Final Report: *Physical Activity Working Group*
Recommendations for Obesity Reduction in BC

FINAL

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Prepared for the Obesity Reduction Task Force
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TABLE OF CONTENTS

1 EXECUTIVE SUMMARY

In April 2009 the BC Health Officers Council passed a unanimous resolution to develop a comprehensive obesity reduction strategy that engages multiple sectors at provincial and community levels in a collaborative effort to prevent obesity. Provincial Health Services Authority Centres for Population & Public Health (CPPH) is supporting this initiative and formed a Provincial Obesity Task Force in June 2009. Four working groups (Food, Physical Activity, Treatment and Evidence) were formed to develop recommendations to be submitted to the Task Force. These recommendations form the basis of the provincial Obesity Reduction Strategy.

The Physical Activity Working Group (PAWG), composed of representatives from organizations involved in physical activity programs, policies and research across the province, met from February to April 2010. The PAWG started with a review of the relevant literature to identify evidence-based recommendations. This was followed by a gap analysis comparing current initiatives in BC with the relevant literature and population health needs. Finally, key themes were identified and priority recommendations selected.

Key Findings:

- Almost half (46%) of all Canadians remain inactive
- 58% of British Columbians are physically active
- Physical activity rates range from 50.1% to 70.6% in BC
- More than half of the population 35 years and over is inactive
- Some populations in Canada and BC are more at-risk of overweight and obesity due to a number of determinants. These populations include:
    - Residents of rural and/or remote areas in BC
    - Those living on low income
    - Aboriginal British Columbians
    - Immigrant populations in BC

Recommendations:

A review the literature and current practice identified a number of evidence-based recommendations which the PAWG prioritized into five action areas:

1. **Community Planning and Active Transportation:** Support local governments to adopt an active transportation plan for each community, to develop a long-term vision for encouraging physical activity through land use and other community planning strategies.
2. **Community Coalitions and Mobilization:** Support communities to build intersectoral coalitions between citizens, municipal government, school districts, relevant community organizations, and the private sector to develop shared goals and coordinate actions to promote physical activity opportunities for all citizens.
3. **Access and Target Populations:** Ensure all citizens have access to formal and informal physical activity opportunities by removing traditional barriers

including cost, cultural and language disconnections, geographic location and transportation issues.

4 **Schools & Early Learning:** Schools and child care facilities offer unique and powerful opportunities to influence children and youth, to establish healthy behaviours that could endure for life. Build on existing programs and resources in schools and child care facilities to ensure a return on the investment that has already been made in the province.

5 **Supports to Ensure High-Quality Programs, Policy, and Practice:** Support program, policy and practice changes with high quality, relevant data, case studies, and knowledge exchange opportunities that address the determinants of health, build community capacity, improve the quality and exchange of information about program and policy successes, and ensure that all partners involved in program and policy implementation are well informed and adequately resourced.

A complete list of the priority recommendations can be found below.

2 INTRODUCTION

In April 2009 the BC Health Officers Council passed a unanimous resolution to develop a comprehensive obesity reduction strategy that engages multiple sectors (e.g. public policy makers, corporations/industry, non-government organizations and academia) at provincial and community levels in a collaborative effort to address this wholly preventable and treatable epidemic.

PHSA Centres for Population & Public Health (CPPH) is supporting this initiative and began by forming a Provincial Obesity Task Force in June 2009. The Task Force goals are: (1) to develop a comprehensive Obesity Reduction Strategy (ORS) for BC that places an emphasis on engaging and mobilizing a broad range of partners and (2) to mobilize resources across all sectors to implement the strategy. In January 2010, four working groups (Food, Physical Activity, Treatment and Evidence) were formed to develop recommendations to be submitted to the Task Force at a Spring Forum. The final ORS will be launched at a Summit in September 2010.

This report represents the Physical Activity Working Group submission to the Task Force for the overall ORS report. The Physical Activity Working Group (PAWG), composed of representatives from organizations involved in physical activity programs, policies and research across the province, met from February-April 2010. The intent of the Physical Activity Working Group (PAWG) is to build on the significant momentum in the province from initiatives implemented through government (e.g. Act Now BC) and NGO initiatives (e.g. BC Healthy Living Alliance Healthy Living Strategy). The approach used by the PAWG started with a review of the relevant literature to identify evidence-based recommendations followed by a gap analysis comparing current initiatives in BC with the current literature and population health needs. Finally, key themes were identified and priority recommendations selected.

Physical Activity Working Group Approach:

The following is the final report of the PAWG to be presented to the ORS Task Force.

3 RECOMMENDED APPROACH FOR THE ORS

The Physical Activity Working Group recommends the following general approach be used within the Obesity Reduction Strategy (ORS):

- Work to create a shift in thinking that moves beyond a focus on individual behaviour change, to a broader 'whole of community' approach that emphasizes the important role of the social determinants of health in the development of chronic disease and the potential role of community action in improving health and reducing obesity.

- Ensure that the final mix of recommended strategies contains a balance of individual-oriented approaches with broader strategies that focus on the underlying societal

- Enhance the focus for the ORS on identifying and addressing the needs of those populations at high risk for physical inactivity and/or obesity, including Aboriginal people and low income families.

- Ensure that all recommendations in the ORS reflect an understanding and accommodation for the unique strengths and needs of rural or remote communities that have limited access to some formal services, including recreation.

- Use a life course approach, emphasizing those stages in life during which many British Columbians run the risk of leaving the healthy weight trajectory.

- Provide better supports for sustained implementation of programs in child care, schools, community and health care settings. This will be possible with an overall enhancement to investment in public health and health promotion.

- Limit disease-specific strategies and plans.

- Ensure this work is linked with Core Public Health Programs in each Health Authority where there are shared goals. Specifically, the ORS should link with the Healthy Living and Prevention of Chronic Disease, Healthy Communities and Healthy Community Environments Core Programs.

- Recognize the importance of the development of the fundamental movement skills that serve as the foundation for physical activity choices and engagement across the lifespan.

- Ensure an emphasis on programs and policies that support children and youth to be active. Childhood represents a crucial time for developing and solidifying lifelong physical activity patterns.

- Ensure this work is linked with current health promotion initiatives by Aboriginal groups, communities and organizations and recognizes the diversity within Aboriginal populations which include on reserve, off reserve, status, non-status, urban and rural, Inuit and Metis.

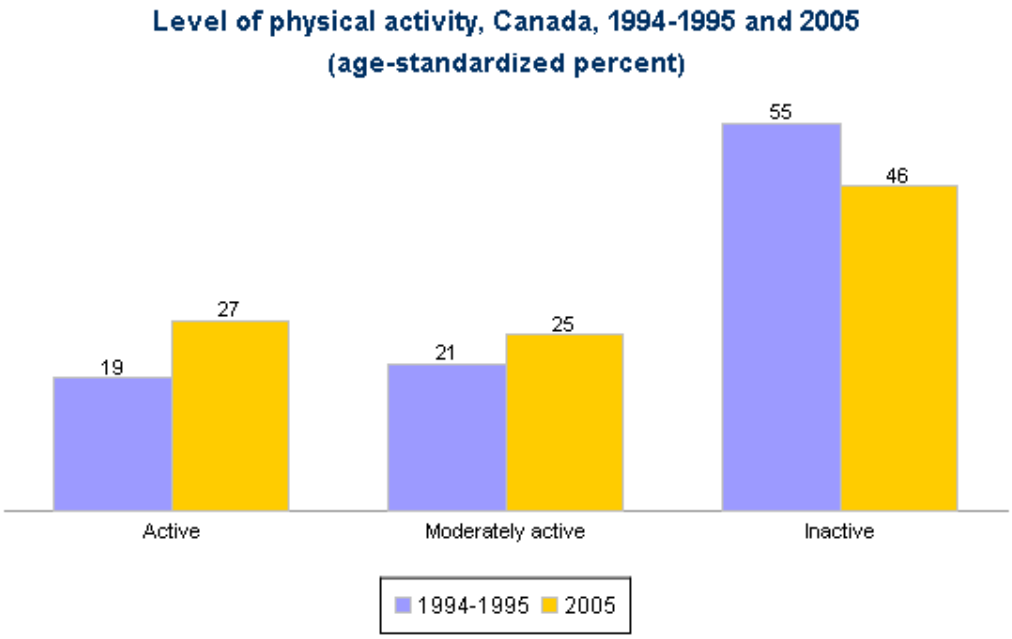
The last six years have represented substantial investment in healthy living initiatives in BC, investment that is now threatened in this economic downturn. Research indicates that when supports for initiatives are removed positive organizational changes (implementation of policies and practices) and individual behaviour changes (physical activity levels) begin to return to baseline. We can't afford to let this happen. For the recommendations in this strategy to have the desired effect of increasing physical activity and decreasing obesity among British Columbians, it is imperative that critical chronic disease prevention initiatives (where the initial development costs have already been incurred) be sustained over time and supported with further targeted action by stakeholders across sectors and levels of government. Continued supports to those non-profit organizations, health authorities, and school districts that are committed to physical activity and health promotion are essential. Sustaining current initiatives and building on the momentum that has been developed over the last few years represents an investment in the health of the BC population with the potential for significant economic benefit in the long-term.

4 PHYSICAL ACTIVITY AND OBESITY IN BC

Physical activity is a key behaviour that significantly affects an individual's physical and mental health. Higher levels of physical activity can reduce the risk for a number of chronic conditions, including overweight and obesity, cardiovascular disease, and some cancers. (see Table 1, below).

The following data comes from available sources therefore reporting years may be inconsistent.

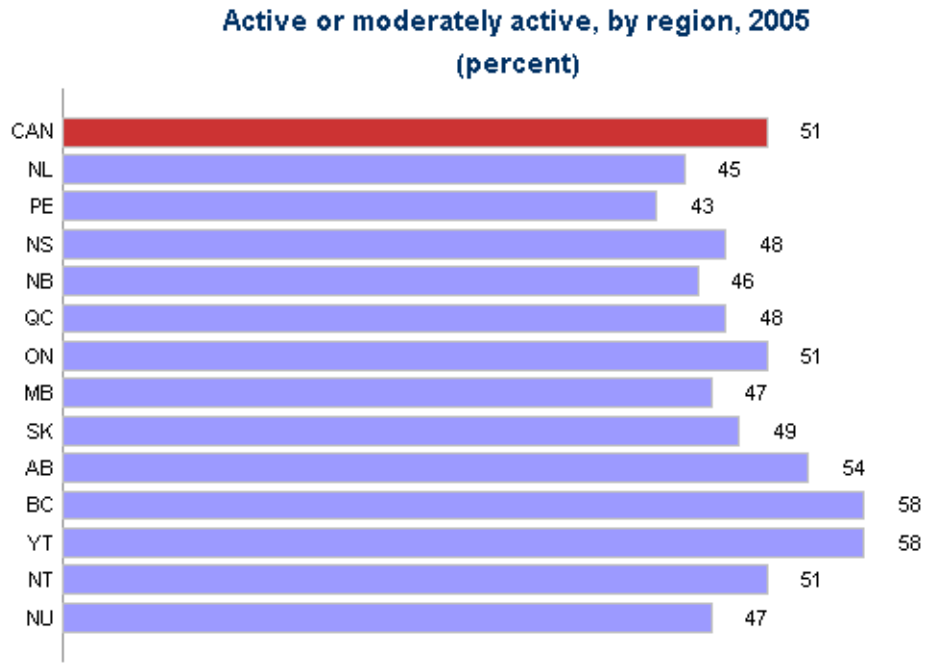
Figure 1: Physical Activity Rates in Canada



Source: Statistics Canada (2006). *Leisure-time physical activity, by sex, household population aged 12 and over, Canada, provinces and territories, occasional* (CANSIM Table 105-4033). Ottawa, Statistics Canada.

British Columbia has the highest proportion of physically active individuals of any province or territory. The proportion of the population classified as active or moderately active varied from 43% in Prince Edward Island to 58% in both British Columbia and Yukon in 2005 (see Table 2, below).

Figure 2: Proportion of the Population who are Active or Moderately Active, by Province or Territory, 2005



Source: Statistics Canada. (2006). *Leisure-time physical activity, by age group and sex, household population aged 12 and over, Canada, provinces, territories, health regions (June 2005 boundaries) and peer groups, every 2 years* (CANSIM Table105-0433). Ottawa, Statistics Canada.

While 58% of the BC population is physically active enough to achieve health benefits, there is significant geographic variation within the province. Rates of at least moderate physical activity range from 50.1% in Richmond to 70.6% in the Kootenay Boundary region of the province[1] (see Table 1, below).

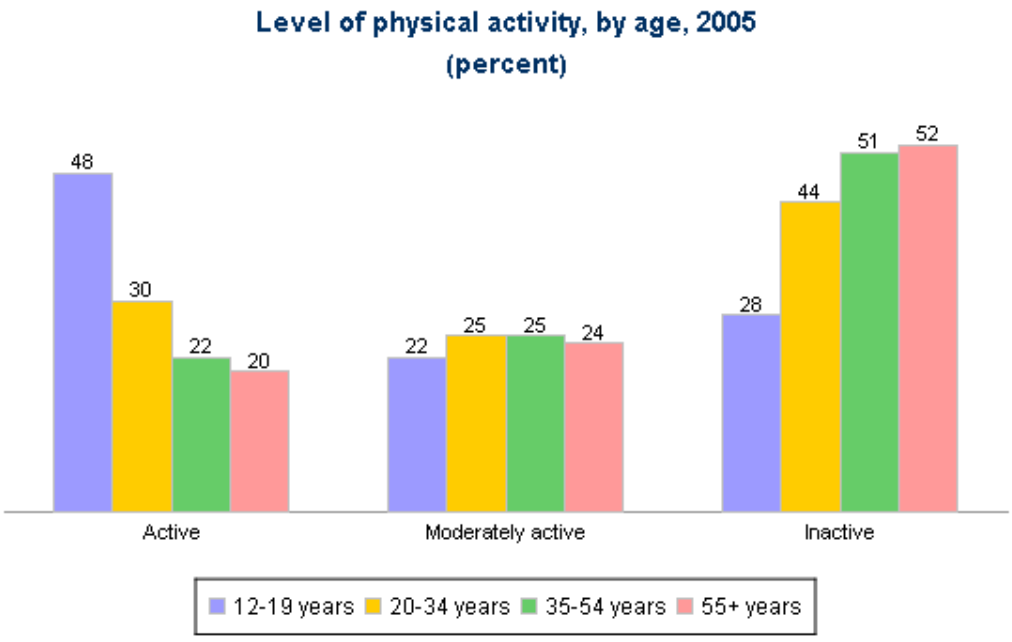
Table 1: Percent of physically active or moderately active people (aged 12+) in BC in 2007/2008

Health Region		Total	Men	Women
BC		**57.7%**	**59.1%**	**56.4%**
Interior	East Kootenay	60.1%	65.1%	55.3%
	Kootenay Boundary	70.6%	74.9%	66.3%
	Okanagan	61.7%	63.5%	60.1%
	Thompson / Cariboo	57.6%	55.8%	59.2%
Fraser	Fraser East	56.1%	54.9%	57.3%
	Fraser North	53.2%	59.4%	47.3%
	Fraser South	54.2%	56.4%	51.9%
Vancouver Coastal	Richmond	50.1%	53.0%	47.4%
	Vancouver	57.4%	58.1%	56.8%
	North Shore / Coast Garibaldi	61.8%	61.4%	62.2%
Vancouver Island	South Vancouver Island	64.8%	63.4%	66.0%
	Central Vancouver Island	56.8%	57.5%	56.1%
	North Vancouver Island	62.8%	60.5%	64.8%
Northern	Northwest	56.0%	58.5%	53.4%
	Northern Interior	61.0%	59.4%	62.7%
	Northeast	54.9%	55.4%	52.7%
Canada		**50.5%**	**53.9%**	**47.2%**

(Data Source: Statistics Canada, Canadian Community Health Survey, CANSIM annual data table 105-0501)

The proportion of the population who are inactive increases with age, from 28% of the 12 to 19 age group, to more than 50% of those aged 35 and over (see Figure 3, below).

Figure 3: Activity levels among Canadian Population, by Age



Source: Statistics Canada (2006). *Leisure-time physical activity, by age group and sex, household population aged 12 and over, Canada, provinces, territories, health regions (June 2005 boundaries) and peer groups, every 2 years* (CANSIM Table105-0433). Ottawa, Statistics Canada.

KEY FINDINGS:

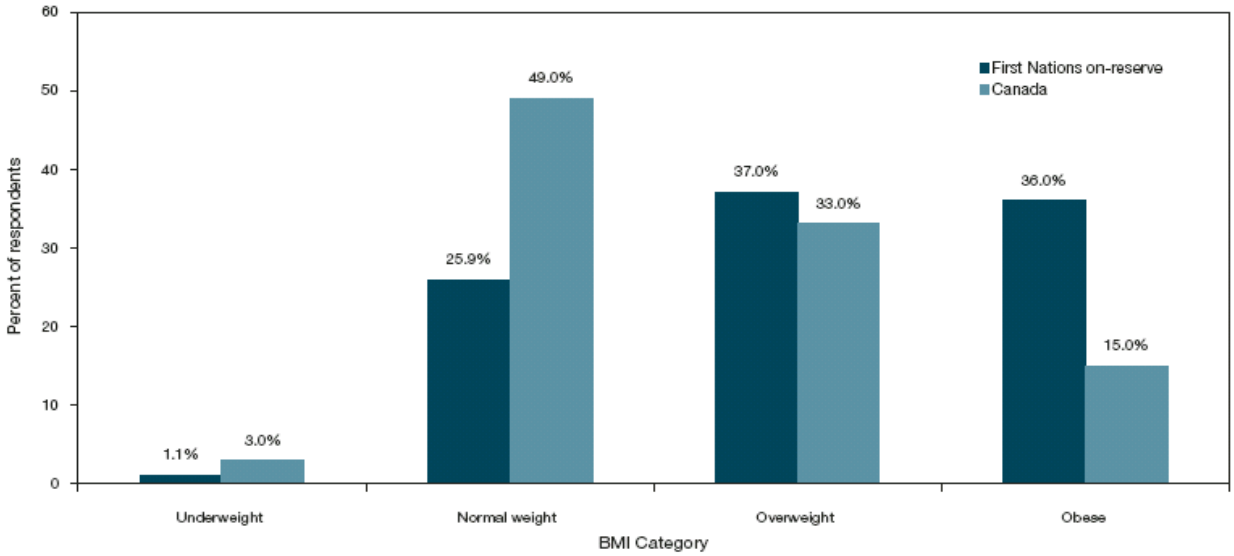
- Almost half (46%) of all Canadians remain inactive
- 58% of British Columbians are physically active
- Physical activity rates range from 50.1% to 70.6% in BC
- More than half of the population 35 years and over is inactive

4.1 At-Risk Populations

Further analysis of the above data on levels of physical activity and obesity rates among the BC population reveal that all population groups are not equally at risk. In particular, the following inequalities were identified:

- Residents of rural and/or remote areas are more at risk of overweight and obesity. Rates of overweight or obesity range from 30.1% in Vancouver, to 64.1% in the Northwest region of the province[2].
- Those living on low income are more at risk for both low physical activity levels and food insecurity than those living on higher incomes, with a gradient across all income levels. Low-income women are more at risk of obesity than low-income men;
- Aboriginal British Columbians are at increased risk, with rates of obesity at least 2 to 4 times that of the non-Aboriginal population (see Table 5, below). This increased risk is present in both children[3] and adults[4].

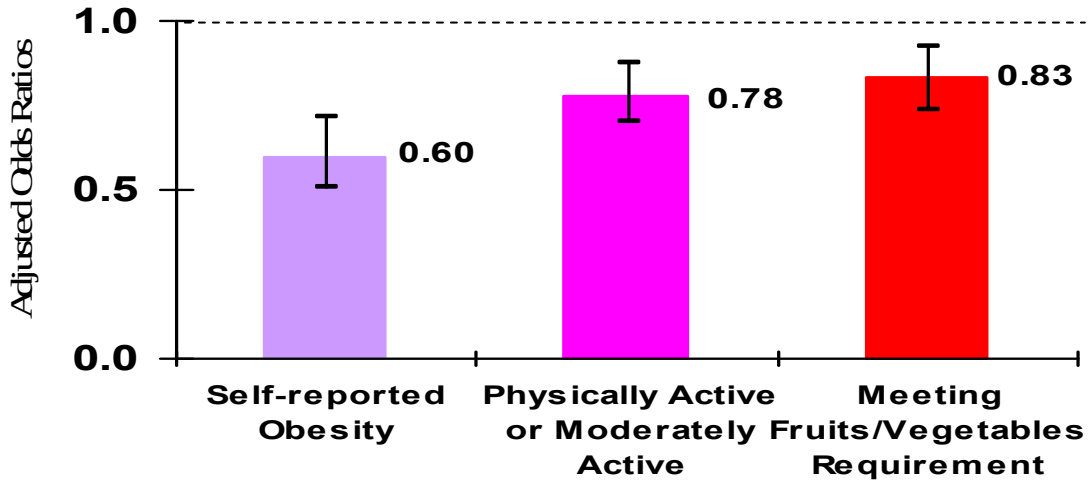
Figure 4: Body Mass Index among Adults, First Nations on-reserve (2002-03) and Canada (2003)



(Source: Health Canada, A Statistical Profile on the Health of First Nations in Canada, Determinants of Health 1999 to 2003)

- Immigrants, regardless of how long they had been in Canada, are less likely to be at least moderately active in their leisure time than are Canadians overall[5]. Immigrant populations in BC are less likely than non-immigrant populations to report being obese, being active or moderately active, or consuming enough fruits and vegetables (see Figure 5, below). British Columbia continues to be one of the top immigration destinations in Canada, with almost 10,000 new immigrants arriving in the province each year.[6]

Figure 5: Rates of Obesity, Physical Activity and Fruit/Vegetable Consumption among Immigrant Populations in BC



(Data source: Statistics Canada Canadian Community Health Survey Cycle 3.1 (2005); Study population consist of BC population. Odds ratios were obtained from multivariate logistic regression models adjusting for age, sex, income, education and immigration status.)

KEY FINDINGS:

- Some populations in Canada and BC are more at-risk of overweight and obesity due to a number of determinants. These populations include:
    - Residents of rural and/or remote areas in BC
    - Those living on low income
    - Aboriginal British Columbians
    - Immigrant populations in BC

5 GAP ANALYSIS

The following section details an environmental scan of existing strategies in the promotion of physical activity, a brief description of the evidence about effective interventions, and a discussion of the gaps in current initiatives.

5.1 Environmental Scan of Existing Strategies

From 2005-2010, there was a significant investment in healthy living strategies in British Columbia, most notably through the funding of ActNow BC, the BC Healthy Living Alliance, BC Recreation and Parks Association, Union of BC Municipalities, and 2010 Legacies Now. Leading up to the February/March 2010 Olympic and Paralympic Games in Vancouver, tens of millions of dollars were spent on healthy living initiatives in BC, including several related to physical activity and sport.

Following the onset of a significant economic downturn and the end of the Olympic and Paralympic Games, many of these initiatives were discontinued. Those initiatives that remain are listed in Appendix B. Please note that this list is current as of March 2010, it is likely to change substantially over the coming months and years. While the Working Group made an effort to ensure the list is complete, it may have missed some ongoing initiatives, particularly at the local level.

5.2 Better Practices Review

The following discussion offers a quick look at the research and emerging practice in the promotion and facilitation of physical activity as it relates to obesity prevention. While an effort was made to present the research that identifies clearly effective strategies, the PAWG thought it was also important to consider strategies that have not been systematically tested, but show significant promise as demonstrated in case studies or other, more qualitative approaches.

The evidence and strategies described here are organized into five main themes: community planning and active transportation, community coalitions and mobilization, access and target populations, schools and early learning, and supports to ensure high-quality programs, policy, and practice.

5.2.1 Community Planning and Active Transportation

For many cities and towns in BC, the built environment is one in which it has become more and more difficult to integrate physical activity into day-to-day life. The dominant

forms of modern city planning have made walking and cycling for transportation difficult: long distances between places such as school, work and shopping mean that most people cannot walk or cycle between destinations. A rapidly growing set of research is demonstrating that altering the built environment can reduce our reliance on using cars and support more active means of transportation to get to daily destinations. A relatively strong link has been established between increased physical activity and compact, mixed-use land use development that emphasize walking and cycling to increased levels of physical activity[7]. Beyond its role in the development of physical activity patterns, built environments also influence health in other ways, including affecting access to healthy food, social networks, and a 'sense of community'. This is even more important to people in our communities who need greater levels of support (e.g., children, the elderly, and families with low income) as they tend to be more negatively affected by unhealthy environments.

Achieving a shift in community planning that emphasizes more compact, walkable urban and suburban spaces will require stronger partnerships to develop among local government (including the planning, engineering, and parks and recreation departments), the health sector, and those local organizations that are committed to building social and community networks. Community and political leadership are necessary to achieve this significant shift in how our communities are planned[8].

It is important to note that much of the research that supports the set of recommendations below has been done in large urban centres. Small towns and rural areas are now learning about how much and in what ways the emphasis on these shifts in community planning can relate to their unique circumstances.

5.2.2 Community Coalitions and Mobilization

Action at the community level, through formal or informal coalitions and networks, is vital to efforts to improve physical activity levels and reduce obesity, particularly among those populations at greater risk of ill health. The available evidence in health promotion suggests that community action is best supported through the use of community coalitions: groups of public- and private-sector organizations that, together with individual citizens, work to achieve a shared goal through the coordinated use of resources, leadership, and action[9]. The effectiveness of community coalitions stems from the multiple perspectives, talents, and expertise that are brought together to work toward a common goal. Coalitions also build a sense of community, enhance residents' engagement in community life, and provide a vehicle for the empowerment of marginalized groups within the community. Finally, the active engagement of community members in the development and implementation of programs and policy is also essential in helping to identify local assets, focus resources, and shape plans to the circumstances of the local area.

Building community coalitions ultimately leads to an increase in community capacity to address a variety of health-related issues. Community capacity gains among community partners may be measured by increased partnerships (participation), knowledge, skills and behaviour, and leadership as well as an increase in resources, both formal and informal, addressing an issue such as physical activity.

Intersectoral action is a strategy in which one sector, including health, actively builds relationships with other sectors to deal with complex issues that cannot be dealt with by a single sector alone[10]. Given the complex determinants of physical activity, building intersectoral action is an appropriate way to improving physical activity levels in the BC

population. Encouraging physical activity and reducing obesity in the province will require the involvement of an array of local, regional, provincial, and national government departments, including public health, transportation, parks and recreation, public safety, planning, economic development, and housing. Local governments, who have jurisdiction over many aspects of land use, community planning, and the provision of local services, are ideally positioned to support greater involvement in physical activity in the community[11]. The non-profit and business sectors also have an important role. In rural or remote communities, the process of building community coalitions may look different, as community-based work may rely to a greater degree on personal relationships, than on relationships among organizations.

ActNow BC, a cross-government initiative launched by the BC provincial government in 2005, is an excellent example of intersectoral action and can be used as a home-grown world recognized best-practice model.

5.2.3 Access and Target Populations

Access to formal and informal opportunities for physical activity is affected by a variety of factors, including cost, cultural and language disconnections, geographic location and transportation issues. A recent Australian systematic review of issues of equity and target populations within obesity prevention interventions concluded that, while there is still limited evidence about the differential effects of prevention initiatives on population sub-groups, the authors suggested that strategic planning consider equity and access at three levels, targeting social determinants of health (whole population), specific sub-communities (geographical / cultural) and high risk individuals[12].

Primary care offers a unique and potentially powerful setting in which to encourage and help facilitate regular patterns of physical activity, particularly for some members of the population who may be at risk for chronic disease. International comparisons suggest that countries with stronger primary care generally have healthier populations[13], a finding that persists even after taking into consideration such factors as income inequality and smoking rates[14]. Recent international research is also suggesting that accessible, good quality primary care services also have the potential to reduce health inequities by increasing access to health services for vulnerable populations and providing greater continuity of care[15].

Given the importance of primary care as a key setting for both prevention and treatment services, the BC Ministry of Health Services actively supports increasing effective prevention in primary care. Together with the BC Medical Association, the Ministry has introduced guidelines to facilitate primary care practitioners to address overweight, obesity and physical inactivity with their patients[16]. Recent reviews suggest that interventions in which family physicians simply advise patients to do more physical activity without offering more specific assistance and follow-up is ineffective, especially in the long term[17]. However, referrals to community-based physical activity opportunities have been effective in the longer term if the referral was part of a broader personalized action plan which included personal planning, goal setting and personalized strategies for overcoming barriers. Follow-up by allied health professionals is also essential[18].

5.2.4 Schools & Early Learning

As a setting for physical activity and broader health-oriented interventions, schools and child care facilities offer unique and powerful opportunities to influence children and youth, to establish healthy behaviours that could endure for life. Schools offer continuous,

intensive contact with children, and the school's physical environment, policies, curricula and staff have considerable potential to influence children's health. A recent review[19] of international school-based interventions for preventing obesity in children recommended that interventions should target improvement of physical activity, healthy eating and reduction of 'screen time' behaviour, ideally in the upper elementary grades, when health-related behaviours are being formed. Comprehensive approaches in which parents and the broader community are involved, and which emphasize not only individual behaviour change strategies, but also policy and environmental change, are important.

Fortunately, there are a number of programs and resources in BC that achieve many of the goals recommended in the literature. The Working Group recommends building on existing programs and resources, ensuring a return on the provincial investment that has already been made.

5.2.5 Supports to Ensure High-Quality Programs, Policy, and Practice

Meeting the goals in the above core areas will build a stronger, more comprehensive system for encouraging physical activity and preventing obesity. Yet program and policy changes need to be accompanied by supports that further develop existing efforts to implement progressive social policies addressing the determinants of health, build community capacity, improve the quality and exchange of information about program and policy successes, and ensure that all partners involved in program and policy implementation are well informed and adequately resourced. Some particular needs of most importance now include more data about the health status of children under 12, information about successful techniques to build intersectoral action, and the particular needs and strengths of rural and remote communities. Of course, these types of supports will be most effective if they are considered key components of a comprehensive strategy, rather than 'extras' that can be deleted if resources decline.

The results of the better practices review above along with data identifying at-risk population groups was compared to the environmental scan of existing initiatives (Appendix B) to identify gaps in current practice in the province.

5.3 What Key Gaps Need to be Addressed in Physical Activity?

Given the information we have about the rates of physical activity in BC, the needs of at-risk population groups, and the evidence about 'better' and promising practices in this area, the following gaps in current initiatives exist:

- There are very few initiatives targeted to low income individuals and families, although some more general programs might indeed reach these families;
- Few programs or policies are designed specifically for rural or remote areas;
- Beyond continuing academic research, there is little broad, long-term commitment to altering our cities' and communities' built environments for active transportation and health.
- There are few sustained initiatives (policies and programs) designed to support Aboriginal communities in taking action on physical activity within the specific

context and needs of their communities – a concern, given the degree to which Aboriginal people are at risk for obesity and chronic disease.

- There are few initiatives dedicated to immigrant populations, although, again, that might be happening at the local level.
- At this stage, it is difficult to tell to what degree (and in what ways) individual organizations and companies are encouraging and facilitating physical activity among their staff. While support for workplace programs represents a gap in our environmental scan, it is possible that many large and small businesses are able to continue their efforts to promote healthy living in the workplace.

KEY FINDINGS:

- Lack of initiatives that target low income individuals and families
- Lack of initiatives that target rural and remote areas
- Lack of long-term commitment to improve the built environment of communities to encourage active transportation and positive health outcomes
- Lack of sustained initiatives targeting Aboriginal people who are at significant risk
- Lack of initiatives dedicated to immigrant populations
- An apparent lack of initiatives in the workplace

6 SPECIFIC RECOMMENDATIONS

The specific actions the Working Group recommends are presented below within the five central themes described above in the better practices review. The vast majority of the recommendations provided here have been confirmed by reviews of relevant research, or by expert panels who examined the available literature as well as the emerging practice and policy directions.

6.1 Community Planning and Active Transportation

ACTIONS:

Support local governments to adopt an active transportation plan for each community, to develop a long-term vision for encouraging physical activity through land use and other community planning strategies[20]. Key components of this recommendation include:

- Facilitate the use of a “Healthy Planning” toolkit for local communities, to help guide the direction of local planning and community action. Make sure that the resource is useable for and available to community organizations and action groups, not just municipal government planners.
- Support the planning, building and maintenance of infrastructure to support walking and bicycling (sidewalks, lighting, street crossings, bike lanes, shared-use paths, bike racks)[21,22,23] that creates a safe and comfortable walking and bicycling environment that connects to schools, parks, and other destinations.

- Encourage councillors to implement zoning to support the development of compact, complete communities that foster active transportation and transit use.
- Build and maintain parks & playgrounds that are safe and attractive, in close proximity to residential areas,[24,25] and appeal to all generations.
- Build public awareness about the impact of land use planning decisions on public health and promote the inclusion of healthy living policies within Official Community Plans.
- Provide support to local governments to discourage vehicle traffic around new and existing schools through active transportation planning strategies that emphasize walking and bicycling to school[26].
- Locate new schools (and/or repair or expand existing schools) within easy biking or walking distance of residential areas and away from heavy vehicle traffic.[27,28]
- Adopt neighbourhood safety strategies that improve safety and security of streets and in parks.[29,30]

6.2 Community Coalitions and Mobilization

ACTIONS:

- Actively support intersectoral community coalitions to develop shared goals and coordinate action[31].
    - Support community coalitions to conduct local needs assessments (or bring forward existing assessments) and community engagement processes that identify key stakeholders from all sectors and invite them to participate in planning and taking action to address obesity in their communities.
    - Develop and nurture stronger relationships between public health and local government, perhaps via formal agreements.[32,33]
    - Explore opportunities to partner with the business sector and/or the philanthropic sector on common goals to promote and enable healthy choices that promote healthy weights.
- Support school districts and municipalities to expand joint-use agreements to facilitate maximum community use of playing fields, playgrounds and other facilities[34,35] (e.g. Neighbourhood Learning Centres).

6.3 Access and Target Populations

ACTIONS:

As part of an emphasis on improving access and opportunity for at-risk populations, it is recommended that a life course approach be used, ensuring that specific programs are geared to those stages of life, (e.g. during the transition to or from adolescence, to work, parenthood, or retirement), in which research suggests there is ample opportunity to abandon regular patterns of physical activity and healthy eating. Other specific recommendations include:

- Collaborate with Aboriginal groups, communities and organizations to identify needs and potential approaches as they relate to the development of a provincial Aboriginal obesity reduction strategy (or equivalent initiative), which specifically addresses physical activity.

- Improve access to recreation for lower-income individuals and families by addressing barriers for vulnerable or at-risk populations (e.g. reducing fares[36] or providing basic equipment, building recreation centres in low income neighbourhoods), ensuring that supports address social networks, child care, and transportation.

- Promote walking through increased transit use among low-income at-risk populations through reduced fares and improved service to daily destinations, including schools, parks, work, neighbourhood shops and services, recreation centres, and other destinations.[37,38]

- Engage and consult with communities to address specific cultural and/or social considerations (depending on the unique needs of specific groups [ethnic, immigrant, socioeconomic status] or the local area), to inform the development of relevant programs and policies.

- Work with primary care practitioners to support physical activity promotion in health care and community settings:

    - Support health professionals (e.g. community health nurses, community nutritionists) to build capacity to support clients in adopting physically active lifestyles (e.g. through continuing education courses, mentoring and practice changes).

    - Expand programs in which physicians and other health professionals refer individuals or groups to physical activity/recreation teams within the community or the health care system (e.g. Prescription for Health in Victoria, Physical Activity Line, Active Living coordinators in Vancouver and the North Shore). Establish follow-up systems, to help ensure longer-term influence on physical activity patterns.

    - Advocate for a change in the fee structure for family physicians, so that they are adequately compensated for prevention-oriented action planning with patients.

6.4 Schools & Early Learning

ACTIONS:

- Expand Comprehensive School Health models and participation in Healthy Schools Networks that encourage non-competitive and daily physical activity participation for all K-12 students in all schools,[39,40] involve families and communities,[41,42] and engage children and youth.

    - Enhance the use of resources to promote healthy living practices with families and children (e.g. Healthy Living for Families booklets and the Healthy Eating and Physical Activity Learning Resources).

- Promote and support the use of the BC Performance Standards for Healthy Living in schools.
- Support the continued implementation of the Action Schools! BC initiative in all schools and all classrooms province-wide through ongoing training, equipment and resources.[43,44]
- Support the development of a health promoting secondary school model that promotes lifelong health through increased physical activity levels by using a 'for youth by youth' approach.

- Build on comprehensive early childhood and preschool education programs for physical activity[45]. Ensure parents/families are actively involved[46] (use existing resources and/or settings – e.g. LEAP BC, Strong Start Centres, all-day kindergarten). Increase training opportunities for childcare providers and ensure easy access to these resources.
- Coordinate the components of Action Schools! BC with strategies for addressing physical activity, healthy eating and social support for children and youth outside the school setting (e.g. homes, recreation facilities)[47], with special emphasis on income and gender equity.
- Adopt guidelines and policies that mandate duration of play in preschool, after-school, and child care programs[48].

6.5 Supports to Ensure High-Quality Programs, Policy, and Practice

ACTIONS:

- Implement a yearly province-wide survey of health-related behaviours of children under 12, with regularly scheduled physical and survey measures;
- Build and disseminate evidence (e.g. case studies) about intersectoral efforts in healthy living to support schools, health authorities, municipalities, and private sector organizations to work together more concretely and collaboratively.
- Develop better evidence about how to ensure programs and policies are relevant to rural and remote communities.[49]

7 CONCLUSION

The above body of work represents the committed efforts of the Physical Activity Working Group composed of a group of experts in the physical activity field in BC and Canada. These recommendations on physical activity as it relates to obesity prevention will be combined with recommendations from the other three working groups (Food, Treatment, and Evidence) to form the foundation of draft report to be presented to the Obesity Reduction Strategy Task Force in spring 2010.

8 Appendix A: Specific Actions Recommended by the Physical Activity Working Group

The recommendations are grouped according to the particular function they serve (build healthy public policies, strengthen community action, create supportive environments, develop personal skills, and reorient health services), as recommended by the Ottawa Charter for Health Promotion. A sixth category, Build Evidence, has been added. In addition to the function each recommendation serves, specific strategies are divided according to the setting (BC population, local communities, schools, and workplaces) in which they take place.

		Settings			
		BC Population	**Local Communities**	**Schools**	**Workplaces**
Functions	**Build healthy public policies**	• Improve access to recreation for lower-income individuals and families by addressing barriers for vulnerable or at-risk populations (e.g. reducing fares[50] or providing basic equipment, building recreation centres in low income neighbourhoods), ensuring that supports address social networks, child care, and transportation.	• Implement zoning for supporting the development of compact, complete communities that foster active transportation and transit use. • Advocate for the inclusion of healthy living policies within Official Community Plans.	• Adopt guidelines and policies that mandate duration of play in preschool, after-school, and child care programs[51]. • Expand Comprehensive School Health models and participation in Healthy Schools Networks that encourage non-competitive and daily physical activity participation for all K-12 students in all schools,[52,53] involve families and communities,[54,55] and engage children and youth.	
	Strengthen community action	• Work with Aboriginal stakeholders to identify needs and potential approaches as they relate to the development of a provincial Aboriginal Obesity Reduction Strategy, which specifically addresses physical activity.	• Actively support intersectoral community coalitions to develop shared goals and coordinate action[56]. • Support community coalitions to conduct local needs assessments (or bring forward existing assessments) and community engagement processes that	• Support school districts and municipalities to expand joint-use agreements to facilitate maximum community use of playing fields, playgrounds and other facilities[57,58] (e.g. Neighbourhood Learning	

			identify key stakeholders from all sectors and invite them to participate in planning to address obesity in their communities.	Centres).	
	Strengthen community action (cont.)		• Develop and nurture stronger relationships between public health and local government, perhaps via formal agreements.[59,60] • Explore common initiatives with the business sector and/or the philanthropic sector. • Support local Aboriginal communities as they identify their needs and develop longer term programs and policies to address those needs as they relate to physical activity, and more broadly, obesity[61].		
	Create supportive environments		• Facilitate the use of a "Healthy Planning" toolkit for local communities, to help guide the direction of local planning and community action. • Support the planning, building and maintenance of infrastructure to support walking and bicycling (sidewalks, lighting, street crossings, bike lanes, shared-use paths, bike racks)[62,63,64] that creates a safe and comfortable walking and bicycling environment that connects to schools, parks, and other destinations. • Build and maintain parks & playgrounds that are safe and	• Locate new schools (and/or repair or expand existing schools) within easy biking or walking distance of residential areas and away from heavy vehicle traffic.[67,68] • Support the continued implementation of the Action Schools! BC initiative in all schools and all classrooms province-wide through ongoing training, equipment and resources.[69,70] • Support the development of a health promoting secondary school model that	

			attractive, in close proximity to residential areas,[65,66] and appeal to all generations.	promotes lifelong health through increased physical activity levels by using a 'for youth by youth' approach.	
Functions	**Create supportive environments (cont.)**		• Provide support to local governments to discourage vehicle traffic around new and existing schools through active transportation planning strategies that emphasize walking and bicycling to school[71]. • Adopt neighbourhood safety strategies that improve safety and security of streets and in parks.[72,73] • Promote increased transit use among low-income at-risk populations through reduced fares & improved service to daily destinations, including schools, parks, work, neighbourhood shops and services, recreation centres, and other destinations.[74,75] • Engage and consult with diverse communities (including immigrant populations) to address specific cultural and/or social considerations (depending on the unique needs of specific groups or the local area), to inform the development of custom programs and policies.	• Coordinate the components of Action Schools! BC with strategies for addressing physical activity, healthy eating and social support for children & youth outside the school setting (e.g. homes, recreation facilities)[76], with special emphasis on income and gender equity.	

Functions	**Develop personal skills**			• Enhance the use of existing resources including Healthy Living for Families booklets and the Healthy Eating and Physical Activity Learning Resources. • Build on comprehensive early childhood and preschool education programs for physical activity[77]. • Ensure parents/families are actively involved[78] (use existing resources and/or settings – e.g. LEAP BC, Strong Start Centres, all-day kindergarten). Increase training opportunities for childcare providers and ensure easy access to these resources. • Promote and support the use of the BC Performance Standards for Healthy Living in schools.	
	Reorient health services	• Advocate for a change in the fee structure for family physicians, so that they are adequately compensated for prevention-oriented action planning with patients.	• Ensure all health professionals (e.g. community health nurses, community nutritionists) working in primary care settings are supported to help facilitate participation in physical activity. • Expand programs in which physicians and other health professionals refer individuals or groups to physical activity/recreation teams within the		

Functions			community or the health care system (e.g. Prescription for Health in Victoria, Physical Activity Line, Active Living coordinators in Vancouver and the North Shore). Establish follow-up systems, to help ensure longer-term influence on physical activity patterns.		
	Build evidence	• Implement a yearly province-wide survey of health-related behaviours of children under 12, with regularly scheduled physical measures.	• Build and disseminate evidence about intersectoral efforts in healthy living - to support schools, health authorities, & municipalities working together in more collaborative & concrete ways. • Develop better evidence about how to ensure programs and policies are relevant to rural and remote communities.[79]		

9 Appendix B: Current Initiatives Matrix

Current Initiatives	Target Populations						
	Children or Youth	Adults	Seniors	Low Income Families	Aboriginal Communities	General Population	Rural or Remote Areas
Federal							
PHAC national: Innovation Strategy						√	
PHAC regional: Healthy Living Fund						√	
Provincial							
Ministry of Education – Neighbourhood Learning Centres	√	√	√	√	√	√	√
Ministry of Health: Falls Prevention, Assisted Living, Pre & Post Natal		√	√				
Shapedown BC	√						
Ministry of Healthy Living & Sport: Aboriginal Bilateral					√		
Ministry of Transport. &						√	

Current Initiatives	Target Populations						
	Children or Youth	Adults	Seniors	Low Income Families	Aboriginal Communities	General Population	Rural or Remote Areas
Infrastructure: BikeBC							
Organized sport system (50 funded sport organizations + 11 multi-sport)	√	√	√	√	√	√	√
Promotion Plus	√	√	√	√	√	√	√
Kid Sport	√			√			
BC Sport Participation Program	√	√	√	√	√	√	√
BC Activity Reporter	√	√	√		√	√	
Aboriginal Youth Sport Legacy Fund & Sports Challenge	√				√		
Accessible Playgrounds	√						
Schools							
Healthy Schools Framework – Healthy Schools Network	√						
Daily Physical Activity	√						
All Day Kindergarten	√						

Current Initiatives	Target Populations						
	Children or Youth	Adults	Seniors	Low Income Families	Aboriginal Communities	General Population	Rural or Remote Areas
Hub for Action on School Transportation Emissions (HASTE)	√						
School sports & intramurals	√						
Post-Secondary CIS / BCCAA, sport & activity clubs		√					
Strong Start Centres	√						
Premier Sport Awards Program	√						
Action Schools! BC	√						
Non-governmental Organizations							
Joint Consortium for School Health: Healthy Schools Planner	√						
Bike to Work Week BC Society		√					
DASH: Walking School Bus & International Walk to School	√						

Current Initiatives	Target Populations						
	Children or Youth	Adults	Seniors	Low Income Families	Aboriginal Communities	General Population	Rural or Remote Areas
BCRPA: Registration of fitness professionals		√					
Healthy Workplace Month		√					
BCHLA: Walk BC (until Sept 2010)		√					
Healthy Heart Society: For My Health!		√					
Peer to peer coaching		√					
Hearts-in-Training		√					
Canadian Cancer Society: WellnessWorks		√				√	
CLASP/CACO Screentime Initiative	√					√	
Health Authorities							
HEAL Network	√	√	√	√	√	√	√
SCOPE Project (PHSA &	√						√

Current Initiatives	Target Populations						
	Children or Youth	Adults	Seniors	Low Income Families	Aboriginal Communities	General Population	Rural or Remote Areas
NH)							
Healthy Built Environment Alliance (sponsored by PHSA with HA reps)						√	
New, emerging work in partnering with local government on land use planning decisions						√	
Research							
PURE – Prospective Urban/Rural Epidemiology Study		√					√
Larry Frank (UBC) – Active Transportation Lab						√	
Kay Teschke – Cycling		√				√	
Centre for Hip Health		√	√				
BC Injury Prevention Research Unit	√	√	√			√	
Business Sector							
Running Room – walking/running groups		√					

Current Initiatives	Target Populations						
	Children or Youth	Adults	Seniors	Low Income Families	Aboriginal Communities	General Population	Rural or Remote Areas
Workplace wellness programs		√					
YMCA cardiac rehabilitation programs		√	√				
Local Community Level							
Community recreation programs	√	√	√	√			√

10 Appendix C: Physical Activity Working Group Membership

Name	Organization / Agency
P J Naylor (Co-Lead)	University of Victoria
Jennifer Bradbury (Co-Lead)	Childhood Obesity Foundation
Jane McCarney (PPH Manager)	Provincial Health Services Authority
Alan Callander	BC Ministry of Transportation & Infrastructure
Andrew Kmetic	Provincial Health Services Authority
Andrew Merrill	Planning Institute of British Columbia
Bev Gutray	Canadian Mental health Association, BC Div
Bryna Kopelow	Action Schools! BC
Caryl Harper	Vancouver Island Health Authority
Chani Joseph	Planning Institute of BC
Christine Glennie-Visser	Northern Health Authority
Darren Warburton	University of British Columbia
Denise Weber	Public Health Agency of Canada
Don Hunter	BC Recreation & Parks Association
Fionna Main	Canadian Cancer Society, BC/Yukon Div
Jami Brown	Fraser Health Authority
Jean Thompson	Vancouver Coastal Health Authority
Jessica Chant	BC Recreation & Parks Association
John Millar	Provincial Health Services Authority
Joyce Resin	Healthy Heart Society
Kathy Cassels	Directorate of Agencies for School Health BC
Lydia Drasic	Provincial Health Services Authority
Marilyn Payne	2010 Legacies Now
Raymond Fang	Provincial Health Services Authority
Samantha Hartley-Folz	BC Health Living Alliance
Scott Beddall	BC Ministry of Education
Scott Lear	Simon Fraser University
Sharon Storoschuk	Canadian Cancer Society, BC/Yukon Div
Theresa Hermary	Interior Health Authority
Tobby Green	BC Ministry of Healthy Living & Sport
Victoria Barr	Consultant

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