Physical Activity without a Coach (SES)



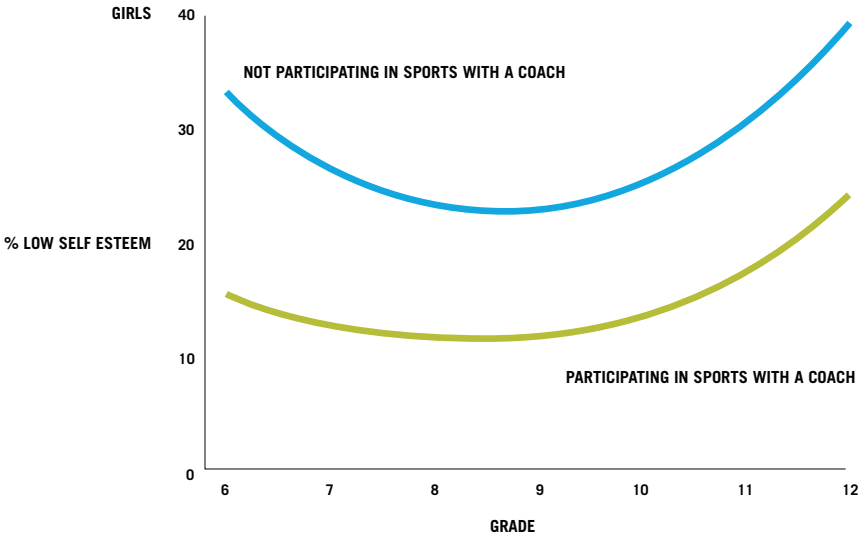
With respect to health benefits for this indicator, participation in unstructured sport has been shown to have a protective effect in relation to the prevalence of overweight and obesity, whereas participation in organized sport has not.[13]

With respect to both organized and unstructured sport, there are a number of additional considerations. In both cases, there is a marked decline in participation once children reach secondary school; this has also contributed to a lowering of the grade assignment in both cases.

Interesting correlations exist between children's participation in sport and their sense of belonging and self-esteem. Children with a low sense of belonging and low self-esteem were half as likely to report participation in sport, regardless of age, gender or SES.

The decline in self-esteem that begins just before adolescence mirrors a decline in sport participation that also begins at this time. Figure 5 demonstrates this relationship for girls, and the data is similar for boys.

Figure 5: Girls Participation in Sports – Low Self-Esteem



While the data do not indicate clearly whether participation in sport facilitates positive self-esteem and a sense of belonging, or whether children lacking in these areas choose not to participate, it is important to consider the relationship between these factors. Also important to note is the fact that the decline in self-esteem that begins at the onset of adolescence is mitigated by participation in sport.

The quality of the sport experience, however, is a key factor. Sampling various sports and playing sport for fun are two important elements of early involvement in sport that lead to adults' participation in recreation sport, positive youth development and elite sport performance.[15 16 17 18] Conversely, early specialization and excessive competition in sport reduce health and enjoyment and increase the likelihood discontinuing participation in sport.[19 20 21]

The grade assignments for these indicators are based on participation levels and do not involve measures of quality of sport participation. Nor do they involve an assessment of how physically active children and youth actually are while participating in sport.

Future assessments should attempt to make stronger links between physical activity levels and participation in sport. An assessment of quality linking overall positive development in relation to the psychosocial elements noted should also be established.

The Coalition for Active Living's Pan-Canadian Physical Activity Strategy states the need for a paradigm shift that will create supportive social and physical environments that are essential to sustain physical activity among children and youth.

To be effective, this paradigm shift needs to influence those who touch the lives of children and youth in the home, school and community. All sectors must contribute through their means and processes – research, policy, public awareness and education, programs, products and services – to make this happen.

The Heart and Stroke Foundation of Canada, with support from the Canadian Institutes of Health Research and the Canadian Population Health Initiative, conducted a recent think tank and is taking strides to fund research that examines the relationship between community planning and obesity. This research can examine the elements involved in the cultural shift suggested above and inform future policy development that makes communities more conducive to physical activity.

CATEGORY: FAMILY

Families represent a major social influence on the physical activity levels of children and youth. Parents, including caregivers in a parental role, play a key role in providing their children with the skills, values, norms, knowledge and confidence necessary to lead a healthy, active life throughout childhood and adolescence and into adulthood.[22 23 24] Research indicates that effective interventions in relation to parental influence on the physical activity of children and youth increase the frequency with which parents transport their child to and from physical activity venues, watch their child participate, participate in physical activities with their child and positively reinforce the child's participation.[25]

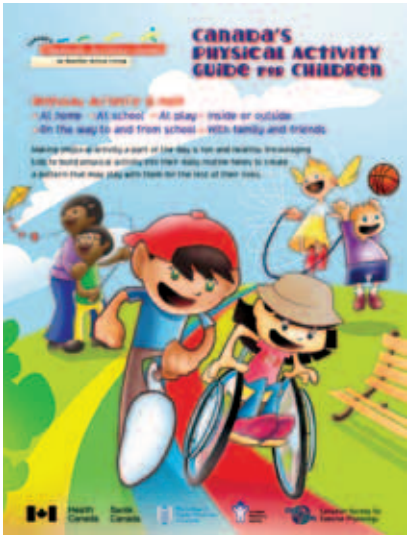
The assessment of family influences on physical activity among Canadian children and youth drew on these research findings to examine three indicators. They are parental beliefs concerning the physical activity needs of their children, ensuring that kids are active through parental role modeling and support in arranging or providing transportation for their children to physical activity opportunities, and family physical activity, in which parents and children engage in active pursuits together.

The grade assignments for the indicators in this category are based primarily on comparative analysis of family data from the 2000 and 2005 Canadian Fitness and Lifestyle Research Institute (CFLRI) Physical Activity Monitor (PAM), new data from the 2005 PAM and further supportive evidence from select studies.

INDICATOR: PARENTAL PERCEPTIONS OF PHYSICAL ACTIVITY

Grade: D

This is a new indicator for the 2006 Report Card.



Canada's Physical Activity Guidelines for Children and Youth recommend 90 minutes of physical activity daily for children and youth. Specifically, the guidelines recommend that inactive kids increase their physical activity by at least 30 minutes a day to start, and that all kids should gradually progress toward participating in 90 minutes of physical activity each day.[26 27]

Only 32% of parents believe that 90 minutes of physical activity daily is recommended for health and well-being, and only 21% report this amount of physical activity in relation to maintaining a healthy weight.

While generally the beliefs of mothers and fathers about physical activity are similar, and they identify the amount of daily physical activity necessary for both boys and girls, differences in parents' beliefs do exist in terms of the age of the child. As children get older, parents seem to believe that their need for physical activity declines. Only 21% of parents of teenagers, compared with 40% of parents of younger children, identify 90 minutes or more as the appropriate amount of physical activity required daily for their child to be healthy.

This discrepancy between parental perceptions and recommended guidelines is further complicated by another between parental perceptions and reported levels of activity.

In the 2005 report *Speaking of Food and Healthy Living – Children and Healthy Weights: Parents' Perspectives*, Dietitians of Canada and Kraft Canada reveal that approximately 90% of parents feel that their child gets, at the very minimum, a "good" amount of physical activity.[28] Similarly, the 2006 *Canada Activity and Health Survey*, conducted by Sunkist Growers and Active Healthy Kids Canada, reveals that 78% of parents of children aged 5 to 12 years believe that their child gets "plenty of exercise."[29]

Unfortunately, in reality less than half of Canadian children and youth meet the minimum daily physical activity requirements for healthy growth and development.[30]

INDICATOR: ENSURING THAT KIDS ARE ACTIVE

Grade: D

By providing or arranging transportation to places to be active, parents can directly support their children's participation in physical activity. In doing so, parents act as "gatekeepers" to their children's access to facilities, programs and play spaces, regulating their children's opportunities to be active.

Published research studies have demonstrated a positive relationship between parental provision of transportation and children's overall physical activity levels. This correlation is maintained beyond childhood, while, even as adolescents become more independent from their families, they continue to rely on their parents for transportation to physical activity opportunities.[31]

Data from the CFLRI 2005 Physical Activity Monitor reveal that 55% of parents report regularly taking their child to places to participate in physical activity and sports, a drop from 60% of parents who reported this in 2000. This decrease contributes to a lower grade for this indicator, which received a C- in the 2005 Report Card.

These results appear to be linked to the age of both the parent and the child, in that younger parents (ages 25–44) and parents of young children are more likely to provide transportation to physical activity opportunities than older parents (ages 45–64) and parents of adolescents.

Household income also plays a significant role in determining whether parents provide transportation for their children. There is a 40% difference in parental provision of transportation between the lowest and the highest income groups, a disparity that has grown considerably since 2000.

The role of parental physical activity levels in promoting physical activity among children needs further exploration. According to the 2005 Physical Activity Monitor, only 35% of parents regularly engage in physical activity; young parents are the least active. Inactivity increases as income increases, with the exception of the highest income earners. The *Canada Activity and Health Survey* reports similar results: 40% of parents role model physical activity.[28]

Interestingly, this survey reports that parents who do not role model physical activity do not want their children to have the same physical activity habits they do. In comparison to parents who do not role model physical activity, parents who role model physical activity report that their children are more active, healthier and have better eating habits. The *Speaking of Food and Healthy Living* report also notes that parents rarely use role modeling in relation to increasing physical activity.

The relationship between parental support in transporting children to physical activity opportunities and the parental role modelling of physical activity also needs to be explored. In an effort to increase their children's physical activity, are many parents spending their time driving children to programs and watching them participate, yet as a result having more difficulty also finding time and opportunity to role model physical activity through their own participation? Can models be explored that allow parents to be active at the same time as children through jointly scheduled recreation programming so they can maintain their own physical activity levels and role model this behaviour to their children? Can we look at models of programming or unstructured time where families can be active together more frequently? These questions need some consideration.

We need to ensure that parents who are making the effort to engage children in physical activity programming do not have to do so at the expense of their own activity levels. Role modeling physical activity, and supporting physical activity pursuits of children and youth, are both important to ensuring that kids are active.

Role modeling physical activity is related to the next indicator, family physical activity.

INDICATOR: FAMILY PHYSICAL ACTIVITY

Grade: D-

When families spend time being physically active together, both child and parent reap the benefits cited in relation to parental role modeling of physical activity, as well as the benefits noted above regarding both organized and unstructured forms of activity. This indicator assessed the proportion of Canadian parents who regularly play active games or sports with their children. Data reveal that families have little opportunity to be physically active together.

According to the 2005 Physical Activity Monitor, only 36% of parents regularly engage in physical activity with their children, a drop from 43% in 2000. Alarmingly, as many as 32% of parents report that they rarely or never play active games or sport with their kids. The grade for this indicator has declined from the D grade in the 2005 Report Card.

The Canada Activity and Health Survey supports this result, indicating that, apart from engaging in physical activity related to household chores, parents and children are not active together in any other form of physical activity even one day of the week.[28]

While mothers and fathers equally report involvement in their children's active play, differences exist according to the child's age. Parents are much less likely to be involved in activity with their children as they get older; the percentage drops from 46% of parents with children aged 5 to 12 years to just 21% of parents of teenagers aged 13 to 17.

In addition, younger parents (ages 25–44) are also almost twice as likely as older parents (ages 45–64) to report playing actively on a regular basis with their children, reflecting the fact that younger parents are more likely to have younger children. This is an important issue to note because, although peer influences on physical activity strengthen as children get older, parents still remain important role models for adolescents and are encouraged to remain actively involved in their older children's physical activity pursuits.[32]

These data, taken together with the results for the two previous indicators, demonstrate that support to parents and families play a critical role in increasing child physical activity levels.

The Coalition for Active Living Pan-Canadian Physical Activity Strategy indicates that families can be encouraged to become more physically active in unstructured opportunities in their homes and communities through supportive policies that eliminate barriers to participation, whether they are in the workplace, the community, means of transportation or school policies.

CATEGORY: COMMUNITY AND SCHOOL

The communities in which children and youth live can facilitate or inhibit their participation in physical activity – whether it is in the neighbourhood, at school or in getting to and from school. The indicators in this category examined the perceived safety, perceived quality of Canadian neighbourhoods, neighbourhood support systems, access and quality of recreation programming in communities, characteristics of the built environment in communities, active transportation to school and physical activity opportunities at school. We still have much to learn about these important social systems and their relationship to the participation of children and youth in physical activity.

A better understanding of the perceptions of neighbourhood quality, safety and support is needed to influence both community programs and unstructured physical activity in the community. Some measures of the accessibility to recreation program offerings are available, but at present we do not have an accurate assessment of the overall quality of delivery.

While published research has demonstrated that the design of a community – its transportation, recreation and commercial infrastructure – is important in that it can either facilitate or inhibit active living, at present no national data exist to provide an assessment of how we are doing as a nation in this regard. Current data in this category do not allow for a full assessment of the "walkability" or "playability" of Canadian communities.

While some good measures relating to active transportation to school are available, a better understanding is needed of how to overcome the barriers to walking and cycling to school. In addition, no current data are available that allow us to understand the prevalence of school-community partnerships in regard to shared use of facilities for physical activities. We also lack knowledge of the maintenance and repair needed for both community and school facilities and green areas to ensure that they continue to be quality spaces for physical activity.

Finally, there is great interest in the promotion of physical activity at school, but at present no nationwide assessment of school-based physical activity opportunities although data will become available in the fall of 2006.

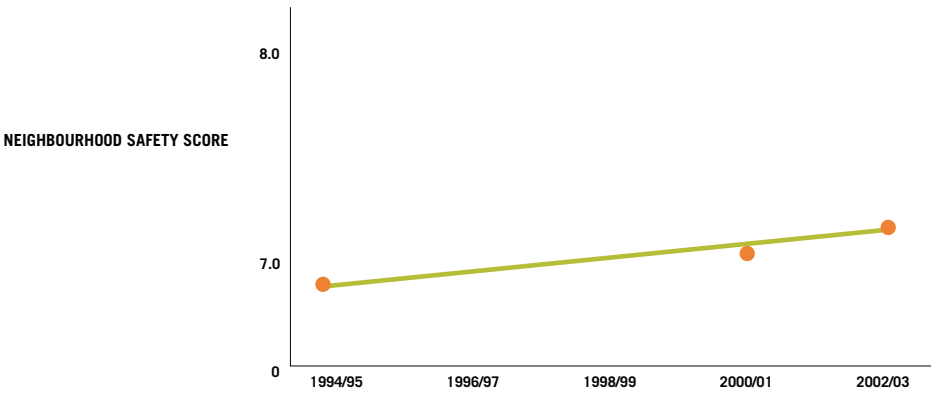
INDICATOR: NEIGHBOURHOOD SAFETY AND SUPPORT

Grade: B

This indicator involves an examination of the last five cycles of the National Longitudinal Survey of Children and Youth in the areas of neighbourhood safety, quality and social support. The scales for each ranged from 0 to 10, with 10 indicating more favourable attitudes.

The results indicate that Canadian families generally are satisfied with the level of social support and the quality and safety of their neighbourhoods: scores for these measures were between a 7 and 8 out of 10, across SES and rural/urban comparisons (Figure 6).

Figure 6: Trend in Neighbourhood Safety, 1984/85 to 2002/03



These scores are fairly constant over time, varying less than one-half a point from year to year on each of the scales; scores for perceptions of neighbourhood safety increased slightly. These findings correspond with data from the 2004 Go for Green survey on active transportation; that survey indicates that 73% of parents believe that their community is fairly safe or very safe for children to walk to school.

The nationwide surveys of parents reported in the *Speaking of Food and Healthy Living* report and the *Canada Activity and Health Survey*, indicate that the safety of their children ranks among the highest of parents' concerns; almost 80% of parents identify safety as a key priority in the healthy growth and development of their kids.[28 29]

Media coverage of the incidence of violence against or abduction of children often results in parents indicating concern about children's participation in neighbourhood-based physical activity, whether it is active transportation (walking or cycling) or unstructured play in yards, parks and playgrounds. Yet, Statistics Canada reports consistently demonstrate that, three-quarters of the time, violent crime against children and youth is perpetrated by someone known to the child.[33] In the 2004 CFLRI Physical Activity Monitor, 82% of respondents reported that crime rates did not prevent them from walking in their neighbourhood at night.

A differentiation exists between the long-standing positive scores relating to neighbourhood safety, quality and support, and parental perceptions and concerns relating to community safety and support.

With regard to violence against youth, the Statistics Canada report also notes that other youth perpetrate 30% of violent incidents.[31] The relationship between violence and SES may also need further exploration, as lower SES youth were more likely to report safety as a concern and potential barrier to physical activity in their community, and often referred to conflict with other youth.[4]

A gender disparity also exists with respect to violence, as the literature shows that, in a recreation setting, boys typically initiate harassment and abuse, mostly against other boys.[34] Research also shows, however, that physical activity and recreation is a positive youth development activity that reduces violence.[33]

More needs to be understood about community safety as it pertains to physical activity for children and youth. If Canadian communities are already perceived positively in terms of safety and support, how can they be further enhanced in this regard to mitigate this as a barrier to participation?

INDICATOR: BUILT ENVIRONMENT

Grade: Incomplete (INC)

The physical or "built" environment of communities is associated with physical activity. Environmental barriers reduce the likelihood of walking, cycling and unstructured play occurring in communities. Lack of sidewalks, bike lanes and trails, for example, can be a barrier to physical activity. More technical indicators of the built environment include street connectivity, retail density and land-use mix – that is, how easy it is to walk from street to street in a neighbourhood, what the mix of parks and play spaces is, and how easy it is to walk to stores and community services. With respect to Canadian adults, the CFLRI 2004 Physical Activity Monitor reports these findings:

- 63 % indicate that they live within walking distance of shops, markets etc. where they can buy necessities.
- 58 % indicate that their community has sidewalks.
- 51 % indicate that their community has walking trails.
- 25 % indicate that their community has bike lanes and trails.
- 33 % indicate that their community has facilities, places and programs for physical activity.

In all cases, respondents who reported these environmental supports also reported higher levels of physical activity. In the last three areas noted above, a significant decrease had occurred in the percentage in comparison with that in the 1999 findings.

It is important to note, however, that environmental design that promotes or inhibits physical activity in adults may be different from that which has these effects on physical activity among children and youth.[35] For example, cul-de-sac street design typically has been shown to correlate with reduced physical activity in adults, but in at least one study, such street design has been shown to potentially increase physical activity among children.[36] For kids, a "playable" community, as well as a "walkable" community, is important.

A recent mapping study that gathered perspectives on how community design influences physical activity behaviour examined this from the point of view of children and youth in Kindergarten to Grade 6 in communities in the city of Edmonton.[37] This descriptive study compared children who live in a grid-style urban setting with children who live in a lollipop-style (cul-de-sac) urban setting in terms of their mental representations of places to play and be physically active in their neighbourhood.

Children in the lower grades who live in a lollipop-style neighbourhood were more likely to depict play in and outside the home environment and, in relation to schools, were more likely to depict participation in organized sports and play activities outside. The opposite was true of children in the older grades; those who live in grid-style neighbourhoods were more likely to depict play in the home and school environment. Consistent across age range was the finding that children who live in grid-style neighbourhoods depicted more active transportation than those who live in lollipop-style neighbourhoods.[36]

Differences in relation to community design and the facilitation of physical activity opportunities may exist between children and youth. Retail density – proximity to stores, and so on – may be more indicative of physical activity in youth than it is of physical activity in children.

Although some regional research is in development and proposals of nationwide assessment that will provide more in-depth analysis of the built environment are underway, the current data are insufficient for providing a grade assessment in this area, particularly in relation to children and youth.

Additional analysis is needed to determine fully how the current built infrastructure in Canada supports or inhibits physical activity among children and youth. Recommendations for both enhancing existing infrastructure and designing new communities should flow from this research.

INDICATOR: PROXIMITY TO PARKS AND PLAYGROUNDS

Grade: B-

Although proximity to parks and playgrounds is essentially a component of mixed land-use measures in relation to the built environment, in this report card this new indicator has been highlighted because of the important role parks and playgrounds have in fostering unstructured physical activity for children and youth.

The grade assignment is based on analysis of the 2005 Physical Activity Monitor and measures the proximity to parks and playgrounds in communities across Canada.

Nearly 72% of Canadians report living within one kilometre of a park or playground, and 43% indicate that they live within two blocks of a park or playground.

This statement reflects the opportunity that can exist in the current built environment. There is fairly immediate access to outdoor play spaces within the existing community infrastructure. A regional disparity, however, exists for this measure; the prevalence of having a park or playground within two blocks of the home increases from eastern to western Canada. This regional disparity lowers the grade for this indicator.

Other important considerations need further exploration. The data do not reflect the quality of these parks and playgrounds, nor how often families frequent these spaces to pursue physical activity. As previously noted, no accurate picture is available of access to school playgrounds for community use. Also worth exploring are any differences that may exist across the age spectrum with respect to accessing the space for physical activity. For example, do more children or more youth visit these spaces? Do children and youth engage in different forms of physical activity when they are in these spaces? Future investigations should focus on variables such as these to determine more clearly the correlation between proximity to outdoor play spaces and participation in physical activity among children, youth and families.

INDICATOR: ACCESS TO AND QUALITY OF RECREATION PROGRAMS

Grade: C

The 2006 CFLRI Survey of Municipalities examined program offerings extended to Canadian children and youth. Ninety-three percent of municipalities report offering programs targeted at children and youth (down from 97% in 2000), and 65% indicate a discounted fee structure for children (down from 81% in 2000), although targeted programming for low-income families increased.

In the 2004 CFLRI Physical Activity Monitor, only 49% of Canadians reported that their neighbourhood had free or low-cost recreation facilities; among respondents, those with postsecondary education reported this more commonly. A lack of broad public awareness regarding access to recreation offerings may exist.

Since 2000, the number of municipalities that report programs and services for children and youth at-risk has increased, more frequently in larger municipalities. The literature notes that effective management of such programs is critical to providing positive results. Recommendations include expansion of early-years intervention programs, comprehensive targeted outreach to families, appropriate mix of pro-social and anti-social participants, and maintaining gender and ethnoracial balance.[33]

Nationwide qualitative research that the Canadian Parks and Recreation Association (CPRA) commissioned investigated the issues that low-income families have in accessing recreation programming; both parents and recreation providers were interviewed.

Both parents and providers listed barriers such as costly program fees and equipment, distant program locations, lack of transportation, inflexible program structures and schedules, a lack of awareness of programs and subsidy policies, experiences with racism, and attitudes of some staff and other participants toward youth.

Staff noted difficulties in reaching out to low-income populations, as well pressures to raise revenues, making it difficult to improve service for those who might benefit the most from participation but were least able to pay.

Parents frequently cited discomfort in asking for recreation program subsidies and often identified cumbersome subsidy policies as a barrier.[37]

Community agencies such as the YMCA and Boys and Girls Clubs of Canada also have policies, which complement municipal policies, to ensure that low-income families have access to programming and that annual tracking is conducted to determine the numbers of children and youth overall engaged in physical activity programs. While these agencies provide valuable programming to children and youth across Canada, facilities are not in every community, and therefore the data are limited to the scope of service provided. Certain provinces offer the KidSport program to address inequities, and the CPRA also manages an Everybody Gets to Play initiative across Canada that targets increased opportunities for low-income families.

Canadian Tire's JumpStart program is a recent corporate contribution, offered with support from the CPRA, the YMCA and Boys and Girls Clubs of Canada. All such initiatives should be evaluated to determine their effectiveness in increasing physical activity opportunities nationwide; they will be assessed in future report cards.

With respect to assessing the quality of recreation programming, some initiatives are in place that in future will yield national data in this area, but at present such data are not available. For example, the HIGH FIVE program of Parks and Recreation Ontario, which some other provinces are also implementing, is designed to support the safety, well-being and healthy development of children in recreation and sport programs. The HIGH FIVE program provides parents and recreation professionals with tools, training and resources that promote and support the principles of healthy child development, and includes a quality assurance process and an accreditation system for recreation and sport programs.

In an effort to reduce peer-initiated harassment or violence in recreation programming, the CPRA has developed the Making All Recreation Safe (MARS) initiative, which will enable recreation and parks practitioners to establish systems and processes to prevent harassment and abuse. Some study of accessibility to recreation among ethnoracial populations has been conducted; this area should be explored further. Much more research needs to be conducted in relation to recreation opportunities for children and youth who have a disability.

Future report card assessments need to draw on the evaluations of initiatives such as these to ascertain what measures of quality are appropriate in the recreation setting. Adequate program evaluations of all such initiatives are needed to derive nationwide measures of quality.

INDICATOR: ACTIVE TRANSPORTATION

Grade: D-

Active transportation refers to modes of transportation that require human power – walking, cycling and so on. These contribute to a cleaner environment and the improved health of those who employ them. In relation to children and youth, this new indicator examined active transportation between home and school. A study from the U.S. Environmental Protection Agency tracked historical trends in relation to active transportation to school through walking or cycling. In 1969, 48% of students walked or biked to school, while in 2001, less than 15% walked and only 1% biked.[i] Clearly these findings demonstrate a decline in this form of daily activity for children and youth.

Walking and cycling behaviours in Canada were assessed in research that Go for Green commissioned.[ii, iii] A 1998 study was replicated in 2004, and some alarming continued trends can be seen in the data.

In the 2004 study, only 29% of parents reported that their child walks to school more than half the time. This proportion has not changed from 1998.

While this indicator needs to be further analyzed in relation to the reported distance between home and school, clearly the level of children who use active transport through walking is of concern. The number of parents who report their children taking the school bus to school has not changed from 1998.

Cycling to school has decreased. Three-quarters of parents reported that their children never used their bicycle to get to school in 2004, compared to slightly less than two-thirds in 1998. This low level of cycling exists despite the fact that almost 90% of children own a bicycle. Driving to school in the family vehicle has also remained relatively consistent at around 20%.

The main reason parents cite for children not walking or biking to school is distance: 48% of parents state this as a reason their children do not walk to school (this percentage has not changed significantly from 1998), and 33% of parents note distance as the reason their children do not cycle to school (a percentage consistent with that in the 1998 report). Most parents report their community as safe for walking and cycling, although traffic issues are of concern. In the 2004 CFLRI Physical Activity Monitor, 83% of Canadians expressed the view that traffic did not make walking in their neighbourhoods difficult or unpleasant.

Sixty percent of parents who do not feel that it is safe to walk to school indicate that, even if safety were improved, the amount their child walks to school would not increase. Of parents who do not feel it is safe to cycle to school, more of them feel that an increase in safety would change the amount their child would cycle to school than of parents with a similar opinion in 1998.

Conclusions have been drawn that pertain to both physical activity and environmental health: students who live closer to school and in higher quality environments are more likely to walk or bike, and more centrally located schools that facilitate this active transportation reduce air pollution.[39]

Exploring active transportation data in relation to SES would be useful. School board policies on busing vary, but, given the decrease in walking to school and the increase in busing, such policies should also be explored in relation to active transportation to school. Have the parameters for school bus distance changed, resulting in an increase in the number of children bused? In addition, policies on the safe storage of bicycles at school may also need to be explored, as concern for theft or vandalism may be a barrier to cycling.

Parental perceptions of distance to school merit further exploration. If we look again at the 1969 U.S. Environmental Protection Agency data, did students live closer to schools at that time, or is the perception of "too far" different now than it was then? Perhaps parental perceptions of distance relate to parents' time constraints and their own commuting pressures as well. What supports are needed for parents to facilitate increased walking and cycling to school among their children? Fuller evaluation of the Go for Green Active and Safe Routes to School Program, and of International Walk to School events, would clarify the impact these initiatives have and how they can be implemented more effectively.

Go for Green also commissioned recent qualitative research that provides evidence that concern for family health, youth health and the environment is a priority for Canadians, but that more persuasive messaging and clarity about what is meant by "active transportation" is needed to move people from being concerned to changing their behaviour.[iv]

INDICATOR: PHYSICAL ACTIVITY AT SCHOOL

Grade: INC

Issues of obesity and inactivity among children received North American media attention in 2005 that was second only to that given to reports on international conflict. One of the most commonly cited recommendations to address the inactivity problem is to increase physical activity participation in Canadian schools through quality health and physical education classes and other school-based physical activity opportunities.

At present, no nationwide data are available that provide an assessment of physical activity at schools in Canada, although the CFLRI will release the results of its school survey in the fall of 2006. This survey is a nationwide assessment of a variety of indicators of school-based activity, and will allow for comparison to the previous survey conducted in 2000. In addition, the Joint Consortium on School Health is developing an evaluation strategy that will include assessment of school-based physical activity.

The 2006 Report Card cannot responsibly provide a grade assignment for this indicator, although it does provide perspectives on the current situation from available program evaluation and research.

Last year, the 2005 Report Card using the most current data from 2000, school-based indicators all received failing grades. The Canadian Association for Health, Physical Education, Recreation and Dance (CAHPERD) recommends 150 minutes of physical education per week and recognizes schools achieving this standard with the Quality Daily Physical Education Award. Only 805 of all schools in Canada are providing physical education in accordance with this standard.

A recent Montreal-based study of elementary schools found that the median total opportunity for physical activity in a school day was only 29 minutes.[43]

Over half of Canadian parents believe that their children get enough physical activity through physical education at school,[44] and further reports indicate that parents believe that their children are getting physical activity at school three to four days per week.[28] Parents need to be better informed and better supported to advocate for physical activity and physical education in school. If school-based physical activity opportunities do not increase, parents will have the added burden of finding other times and means to provide daily opportunities for physical activity.

The need for Canadian schools to provide both physical activity and quality physical education opportunities must be addressed. These mutually supportive opportunities facilitate physical activity participation among children and youth. Setting aside time to be active during the school day, both in and outside of class time, is important. As well, we must ensure that quality health and physical education classes are delivered to help children develop the knowledge and skills to feel competent pursuing various forms of physical activity.

Quality health and physical education classes should be taught by qualified personnel, should engage students directly in moderate to vigorous physical activity at least 50% of the time, and should teach skills and games that are designed to promote participation in physical activity throughout one's lifetime. Nationwide, observational assessment of these measures of quality is necessary to provide an accurate understanding of program delivery. Principals and parents need to understand these measures of quality when assessing program delivery in their school community.

Daily physical activity offered in other curricula or outside of class time should provide a variety of offerings that will fully engage the school populace and build a culture of active, healthy living in the school community. This, in turn, will reinforce the knowledge and skills obtained in health and physical education classes.

While health and physical education classes are mandatory in most Canadian elementary schools, frequently they are not delivered with consistency and often are cancelled to accommodate other school priorities. At the secondary school level, in most provinces students are required to complete only one course credit in health and physical education throughout their high school experience.

We look forward to seeing the results of the 2005 CFLRI School Survey, as many jurisdictions have instituted policies and programs designed to increase active, healthy living in the school community. Results from some of these interventions are available and are profiled to provide some indication of the work being done to increase physical activity for children and youth at school.

Policy initiatives and implications in relation to school-based physical activity are discussed in the following section. Policy support in each province and territory is critical to increase the participation of children and youth in school-based physical activity.

PROMISING INITIATIVES: SCHOOL-COMMUNITY ENGAGEMENT AND COMPREHENSIVE APPROACHES

Recent research from Nova Scotia, Ontario and British Columbia demonstrates the benefits of comprehensive school health programs that employ community engagement practices in increasing physical activity and other healthy behaviours in schools.

Implementation of the U.S. Centers for Disease Control and Prevention's Coordinated School Health program in Nova Scotia's Health Promoting Schools initiative, the Action Schools! BC program and the Living School pilot initiative in Ontario are all based on a comprehensive approach that involves policy development, environmental support, curriculum, and community programs and services.[45 46 47] In all of these cases, implementation involved multi-stakeholder commitment and planning involving school boards and local boards of health, and sometimes recreation leaders, parents and other community partners.

Both the Living School and the Action Schools! BC initiatives were based on a premise of knowledge exchange, which incorporates the need for two-way dialogue between researchers and community members, incorporates the community's needs and has the potential to increase the impact of knowledge. The measure of effective knowledge exchange is essentially how that knowledge is used to influence, directly or indirectly, thoughts and actions in decision making.[45 46]

In all three provincial examples mentioned above, participation in the initiatives resulted in increased physical activity levels among students. In addition, the Action Schools! BC and Living School initiatives demonstrated enhanced capacity to work across sectors and the importance of a combined local and provincial support structure.[44 45 46] Key players, such as principals and parents, engaged municipal support in implementing health and recreation initiatives.[45 46] This finding is also supported in the Montreal-based study previously mentioned.[43]

In the Living School pilot, participation of teachers in physical activity also increased, which provided further role modeling for students. Positive correlations were also noted between increased physical activity and self-esteem, a sense of safety and a sense of belonging in the school community; provided that physical activity opportunities were delivered in a manner in which students felt engaged and had choice in the activities offered.[46]

Notably, school communities that had applied but were not able to participate in the pilot initiative received workshop support to implement daily physical activity. While all Living School pilot sites implemented daily physical activity, a very small portion of the sites that officially were not part of the initiative were successful in doing so, perhaps demonstrating the value of the cross-sectoral community engagement process.[46]

Both the Action Schools! BC and the Living School initiatives were funded through the provincial government, but only Action Schools received funding from the British Columbia Ministry of Education. This initiative has received further support for implementation and is now going on in 809 of British Columbia's elementary schools. Further data analysis on the impact of this initiative on student health will be available later in 2006. More research on the Health Promoting Schools initiative in Nova Scotia has been supported, and all boards in the province are now eligible for annual funding. At present, the Living School initiative that was funded through the now amalgamated Recreation and Health Promotion ministries in Ontario has not been expanded.

The World Health Organization has noted that interministerial financial support for school-based initiatives, with solid support from education ministries, has been demonstrated to increase the likelihood of success and sustainability for these initiatives. Other Canadian models for this approach that will release evaluation results in the next year are Nova Scotia's Active School Communities initiative and the school community component of the Saskatchewan in Motion initiative. The knowledge gained from these community engagement approaches to increasing physical activity and health among students needs to be further expanded across the country.

The initiatives described focus only on the elementary school population. Given that students' physical activity and sport participation declines when they enter secondary school, interventions for the secondary school population are sorely needed. In addition, very few interventions are targeted at the early childhood education system and this issue also needs attention.

In its Pan-Canadian Physical Activity Strategy, the Coalition for Active Living provides several strategies to increase physical activity in the community and school:

- Incorporate consistent physical activity programming in early childhood and childcare programs, as well as in elementary school and secondary school programs, to ensure physical activity during the early stages of child development.
- Create reciprocal, shared-use agreements for school and municipal facilities so that schools may use municipal facilities and municipal sport and recreation departments may use school facilities after school hours.
- Mandate daily physical education from Kindergarten through secondary school graduation. The Canadian Association for Health, Physical Education, Recreation and Dance fully supports this strategy in its advocacy efforts.
- Enhance and expand school-community engagement approaches (described above) to create collaborative, sustainable initiatives that are built on existing programs.
- Ensure that developers explicitly place priority on active transportation, rather than motorized transportation, when establishing and revitalizing communities. The Heart and Stroke Foundation of Canada, the Chronic Disease Prevention Alliance of Canada and Go for Green all advocate for active transportation, recommending specific funding for infrastructure that promotes physical activity, as well as tax incentives for use of public transit.
- Review user-fee policies for recreational facilities and ensure that such policies foster inclusion and eliminate the possibility of marginalizing underserved groups. The CPRA has created a national policy on access to recreation for low-income families.

CATEGORY: POLICY

Policy that supports and facilitates physical activity opportunities for children and youth involves all other categories and all levels of government. Indicators of supportive policy include effective legislation, financial investment and coordinated implementation.

INDICATOR: PROGRESS ON GOVERNMENT STRATEGIES AND INVESTMENTS

Grade: C-

Early 2006, with a new federal government coming into office, is a time of transition in terms of federal government progress on strategies and investments. A new platform has been established for promoting physical activity in Canada. In the fall of 2006, the previous government announced support of $300 million for the implementation of its Integrated Strategy for Health Promotion and Chronic Disease and its Healthy Living Strategy that took several years to develop but did not make it to final budget deliberations and did not survive the election. Federal/provincial/territorial commitments to increase physical activity by 10% in each province and territory nationwide by the year 2010 will continue but are also affected by the transition in government.

With respect to government policy, the World Health Organization has voiced its concern about the promotion of physical activity and proposed the following principles for action:

- To address the need for the poorest populations to access healthy eating and physical activity. Such activities will generally require community-based action with strong government intervention.
- To be responsible for their 'framing politics,' to ensure maximum evaluation, monitoring, surveillance and essential components of such actions.
- To establish and maintain a strong role for government in achieving lasting change in public health.
- To build on existing structures and processes that already address aspects of diet, nutrition and physical activity.
- For health ministers to be responsible for coordinating and facilitating the contributions of other ministries and government agencies.
- To develop national strategies on physical activity in association with healthy eating
- To use subsidies either through tax incentives or tax breaks to encourage physical activity.
- To implement school policies and programs that support the adoption of healthy diets and physical activity.

Policy initiatives relating to physical activity outlined in the new Conservative government's election platform included the following:

- Commitment to spend at least 1% of total federal health funding annually on physical activity, including amateur sport and programs for school age children such as the Awards of Excellence program.
- Allow the parents of young people under 16 years old who register their children in programs that promote physical fitness to claim a federal tax credit on spending up to $500 per year per child spent on registration fees and memberships. This was announced in the 2006 budget, to begin in the 2007 tax year.

In an interview conducted as part of the report card development process, political-level government officials communicated that many of the physical activity initiatives were the responsibility of the provinces, particularly those related to schools and education, which are under provincial jurisdiction. The new government also communicated that it has responsibility for establishing guidelines, which it will encourage the provinces to follow.

The financial commitment in this election promise is consistent with that recommended in the Coalition for Active Living's Pan-Canadian Physical Activity Strategy. In addition, the Coalition for Active Living and other organizations, such as the Heart and Stroke Foundation of Canada and the Chronic Disease Prevention Alliance of Canada, have identified tax incentives and subsidies as being important, but the new federal government has not outlined the corresponding steps for comprehensive action.

Progress on these federal election promises will be assessed in future report cards.

All provincial governments have strategies that relate to increasing physical activity and identify children and youth as priorities. Currently, only Nova Scotia has implemented tax incentives.

Numerous stakeholders, however, have expressed the view that many of these strategies include too few resources to address the issues comprehensively. At this time, an accurate nationwide assessment of the total financial investment in these strategies and the progress of their implementation is not possible, as some areas are not evaluated and most information is internal to government. More effective evaluations and more transparent access to data are essential to assessing the progress of these strategies.

Many of these strategies rely on the capacity of the non-governmental organization sector for implementation, which may affect the effectiveness of the strategies. In addition, corporate sector investment and practice could be a significant contribution to both policy development and implementation.

As mentioned in the previous section, policy initiatives in relation to school-based physical activity have been under discussion in many provinces. Each provincial ministry of education was contacted in 2004 and asked to report how many minutes of instruction in Health and Physical Education (PE) or Physical Activity (PA) was required per week. The number for each province is shown in the following table.

PROVINCE	REQUIRED MINUTES OF PE/PA PER WEEK IN 2004
British Columbia	150
Alberta	120
Saskatchewan	150*
Manitoba	60
Ontario	100*
Quebec	120
Nova Scotia	150*
New Brunswick	60
Prince Edward Island	150
Newfoundland and Labrador	60

The minutes noted with an asterisk (*) are reported minutes of physical activity, not physical education. Reported minutes of physical activity often include recess and do not necessarily require teacher supervision. The values in the table above represent the documented number of minutes required per week, although typically no audit is performed to ensure that these requirements are met, and previous research shows that frequently such requirements are not met.[48]

In 2006, the provinces were contacted to obtain current data. Only Ontario's and Alberta's requirements had changed. Mandatory daily physical activity was announced in 2004 in Alberta and in 2005 in Ontario. Alberta's policy is for Kindergarten to Grade 12, while Ontario's policy is for Grades 1 through 8. Attempts for a mandatory policy had previously been made in British Columbia but were not successful.

The distinction between physical activity and physical education is important; policy development has been in relation to physical activity in class time, which corresponds with but is not equivalent to delivery of physical education classes.

Evaluation of policy implementation in Alberta is underway and will be available in 2006, while in Ontario evaluation plans are still in development. Commentary on this policy area is notably inconsistent in responses from the provinces, despite long-standing recommendations from issue experts and the federal government's assertion that it has a role in providing consistent guidelines.

Municipal governments also play a key role in more local policy and program support for participation in physical activity. Their management of infrastructure and parks and recreation facilities and programs, their delivery of public and community health programs, and their ability to foster good relations with local school boards play a critical role in facilitating or inhibiting participation in physical activity among children and youth.

The CFLRI's 2005 Survey of Municipalities indicates that only 17% of Canadian municipalities strongly agree that physical activity is a high priority issue and is therefore included in a formal action plan or strategy. This view typically is held in larger urban communities. This low engagement at the grassroots level of implementation is problematic for the success of provincial strategies and federal government directives, and is an area of policy support that must be addressed.

The lack of available data and a government in transition preclude a grade assignment in this category. An alarm has been sounded, however, about the need to promote health and physical activity through such national and international initiatives as the Ottawa Charter for Health Promotion, the Berlin Agenda on Physical Education, the United Nations Declaration of Children's Rights and the Romanow Report, *Building on Values: The Future of Health Care in Canada*. Over a period of several decades, government policy initiatives to address this issue, which is of critical importance to the health and sustainability of our nation, have been moving at an alarmingly slow rate. This situation must be rectified.

As the World Health Organization has pointed out, the non-governmental organizations and corporate sectors must also take responsibility to promote progress through dedicated attention to advocacy work and effective implementation and evaluation of programs and services.

The Coalition for Active Living's Pan-Canadian Physical Activity Strategy is based entirely on a policy-driven goal of creating a nationally integrated and collaborative strategy to promote health through increasing the physical activity level of all Canadians; the immediate target, in each province and territory, is a 10% increase in Canadians' level of physical activity by 2010.

This goal of the Pan-Canadian Physical Activity Strategy provides direction for policy-makers, and its recommendations with respect to educators, physicians, community developers and urban planners, recreation providers, corporations and parents provide direction to officials at all levels of government. This direction has been further supported by the advocacy work of numerous organizations with a mandate to promote physical activity.

CATEGORY: HEALTH

INDICATOR: OVERWEIGHT/OBESITY

Grade: F

Newly released data from the 2004 Canadian Community Health Survey[49] reinforce previously released data from the National Longitudinal Survey of Children and Youth and the Health Behaviour in School-Aged Children Survey. The 2004 Canadian Community Health Survey was the first time since 1978/79 that direct measures were taken of height and weight in a nationally representative sample of Canadian children. In the past, most health surveys have relied on respondents to report their heath and weight, a practice that tended to underestimate the prevalence of overweight and obesity. These direct body mass index (BMI) measures indicate increasing trends in overweight and obesity.

In 2004 the combined overweight/obesity rate for each sex was about 70% higher than it was in 1978/79, and the obesity rate was two and a half times higher.

Increases are most notable among adolescents aged 12 to 17, for whom the combined overweight/obesity rate has doubled and the obesity rate alone has tripled. Disparities in relation to gender, ethnicity, geography, education and SES exist:

- The overweight/obesity rate of adolescent boys is higher than that of girls.
- The obesity rate of Aboriginal adolescents is two and half times the national average.
- Obesity/overweight rates tend to be higher in the Atlantic provinces
- Children in households in which no members have more than a high school diploma are more likely to be overweight or obese than those in households in which the highest level of education attained is postsecondary graduation.
- Children from middle-income families are more likely to be overweight than those from high- or low-income families.

Across the country, provincial rates of combined overweight and obesity range from one-quarter to one-third of children and youth aged 2 to 17 years.

Additional research also indicates that rural youth have higher rates of overweight and obesity than urban youth.[1] In contrast to the data noted above, an assessment of both individual and environmental variables of SES indicates that lower SES correlates with higher levels of obesity.[3] This indicator of the health of Canada's children and youth will continue to be an area of concern now and in the future.

INDICATOR: OVERALL PHYSICAL AND PSYCHOLOGICAL WELL-BEING

Grade: C

In addition to contributing to physical health both immediately and in the long term, physical activity is also related to psychological health and well-being. This is a newly developed indicator for the 2006 Report Card.

Approximately 20% of Canadian girls report frequent physical health problems and 30% report frequent psychological health problems. In comparison, 13% and 23% of boys report these two health problems, respectively. In a large international survey of 35 industrialized countries, the frequency of health complaints in Canadian youth were about average when compared with the other countries.

Increased rates of obesity in Canada and worldwide have coincided with increased prevalence of pre-conditions for chronic disease among children and youth, for example, insulin resistance as a pre-condition for diabetes or increased blood lipid levels as a pre-condition for heart disease. In the case of diabetes in particular, chronic disease occurs among children and youth,[50] [51] most notably among young Aboriginal Canadians.

A link has been demonstrated between physical inactivity and obesity/overweight, and psychological health, although the relationship of each of these factors to psychological health is independent.[52]

Analysis of the 2001/02 Health Behaviour in School-aged Children Survey indicates that both boys and girls with higher physical activity levels are less likely to report psychological health issues such as feeling "low," irritability, nervousness or difficulty sleeping. Overweight and obese youth report higher levels of both physical and psychological health complaints.[48]

While the grade for this indicator is average, given the opportunity for physical activity to improve both physical and psychological health, efforts should be made to improve the outcomes in this area.

Further analysis is needed to fully assess health implications across population groups, particularly physical activity in relation to youth with a disability, who typically are marginalized from participation. Data now emerging with respect to new immigrant families should also be examined in future report cards.

The Coalition for Active Living Pan-Canadian Physical Activity Strategy recommends that federal, provincial and territorial health agreements include physical activity counselling as a reimbursable expense for physicians.

RECOMMENDATIONS FOR ACTION: WHAT CAN WE DO RIGHT NOW?

The need for comprehensive long-term strategies to effectively address the issue is well recognized. The Coalition for Active Living has defined these in its Pan-Canadian Physical Activity Strategy,[53] which outlines numerous recommendations for creating sustainable long-term change and identifies children and youth among its strategic priorities.

Clearly, immediate action is necessary to reverse some of the stagnant and downward trends identified in the data on the previous pages. What can we do right now about the broad issue of inactivity among Canada's children and youth?

While the problem is complex, some key areas for action emerge across indicators and categories.

Canadian parents and caregivers need to be empowered and supported to understand, advocate for and increase the physical activity levels of children and youth. Parents need this support from their bosses, their elected officials and providers of the programs and services – schools, industry and medical and social services – they access.

In particular, parents need support to increase their family's incidental, unstructured physical activity that is part of day-to-day living.

Barriers for parents include lack of time, an "over-programmed" and technology-driven society, perceived issues of safety, and confusion on how the issue really affects them. Academic, government, non-government and corporate sectors all need to play a role in addressing these barriers and supporting parents.

Three immediate actions involving support across government, non-government and corporate sectors that can begin to be implemented within a year are described below.

1. A MULTI-FACETED PUBLIC AWARENESS INITIATIVE DIRECTED AT PARENTS AND CAREGIVERS THAT RE-ESTABLISHES THE IMPORTANCE OF UNSTRUCTURED PHYSICAL ACTIVITY AND "PLAY" AMONG FAMILIES.

Role modeling, family physical activity time, unstructured and incidental activity, and active transportation provide immediate and future benefits to the physical and psychological health of the entire family. These simple ways of being active need to be better understood and to become valued and ingrained in behaviour. For parents, trying to schedule the time, and foot the bill, for their children's physical activity programming can be stressful. They need support to simplify. The environment may also be a beneficiary of such an effort.

Corporations, government, and non-government organizations need to work in partnership to develop and disseminate messages and activities that help parents reclaim the value of family time, with direction on simple strategies to turn that into active family time.

Nationwide research and parent consultations can be conducted to better assess the barriers to, and discuss the value of, unstructured physical activity.

To support this work, relevant support materials for parents that communicate the value of unstructured physical activity and provide strategies on how to implement that activity into family life can be distributed through government, non-government and corporate networks that provide other supports and information to parents.

Policy initiatives can also begin. Corporations should consider instituting flexible time policies in the workplace that would facilitate opportunities for family physical activity. The federal government should develop policies that support family physical activity time. Municipal governments need to ensure that parks are supervised and well maintained and to increase free, unstructured family activity times in facilities, including school-community partnerships.

2. CONSISTENT DELIVERY OF QUALITY HEALTH AND PHYSICAL EDUCATION CLASSES AND SCHOOL-BASED DAILY PHYSICAL ACTIVITY POLICIES NEEDS TO BE IMPLEMENTED, ENFORCED AND EVALUATED IN ALL PROVINCES.

Progress has begun in Alberta and Ontario, but other provinces need to take action toward meeting this goal. Even if support for unstructured activity time for families does become a reality, the time in the day outside of school and work is limited.

To support parents in getting their kids to be more active, schools should help kids become more active – through quality programs – as an essential element of their education. Typically, advocacy efforts have been aimed at educators and government officials. Some of the most sophisticated parent advocates have not known how to ask the right questions to advocate for increased physical activity in their child's school.

Grassroots advocacy initiatives need to target their supports to parents. A well-equipped group of parents focused on an issue has tremendous influence at the school, board and provincial level.

Governments need to provide the resources necessary to ensure effective implementation and evaluation of physical education and physical activity policies. Simple development of these policies is not sufficient to ensure that they are implemented. Partnerships with non-government organizations that provide support programs and resources should be enhanced to ensure that trained, qualified personnel consistently implement policies. Quality programs will encourage lifelong participation among all children, and engage those who typically have been marginalized in physical activity settings.

Strong partnerships with the research community are needed to support effective evaluation of policies on health and physical education and daily physical activity.

Community partnerships and community engagement processes that leverage the supports and resources of the health, recreation and education systems need to be expanded in each province to support effective implementation of policies on health and physical education and daily physical activity, including after-school programming. These policies need both government and non-government support.

Corporations need to take a stand on the importance of future employees coming to their organization as educated, healthy, well-rounded individuals. Corporations should do so in partnership with existing government and non-government initiatives, and should implement industry policies regarding products and services that will contribute to enhancing physical activity among children and youth.

3. STEP AWAY FROM THE SCREEN, AND KEEP STEPPING.

In our technological age, parents need guidance and support with respect to the amount of screen time that is appropriate among children and youth.

Half of Canadian parents rely on a health professional to gauge whether their child is at a healthy weight.[27] Physicians can provide valuable input on aspects of active, healthy living. The CPS guideline of no more than two hours of recreational screen time per day, and the position of both the Canadian Paediatric Society and the College of Family Physicians of Canada on decreasing sedentary time in accordance with the guidelines in Canada's Physical Activity Guide for Children and Youth, must be better communicated to parents through doctor's offices and community health clinics across the country.

The programs that the Canadian Paediatric Society and the College of Family Physicians of Canada have developed to support physicians in championing physical activity and reduced sedentary time in their work with families need to be implemented further and their effect evaluated.

Provincial and territorial governments should implement the recommendations of the Coalition for Active Living to provide compensation to physicians and other health professionals for time spent counselling patients to increase physical activity time and reduce sedentary time.

The messages described in recommendation 1 above should include strategies on how to replace screen time with unstructured family activity, and, as already noted, governments, non-government organizations and corporations should disseminate those messages through established parent education channels, including popular media.

Non-government organizations need to target initiatives such as "No Screens Week" directly to parents and evaluate the impact of these initiatives have on attitudes and behaviours relevant to recreational screen time among children and youth in Canadian families.

The recent trend in increasing physical activity messaging in family television programming, typically aimed at younger children, needs to be examined. *BoohBah, Sesame Street* and other children's television series are creating specific physical activity messaging as part of their programming. Many of these messages also include suggestions to reduce screen time. Public service announcements such as Concerned Children's Advertisers' Long Live Kids "Health Rock" segment also take this approach. Research should be conducted to determine whether such messaging affects the attitudes and behaviour of children and youth with respect to physical activity and screen time.

Electronic games are highly popular among children and youth. Strategies to use video game technology in a physically active manner must be explored further. Corporations that develop technological entertainment need to promote and expand the new line of physically active video and computer games (dance games, simulation games). These games need to be evaluated in terms of their impact on the physical activity levels of children and youth.

In summary, these three recommendations relate to only part of the work that needs to be done in "improving the grade" of future report cards by increasing physical activity among Canadian children and youth. The recommendations provide direction for immediate action by academics, governments, non-government organizations and corporations that will provide greater support to parents and caregivers – the primary influencer in children's lives – to increase physical activity in their families and build the foundation for children and youth to value and participate in physical activity.

APPENDIX: RESEARCH METHODOLOGY AND PRIMARY DATA SOURCES, AND THE 2006 REPORT CARD DEVELOPMENT PROCESS

RESEARCH METHODOLOGY AND PRIMARY DATA SOURCES

The primary sources of information for the 2006 Report Card were multiple cycles of the National Longitudinal Survey of Children and Youth, the most current results of the Health Behaviour in School-aged Children Survey and the Canadian Community Health Survey, surveys from the CFLRI, and select research studies and data in the category areas, as noted in the References section. While some of the data reflect provincial/territorial breakdowns, the report card does not present the findings with this detail, as the overall assessment of the categories is applicable nationwide.

National Longitudinal Survey of Children and Youth (NLSCY)

The NLSCY is a multi-purpose survey that provides a national database on the characteristics and life experiences of Canadian children as they grow from infancy to young adulthood. It is used to support evidence-based policy and provide a means for researchers to conduct research on children's development.

The survey began in 1994/95 with a nationally representative sample of children aged 0 to 11 years. Thereafter, at two-year intervals, data were collected on the original cohort of children and their families. The survey also includes a cross-sectional component, as a new sample of children aged 0 and 1 year is drawn at each cycle. One of the important features of the NLSCY (and most other surveys Statistics Canada conducts) is that children and youth from the smaller provinces are over sampled, making it possible to achieve accurate statistics at the provincial level. Design weights were developed to enable the estimation of statistics at the national and provincial levels for all children and youth in the first four cycles of the survey. In the fifth cycle, weights were calculated only for children aged 0 to 5 years.

The 2006 Report Card uses data for children from the fourth cycle of the NLSCY, conducted in 2001/02. This cycle was chosen because it is the most recent cycle that allows for an examination of interprovincial trends in measures pertaining to children aged 8 to 17 years. The analyses also report the trends, over the five cycles, for childhood body mass index, overweight and obesity, disparities and acculturation for children aged 8 to 11 years.

Canadian Community Health Survey (CCHS)

The CCHS is a Statistics Canada survey that seeks to provide regular and timely cross-sectional estimates of health determinants, health status and use of the health care system.

Data from the 2004 CCHS were used to produce overweight and obesity rates for children and youth aged 2 to 17 years. The 2004 CCHS was designed to gather information at the provincial level about the nutritional status of the Canadian population. (see the CCHS at the Statistics Canada website, www.statcan.ca).

The survey does not include residents of the three territories, Indian reserves and some remote areas, and regular members of the Canadian Armed Forces. The response rate was 76.5%. Measured height and weight were obtained for 66% of the 2- to 17-year-olds who responded to the 2004 CCHS, a total of 8,661 individuals

Health Behaviour in School-Aged Children Survey (HBSC)
The HBSC is an ongoing survey of children and youth aged 11, 13 and 15 years that takes place approximately every four years (1983/84, 1985/86, 1989/90, 1993/94, 1997/98, 2001/02). The latest survey included data from 35 countries (Currie and Roberts, 2004).[54] The World Health Organization Regional Office for Europe coordinates the HBSC, and data collection in each country is funded at the national level. Health Canada's Division of Childhood and Adolescence funded the Canadian component of the 2001/02 HBSC.

CANADIAN FITNESS AND LIFESTYLE RESEARCH INSTITUTE (CFLRI)

Physical Activity Benchmarks/Monitoring Program
The CFLRI Physical Activity Benchmarks/Monitoring Program is a joint venture of the CFLRI, the Fitness/Active Living Unit of Health Canada and the Interprovincial Sport and Recreation Council.

Physical Activity Monitor
The Physical Activity Monitor is part of the Physical Activity Benchmarks/Monitoring Program. It is an annual telephone survey that tracks changes in physical activity patterns, factors influencing participation, and life circumstances in Canada, that is, outcome indicators of the efforts to increase physical activity among Canadians.

To date, seven cycles of the Physical Activity Monitor have been completed:
- 1995 Physical Activity Monitor
- 1997 Physical Activity Monitor
- 1998 Physical Activity Monitor (focus on communication strategies)
- 1999 Physical Activity Monitor (focus on community sport and recreation)
- 2000 Physical Activity Monitor (focus on children and schools)
- 2001 Physical Activity Monitor (focus on physical activity in the workplace)
- 2002 Physical Activity Monitor (focus on trend information or monitoring changes in benchmark indicators, as well as monitoring the joint governmental goal of reducing physical inactivity by 10% or 6 percentage points by 2003.

This Report Card accesses data from the 2004 and 2005 Physical Activity Monitor. It also draws upon the 2005 Capacity Study - Increasing Physical Activity: Enhancing Municipal Opportunities.

Tell Them From Me (TTFM)
Tell Them From Me is an evaluation system for school reform and evidence-based decision making. A Web-based evaluation system, the TTFM allows teachers and students in Grades 6 to 12 to give continuous feedback on a concise set of school indicators that are directly linked to school policy and practice. Data from the student surveys focus on measures of "student outcomes" or "classroom and school processes." The TTFM results are linked to national benchmarks so that schools can see how well they fare on certain indicators without being compared to particular schools.

The 2006 Report Card accesses data from TTFM to inform indicators in neighbourhood safety, proximity to recreation/play spaces and areas of healthy growth and development including self-esteem, physical health and psycho-social health development.

2006 REPORT CARD DEVELOPMENT PROCESS

Background – 2005 Report Card on Physical Activity for Children and Youth
In May 2005, the first annual Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth was released. The report card is a research-based communications piece designed to provide insight on "the state of the nation" each year, on how, as a country, we are taking responsibility for providing physical activity opportunities for children and youth. The 2005 Report Card was presented in both a summary format and a more detailed long form version, distributed in both hard copy and on the Web (www.activehealthykids.ca). The overall grade for the 2005 Report Card was D.

The grade assumption considered the following assessment approach, as well as the indicators in each area:

A = Canadian children and youth are active enough and reaching optimal growth and development
B = Majority of Canadian children and youth are active enough and reaching optimal growth and development; however, children who are obese, physically or mentally challenged may not have appropriate physical activity opportunities provided
C = Insufficient appropriate physical activity opportunities and programs available to large segments of Canadian Children and youth.
D = Insufficient appropriate physical activity opportunities and programs available to the majority of Canadian children and youth.
F = Canadian children and youth have a sedentary lifestyle.

The 2005 Report Card was a starting point and examined indicators in the research categories listed below. Where possible, an assessment of disparities in relation to gender and socioeconomic status, trends over time, and international comparisons were part of the grade assignment process. For some indicators, national data required for proper assessment did not exist, and therefore those indicators were marked "INC" for incomplete.

Physical Activity/Inactivity
This category examined measures of physical activity and sedentary time and included the following indicators and grades:
- Activity Levels: D
- Screen Time: C-
- Sport Participation: C+

Family
This category examined the influence of parental and family behaviour and included the following indicators and grades:
- Family Physical Activity: D
- Ensuring That Kids Are Active: C-

Community Environment
This category assessed physical activity opportunities offered in Canadian communities, as well as the built infrastructure of those communities, and included the following indicators and grades:
- Access and Quality of Programs: C
- Community Infrastructure: INC

School
This category assessed opportunities for physical activity in the school environment and included the following indicators and grades:
- Daily Physical Education: F
- Trained Personnel: D-
- School-Based Physical Activity Opportunities: INC

Policy
This category assessed government policy support for physical activity in Canada and included the following indicators and grades:
- Federal Strategies and Investments: C-
- Provincial/Territorial/Municipal Strategies and Investments: INC

Health
This category assessed the health implications of physical inactivity and included the following indicators and grades:
- Overweight/Obesity: F
- Chronic Disease Risk Factors: INC

The 2005 Report Card categories and indicators were developed from a much larger list created at the 2004 National Physical Activity Symposium (see www.activehealthykids.ca).

We can expect the report card, given adequate resources, to evolve into an annual comprehensive measurement/benchmark of physical activity for children and youth. The knowledge and insight gained from each annual report card should be used to influence building better programs, creating better messages and developing better policies.

The indicators and the methodology for data gathering should be refined further with each subsequent annual report card, involving input from various issue experts and stakeholders. Future versions should become more detailed and include elements such as provincial breakdowns and more specific indicators. The 2006 Report Card is the latest step in the evolution of this annual assessment and communication tool.

2006 Report Card Development
The results of the 2005 Report Card on Physical Activity for Children and Youth were used as a starting point to establish the indicators, data collection and data analysis for the 2006 Report Card. Data were analyzed and translated into the content for a long form version of the report card and a version in summary format.

Research Work Group
A research work group, which included an interdisciplinary selection of experts, informed and supported the development of the 2006 Report Card.

Chaired by Dr. Mark Tremblay, the Active Healthy Kids Canada chair, the research work group was made up of the following members:

- Dr. Lise Gauvin– University of Montreal
- Dr. Ian Janssen – Queen's University
- Dr. Doug Willms – Canadian Research Institute for Social Policy, University of New Brunswick
- Dr. Larry Frank – University of British Columbia
- Dr. Jean Côté – Queen's University
- Cora Craig – Canadian Fitness and Lifestyle Research Institute

This team engaged other experts as necessary and built on the work of the 2005 Report Card, providing guidance on the indicators and data required for the 2006 Report Card.

Improving the Grade: Action Planning Forum
On February 9, 2006, Active Healthy Kids Canada hosted a national action planning forum to explore the requirements and options for improving the level and nature of participation in physical activity among Canadian children and youth, and thereby improving the grade for future report cards. Fifty-five participants, representing Canada's governmental, research, non-government and corporate sectors in all parts of the country, took part in this national action planning forum.

Over the course of a day, attendees deliberated in several small groups on how to improve the grade of Canada's Report Card on Physical Activity for Children and Youth in one to three years by working within their own sector and in collaboration with other sectors.

The dialogue yielded the following recommendations for all who have a stake in the future health and well-being of the youngest members of Canadian society.

1 Establish a national policy on physical activity for Canadian children and youth, one that clearly and succinctly spells out the following:

- The optimum levels of physical activity among Canadian children and youth to be targeted
- The special needs of low-income, rural, ethnoracial and Aboriginal populations
- The projected costs associated with stakeholders's lack of action to effect change in these physical activity choices
- The roles, responsibilities and expectations involved in making change, which should be promoted to parents, schools, communities, organizations, health-related providers and various levels of governments
- The diverse range of measures, approaches, actions, tools and resources for use by governments, organizations and individuals in bringing about the desired changes

Inclusive measures for physical activity promotion are clearly preferred, such as setting minimum play times in childcare and school settings eliminating user fees at municipal recreational facilities, instituting a "nobody gets cut, everybody plays" policy for intramural school sports and establishing physical activity mentoring programs.

2 Develop a long-term research and evaluation agenda and approach, to which all sectors may contribute, that does the following:

- Defines the terms and indicators for "sport," "recreation" and "physical activity"
- Uses a population health framework
- Provides for the measurement of change over time
- Helps build capacity for evaluation at the community level by:
  - Engaging communities and appropriate stakeholders before the design of evaluation studies
  - Developing research process and outcome evaluation for community application
  - Creating national data systems that provide for data sampling at the provincial and community program levels, and that allow for consistent measurement across populations

3 Evaluate the Active Healthy Kids Canada report card to assess its effect.

4 Develop a specific report card on physical activity among Aboriginal youth.

5 Ensure that financial and human resources support the objectives of any policy, program or initiative.

6 Expand the base of collaborators to include greater representation from foundations, corporations, municipalities and media organizations at forums such as the one Active Healthy Kids Canada hosted.

7 Finds ways to alleviate the tension surrounding liability in relation to participation in physical activity.

8 Improve how corporations communicate their current activities for fostering physical activity among children and youth, whether through direct action or through the funding of initiatives by others. Corporations should also raise the profile of active, healthy living for children, parents and families among their employees and customers (through packaging and at retail outlets, for example) and share their knowledge of what works and does not work in fostering change in children's physical activity choices.

9 Explore further the issue of leadership. This topic was discussed at the forum, but the time available did not allow for conclusions to be reached. The substance of this dialogue is described below and offers direction for future deliberations on this issue.

Some participants expressed the need for one entity, whether existing or new, to advise on, coordinate or direct investments, decisions and actions among major collaborators. Ideally, the mandate of this entity would be to establish long-term direction, prioritize needs, clarify roles, spotlight effective initiatives, improve communications with government and facilitate accountability among operatives. At the forum, government representatives in particular suggested that such an entity could simplify their decision making with respect to policy-making and fund allocations. Some attendees from other sectors said that this entity could facilitate the entry of new collaborators into the process and simplify their own understanding of what steps various stakeholders are taking and to what effect. Participants acknowledged these merits but raised questions concerning the mandate of this entity. Would it be an advocate, a coordinator of the actions of others or an agent acting on behalf of others? Would it advance or undercut the effectiveness of all groups? Despite the uncertainty on this matter, stakeholders expressed a shared commitment to continue working toward the changes needed to make Canada's children and youth more physically active.

These recommendations were cross-referenced with existing strategy work, particularly the Pan Canadian Physical Activity Strategy of the Coalition for Active Living. Using the results of the Improving the Grade: Action Planning Forum, specific recommendations for immediate action were created and provided in the 2006 report card.

Indicator Development, Data Collection and Analysis, and Content Development
As previously noted, as the first step in developing the 2006 Report Card, the Research Work Group examined the indicators that were included in the 2005 Report Card and reviewed the indicators identified at the 2004 National Physical Activity Symposium. The group then identified and ranked the indicators for the 2006 Report Card, on the basis of available data and research and key issue areas that could be graded.

Once gathered, the raw report card content was organized into this detailed version of the report card and condensed to produce a summary report card. The summary report card is very concise and is designed to be a compelling communication piece, while the long form provides the more detailed evidence base for indicator grades. The promotion and distribution of the report card involve a variety of vehicles, ranging from media strategies to dissemination through stakeholder networks.

REFERENCES

[1] Plotnikoff, R.C., Berkovitz, K., and Constantinos, A.L. (2004) Physical Activity, Smoking and Obesity Among Canadian School Youth: Comparison Between Urban and Rural Schools. Canadian Journal of Public Health, 2004 November-December: 413-418.

[2] First Nations Regional Longitudinal Health Survey. 2002/2003. Summary Document.

[3] Janssen, I, Boyce, W.F., Simpson, K, and Pickett, W. (2006) Influence of individual- and area-level measures of socioeconomic status on obesity, unhealthy eating, and physical activity in Canadian adolescents. American Journal of Clinical Nutrition, 2006; 83:139-145.

[4] Humber, M.I., Chad, K.E., Spink, K.S., Muhajarine, N., Anderson, K.A., Bruner, M.W., Girolami, T.M., Odnokon, P., and Gryba, C.R. (2006). Factors that Influence physical activity participation among high- and low-SES youth. Qualitative Health Research, Vol. 16 No. 4, April 2006 467-483.

[5] Tremblay, M.S., Barnes, J.D., Copeland, J.L., Esliger, D.W. (2005) Conquering childhood inactivity: Is the answer in the past? Medicine and Science in Sports and Exercise. 0195-9131/05/3703-1187-1194.

[6] Tremblay, M.S., Barnes, J., Esliger, D., Copeland, J. (2005) Moving ahead by looking back: A novel approach for establishing physical activity guidelines for children. Canadian Population Health Initiative Report, Canadian Institute for Health Information. June 2005.

[7] American Academy of Pediatrics: Children, adolescents and television. Pediatrics 2001; 107(2):423-426

[8] Mark, A.E., Boyce, W.F., and Janssen, I. (2006) Television viewing, computer use and total screen time in Canadian youth. Pending publication – submitted to the Journal of Pediatrics and Child Health.

[9] Brown, J.D. and Witherspoon, E.M. (2002) The mass media and American adolescent's health. Journal of Adolescent Health 2002;31 (6 Supplement):153-170.

[10] Francis L.A., Lee, Y., Birch, L.L. (2003) Parental weight status and girls' television viewing, snacking and body mass indexes. Obesity Research 2003; 11(1):143-151.

[11] Robinson, T.N. Television viewing and childhood obesity. (2001) Pediatric Clinic of North America 2001; 48(4):1017-1025.

[12] Marshall, S.J., Biddle, S.J., Gorely, T., Cameron, N., Murdey, I. (2004) Relationships between media use, body fatness and physical activity in children and youth: a meta-analysis. International Journal of Obesity Related Metabolism Disorders 2004; 28 (10): 1238-1246.

[13] Tremblay, M.S., Willms, J.D. (2003) Is the Canadian Childhood obesity epidemic related to physical inactivity? International Journal of Obesity Related Metabolism Disorders 2003; 27(9);1100-1105.

[14] Larson, R.W. (2000) Toward a psychology of positive youth development. American Psychologist 55, 170-183

[15] Robertson-Wilson, J., Baker, J., Derbinshyre, E., & Côté, J. (2003). Childhood Sport Involvement in Active and Inactive Adult Females. AVANTE, 9, 1-8.

[16] Baker, J., Côté, J., & Abernethy, B. (2003). Sport-specific practice and the development of expert decision-making in team ball sports. Journal of Applied Sport Psychology, 15, 12-25.

[17] Fraser-Thomas, J., Côté, J., & Deakin, J. (2005). Youth sport programs: An avenue to foster positive youth development. Physical Education and Sport Pedagogy, 10, 49-70.

[18] Wright, A. & Côté, J. (2003). A retrospective analysis of leadership development through sport. The Sport Psychologist, 17, 268-291.

[19] Carlson, R. C. (1988). The socialization of elite tennis players in Sweden: An analysis of the players' backgrounds and development. Sociology of Sport Journal, 5, 241-256.

[20] Gould, D., Tuffey, S., Udry, E., & Loehr, J. (1996). Burnout in competitive junior tennis players: II. Qualitative analysis. The Sport Psychologist, 10, 341-366.

[21] Wall, M. & Côté, J. (in-press). Developmental Activities that Lead to Drop Out and Investment in Sport. Physical Education and Sport Pedagogy.

[22] Brustad, R.J. (1993) "Who will go out and play? Parental and psychological influences on children's attraction to physical activity", Pediatric Exercise Science, 5(3): 210-233.

[23] Centers for Disease Control and Prevention (1997) "Guidelines for School and Community Programs to Promote Lifelong Physical Activity Among Young People", MMWR, 46(RR-6).

[24] DiLorenzo, T. (1998) "Determinants of exercise among children. II. A longitudinal analysis", Preventive Medicine, 27(3): 470-477.

[25] Trost, Sallis and Pate (2003) Evaluating a model of parental influence on youth physical activity. Americal Journal of Preventative Medicine. November 2005 (4): 277-282.

[26] Health Canada (2002) Canada's Physical Activity Guide for Children, Ottawa, ON: Public Health Agency of Canada (formerly Health Canada). Available online at: www.phac-aspc.gc.ca/pau-uap/paguide/

[27] Health Canada (2002) Canada's Physical Activity Guide for Youth, Ottawa, ON: Public Health Agency of Canada formerly Health Canada). Available online at: www.phac-aspc.gc.ca/pau-uap/paguide/

[28] Dietitians of Canada and Kraft Canada Inc. (2005) Speaking of Food and Healthy Living, Children and Healthy Weights: Parents' Perspectives, Toronto, ON: Available online at: www.dietitians.ca/news/highlights.asp

[29] Canada Activity and Health Survey (2006) Report prepared for Sunkist Growers by Horizon Research Corporation.

[30] Craig, C., C. Cameron, S. Russell, and A. Beaulieu (2001) Increasing physical activity: Supporting children's participation, Ottawa, ON: Canadian Fitness and Lifestyle Research Institute.

[31] Hoefer, W.R., T.L. McKenzie, J.F. Sallis, S.J. Marshall, and T.L. Conway (2001) "Parental provision of transportation for adolescent physical activity", American Journal of Preventive Medicine, 21(1): 48-51

[32] Sallis, J.F. (2000) "A review of correlates of physical activity of children and adolescents", Medicine and Science in Sports and Exercise, 32(5): 963-975

[33] Johnson, H. (1995) Children and youths as victims of violent crime. Statistics Canada Analytical Studies and Reports. ISSN: 0715-271X

[34] Totten, M. (2004) M.A.R.S. Literature and Best Practices Review. Summarising the risk and protective factors related to the harassment and abuse of young people in recreation settings. A Report Prepared for the Canadian Parks and Recreation Association.

[35] Frank, L.D., Kerr, J, and Sallis, J. (2006). Urban form relationships with walk trip frequency and distance among youth. Pending Publication: Submitted to the American Journal of Health Promotion.

[36] Norman, G.J., Nutter, S.K., Ryan, S, et al. (2006) Community design and access to recreational facilities correlates of adolescent physical activity and body mass index. Journal of Physical Activity and Health 2006; 3 (Suppl. 1):S118-S128

[37] Holt, N.L., Spence, J.C., Sehn, Z.L., Black, D.E., Tamminen, K. (2006) Children's perceptions of play and physical activity in their schools and neighbourhoods. Unpublished: Child & Adolescent Sport & Activity Research Centre, Faculty of Physical Education and Recreation, University of Alberta.

[38] Frisby, W., Alexander, T. Taylor, J, Tiron, S, Watson, C, Harvey, J. and Laplante, D. (2005). Bridging the Recreation Divide: Listening to Youth and Parents from Low Income Families Across Canada. A Report Prepared for the Canadian Parks and Recreation Association.

[39] Ewing, R. and Greene, W. (2003) Travel and environmental implication of school setting. A report prepared for the United States Environmental Protection Agency.

[40] 2004 National Active Transportation Survey. Prepared for Go for Green by the Canadian Fitness and Lifestyle Research Institute.

[41] 1998 National Survey on Active Transportation. Report Prepared for Go for Green by Environics Canada.

[42] Active Transportation in Four Canadian Cities. (2005) Report prepared fro Go for Green by Allium Consulting Group.

[43] Barnett, T.A., O'Loughlin, J., Gauvin, L., Paradis, G., and Hanley, J. (2006) Opportunities for physical activity in elementary schools: A cross-sectional survey of frequency and correlates. Health Education and Behaviour Vol.33(2):215-232.

[44] Canadian Institute for Health Information Report (2004) Improving the Health of Canadians.

[45] Veuglers, P.J. and Fitzgerald, A.L. (2005) Effectiveness of school programs in preventing childhood obesity: A multi-level comparison. American Journal of Public Health Vol 95(5): 432-435.

[46] Naylor, P.J., Macdonald, H.M., Reed, K.E. and McKay, H.A. (2006) Action Schools! BC: A socioecological approach to modifying chronic disease risk factors in elementary school children. Public Health Research, Practice and Policy Vol.3(2): 1-8.

[47] Shain, M. (2005) Living School Initiative Program Evaluation Report. Prepared for submission to the Ontario Ministry of Health Promotion in association with the Ontario Physical and Health Education Association.

[48] Tremblay, M.S., T. Pella and K. Taylor. The quality and quantity of school-based physical education: a growing concern. CAHPERD Journal 62(4):4-7, 1996.)

[49] Shields, M. (2005) Measured Obesity: Overweight Canadian Children and Adolescents. Statistics Canada, Analytical Studies and Reports. ISSN: 1716-6713

[50] Pinhas-Hamel, O. and Zeitler, P. (2004) The global spread of Type 2 diabetes Mellitus in children and adolescents. Medical Progress

[51] Lee, J.M., Herman, W.H., McPheeters, M.L. and Gurney, J.G. (2006) An epidemiologic profile of children with diabetes in the U.S. Diabetes Care Vol.9 (2) 420-421.

[52] Janssen, I., Katzmarzyk, P., Boyce, W.F., and Pickett, W. (2004). The Independent Influence of Physical Inactivity and Obesity on Health Complaints in 6th to 10 Grade Canadian Youth. Journal of Physical Activity and Health, 2004, 1, 221-343.

[53] The Pan-Canadian Physical Activity Strategy. Coalition for Active Living. Available online at www.activeliving.ca.

[54] Currie, C., Roberts, C., Morgan, A., Smith, R., Settertobulte, W., Oddrun, S., and Barnekow Rasumssen V. (2004) Young people's health in context. Health Behaviour in School-aged Children (HBSC) study: international report from the 2001/2002 survey. World Health Organization.

[i] Ewing, R. and Greene, W. (2003) Travel and environmental implication of school setting. A report prepared for the United States Environmental Protection Agency.

[ii] 2004 National Active Transportation Survey. Prepared for Go for Green by the Canadian Fitness and Lifestyle Research Institute.

[iii] 1998 National Survey on Active Transportation. Report Prepared for Go for Green by Environics Canada.

[iv] Active Transportation in Four Canadian Cities. (2005) Report prepared fro Go for Green by Allium Consulting Group.

1185 EGLINGTON AVENUE EAST, SUITE 501 TORONTO, ON M3C 3C6 1 888 446 7432

WWW.ACTIVEHEALTHYKIDS.CA