



CORE

Public Health Functions for BC

Evidence Review:
Healthy Communities

**Population Health and Wellness
BC Ministry of Health**

April 2006

This is a review of evidence and best practice, and as such does not necessarily represent ministry policy, and may include practices that are not currently implemented throughout the public health system in BC. This is to be expected as the purpose of the Core Public Health Functions process—consistent with the quality improvement approach widely adopted in private and public sector organizations across Canada—is to put in place a performance improvement process to move the public health system in BC towards evidence-based best practice. Where warranted, health authorities will develop public performance improvement plans with feasible performance targets and will develop and implement performance improvement strategies that move them towards best practice in the program component areas identified in the Model Program Paper.

This Evidence Review should be read in conjunction with the accompanying Model Core Program Paper.

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EXECUTIVE SUMMARY

As one of the strategies to emerge from the Ottawa Charter for Health Promotion (World Health Organization [WHO] 1986), the settings approach to health promotion works with people in the physical and social settings in which they live, work, play, shop and lead their daily lives. Such settings combine the physical and social environments and involve large sections of the population who share a wide range of risk factors for illness and injury. The Ministry of Health's vision of healthy communities includes healthy schools, healthy workplaces, healthy care facilities and community development and capacity building.

Healthy communities have a number of key characteristics, including:

- Clean and safe physical environments.
- Peace, equity and social justice.
- Adequate access to food, clean water, shelter, income, safety, work and recreation for all.
- Strong, mutually-supportive relationships and networks.
- Wide participation of residents in decision-making.
- Opportunities for learning and skill development.
- Strong local cultural and spiritual heritage.
- Diverse and robust economy.
- Strong civic engagement.
- Access to health services, including public health and preventive programs.
- Protection of the natural environment (Ontario Healthy Communities Coalition 2003).

Because effective use of healthy communities strategies necessarily incorporates the social determinants of health, the interaction of multiple risk factors that can be linked to the development of disease or injury is complex. Those risk factors have genetic, biological, behavioural, psychological, environmental, social, economic and cultural aspects, and they are not easily teased apart for the purposes of evaluation and research.

The purpose of this evidence review is to provide an evidentiary base from which to formulate the best practices for health authority programs in the area of healthy communities. The focus of this paper is broad health promotion interventions that are designed to enhance health and improve the physical and social environments in which people live, work, study and play. Specific programs intended to prevent particular diseases and injuries are, by and large, not the focus here, but are included in other evidence review papers as part of the Ministry of Health's core public health functions process.

There is a large body of literature on creating healthy settings and healthy communities, a thorough review of which is beyond the scope of this paper. This evidence review is a review of reviews, with an emphasis on systematic reviews, meta-analysis and other reviews of evidence related to healthy workplaces, schools and health care facilities, and community capacity building.

Healthy Workplaces

A significant proportion of the waking hours of most adults is spent at work or in the workforce. It therefore follows that the characteristics of the settings and environments in which people work are very important to health and well-being. Articulating the rationale for including healthy workplaces within the Core Functions Framework, the Ministry of Health states:

There is growing evidence of the importance of psychosocial working conditions and social relationships in the workplace for both mental health and physical health problems such as cardiovascular disease. Here too, there is extensive evidence in how to create healthier workplaces, to the benefit of workers, employers, and society at large (Ministry of Health 2005).

Psychosocial factors related to how work and organizational structure contribute to work-related stress and affect health have gained increasing recognition as important determinants of health. Two prominent theoretical models are the theories of job strain (or job-demand control) and effort-reward imbalance.¹

Increased job strain and stress are associated with increased cardiovascular disease, anxiety, depression, alcohol abuse, drug abuse, back pain, repetitive strain injuries and colorectal cancer. A number of characteristics of the working environment contribute to increased job strain and stress, including long working hours, high workload, high levels of pressure, lack of control over work, poor support from managers and lack of job satisfaction.

The work setting offers a means of improving psychosocial and physical health through workplace health promotion and through creating healthier workplaces through a focus on the work environment.

There is a significant weight of evidence indicating a positive effect of workplace health promotion programs on individual health awareness and behaviour as well as long-term health and social outcomes. The strongest evidence exists for workplace health promotion programs targeting hypertension/blood pressure control, smoking cessation and fitness. Workplace health promotion program benefits can also extend beyond health to include improved productivity.

Comprehensive approaches to workplace health promotion address the underlying determinants of workplace stress and the psychosocial determinants of ill-health in the workplace. Successful interventions have some common features, including: appropriate commitment and effort from management; support by management and the workforce; participation of the workforce in

¹ The job strain (or job demand-control) model involves workers who experience both low decision latitude (control) and high demands, become subject to high stress at work and therefore increased risk of disease. The effort-reward imbalance model involves an imbalance between high effort and low reward at work, which increases illness susceptibility as a result of continued strain reactions.

planning and implementation; and the creation of trust. Conversely, aspects which inhibit the success of policies include: schemes that direct attention away from difficult working conditions and attempt to treat the symptoms only; technical solutions alone, imposed from the top; and cases where management retained control over the dialogue.

Building Healthy Health Care Facilities

The term “health-promoting health care facilities” can be confusing to some who may argue that health promotion is not the function of these institutions. Health care facilities may not be the main agents in community-based health promotion, but they can contribute to creating health-promoting internal and external environments. For instance, the staff of health care facilities are in a strong position within the health care system to be advocates for healthy communities work. Health care facilities represent the main concentration of health service resources, professional skills and medical technology in the health care system. They generally have substantial prestige among community members, and their staff are well respected as credible sources of advice and expertise on health issues. Given the extensive resources that facilities command, even a small shift in focus to health promotion could, in time, have a significant impact on community health (Johnson and Baum 2001).

The types of health promotion activities undertaken by health care facilities can be grouped into five categories based on the focus of those activities:

- Patients and their families – includes encouraging self-care, facilitating patient participation in care, promoting effective chronic disease management and promoting healthy lifestyles among patients and families.
- Staff – providing a safe and healthy environment for employees, including mental health promotion and facilitating staff empowerment.
- The organization as a whole – organizational structures and processes should work to build a healthy corporate culture, with health promotion principles integrated into the day-to-day practice of all staff.
- The physical environment – involves making the inside and outside environments of the facility as healthy as possible, including ensuring adequate ventilation; reducing noise levels; facilitating social connectedness for patients, families and staff; and respecting our natural environments through “green” building design and maintenance.
- The community that is served by the hospital – advocating and supporting the efforts of local communities to assess and improve their collective health. Such a process involves creating meaningful relationships with local government and local agencies to enhance community capacity to address health issues.

The literature surrounding best practices within health care facilities is still at an early stage. There is currently little evidence demonstrating that multi-faceted programs like health-promoting hospitals or the broad work of community health centres have led to specific health gains or cost savings. There is, however, a significant body of evidence that demonstrates that the individual components of such programs, including patient-centred care, improving the physical environment of facilities and contributing to community capacity, can help to improve health and quality of life among patients, staff and the community.

Health promotion within health care facilities should consider more than just the clinical outcomes of patients; equal consideration should be given to health-related quality of life and empowerment of those patients, their families and the broader community.

Healthy Schools

Along with the home, the school is one of the main settings for the formative stages of a child's development. The school is an attractive setting for health promotion for a number of reasons, including the access provided to students through school, the variety of activities students engage in at school (each of which provides an opportunity for learning and practicing), the availability of teachers and adult role models to reinforce healthy behaviours and the improvement in academic outcomes associated with improved child health and well-being.

Health promotion in the school setting has demonstrated effectiveness for a range of risky behaviours including smoking, drug use, nutrition, sexual activity, eating disorders, violence, mental health services and physical activity.

Programs have an increased likelihood for success if they:

- Are interactive instead of didactic.
- Have a sufficient daily and weekly dosage.
- Are led by well-trained program staff with suitable skills.
- Involve changes to the environment and context for behaviour.
- Include partnerships with parents and/or community organizations.

While school-based health promotion is important, research has shown that adolescent health is influenced by several interlinked factors, requiring a more comprehensive approach addressing the context of health, and not just the behaviour.

The World Health Organization (WHO) defines a health-promoting school as “one that constantly strengthens its capacity as a healthy setting for living, learning and working.” While the literature on the effectiveness of health-promoting schools is still developing, there are a number of key ingredients to successful healthy schools that have been identified, including:

- A focus on cognitive and social outcomes as a joint priority with behaviour change.
- Comprehensive and holistic programs, linking the school with agencies and sectors dealing with health.
- The intervention is substantial, over several school years, and relevant to changes in young peoples' social and cognitive environment.
- Adequate attention is given to capacity building through teacher training and provision of resources.
- School health programs address all or a combination of the curriculum, the environment, health services, partnerships and/or school policies.

Community Capacity Building

Capacity building for the purposes of improving health is about “enhancing the ability of an individual, organization or a community to address their health issues and concerns” (Ontario Prevention Clearinghouse 2002, p. 1). Community capacity is the set of knowledge, skills, participation, leadership and other resources needed by community groups to effectively address local issues and concerns. Community capacity building is an important element of effective health promotion practice (New South Wales Health Department 2001). It increases the range of people, organizations and communities who are able to address health and social problems. Often, the problems that are addressed have arisen out of social inequity or social exclusion. Much of the work done when using a healthy communities approach is about building community capacity.

By building capacity, health authorities and other stakeholders can help to make sure that working partners in the community are developing the skills and resources to identify health issues, work to address those issues and then hold programs together in the long-term. This bottom-up process of building capacity has been shown to build sound community-based infrastructures, provide long-term sustainability for programs, solve ongoing community problems and contribute to efficiency and effectiveness (Ontario Prevention Clearinghouse 2002). On an individual level, capacity building can help to generate a sense of inclusion, self-respect and self-esteem among those who participate (Burton et al., 2004).

The available evidence on best practice in community development and community capacity building suggests that practitioners incorporate the following components:

- Community groups need to translate general, evidence-based principles into practice approaches tailored to the needs of their neighbourhood and the wider context (Work Group on Health Promotion and Community Development 2006; Burton et al. 2004).
- Define the nature of local problems by examining local data and using other evidence, including taking into account the views of service providers and local citizens themselves.
- Adopt an approach to the project that is based on the best evidence about what works when dealing with that particular health or social issue. Clear baselines should be set, measurable objectives proposed and an effective monitoring, review and evaluation system should be in place from the start (Burton et al. 2004).
- Understand the scale or level of a particular problem or set of problems and their causes, and plan your approach to deal with those problems accordingly.
- Interventions to address complex issues in the community are often best implemented in partnership with a variety of health and social service sectors, municipal or regional governments, non-profit organizations, ad hoc community groups and individual citizens.
- Take account of what is happening (or about to happen) outside of your particular strategy or initiative. The evidence indicates that effective interventions often complement the activities of other agencies or groups. Specific actions taken to address health issues should be vertically integrated; they should be consistent with other levels

of policy action – local, regional, provincial and federal (Neighbourhood Renewal Unit 2003).

- Ensure that adequate resources are allocated to support community capacity building activities.
- Encourage intersectoral collaboration and open communication, make roles and responsibilities as clear as possible, acknowledge the importance of process as well as outcome, create accessible and transparent decision-making structures, build on existing structures of community representation and provide skills development and education for all stakeholders as required (Burton et al. 2004).

There is some evidence of effective or promising approaches to community capacity building for health. However, the overall evidence base is not as definitive as it is in some areas of health care, mostly because the rigid rules of traditional quantitative research are difficult to apply to broad, community-based health promotion work. In addition, there is no accepted set of indicators that can help to assess the health or capacity of communities (Crilly 2003; Kwan et al. 2003), and there are no consistent standards for defining success for any given indicator (Frankish, Kwan and Flores 2002). However, the lack of evidence, as traditionally defined, cannot preclude continuing to work collaboratively with communities to address health issues.

Community development and community capacity building work, in part, to build strong social networks that create the social capital that is so strongly linked to community health and quality of life. The evidence for the effectiveness of these processes is still developing, partly because this kind of broad health promotion work is complex, can take a great deal of time and is difficult to measure.

Yet what is clear from the available literature is that community development and community capacity building initiatives need to be geared to that individual community's needs, strengths and desires. A "one-size-fits-all" approach will not be effective. In addition, programs need to acknowledge and work towards reducing health disparities, so that individual community members, and communities as whole entities, have the capacity to more effectively maintain or improve their own health.

Conclusion

Public health research has demonstrated that broad interventions that look to change societal norms and values are among the most effective in improving population health. Such interventions, like healthy communities initiatives in the workplace, schools, health care facilities or the broader community, can take a great deal of time and expertise to prove successful. As well, their success can be a challenge to measure. Regardless of the challenges such broad programs present, it is important that they be part of public health renewal in BC.

A good health promotion approach operates in the many settings where people spend their time—where they work, live and play. As presented in this review of the evidence, taking a "settings approach" to health promotion can be effective in improving health among some segments of the population. However, it is a complex process that requires participation from a number of sectors, including those workers, patients and community members whose health these programs are meant to be improving.

As has been repeatedly emphasized in this review, and consistent with the philosophy of health promotion and our increasing understanding of the social determinants of health, the promotion of healthy lifestyles in any of these settings, by itself, is insufficient to effectively improve health and quality of life outcomes. A consideration of the social and physical environments of the setting itself is at least as important. In addition, the weight of the evidence confirms that multi-component or comprehensive interventions have higher effectiveness and cost-effectiveness compared with those programs that focus on a single component.

Health care systems are well placed to have some impact on the broad determinants of health, both directly and indirectly. The mandate of health authorities is the health and well-being of the populations they serve, and they are well-positioned to participate in collaborative efforts with communities and other sectors that have a long-term vision of healthier cities and communities. By approaching broadly based health promotion work in each of these four settings, health authorities can continue to help build healthier and more sustainable communities.

Collaborations with schools, workplaces and care facilities, and in community development and community capacity building, offer health authorities the opportunity to bring the voice of the health sector to the table and to create health-promoting partnerships that can improve the quality of the larger environment that has such a significant impact on health.

1.0 OVERVIEW/ SETTING THE CONTEXT

In 2005, the British Columbia Ministry of Health released a policy framework to support the delivery of effective public health services. The *Framework for Core Functions in Public Health* identifies healthy communities as one of the 21 core programs that a health authority provides in a renewed and comprehensive public health system.

The process for developing performance improvement plans for each core program involves completion of an evidence review used to inform the development of a model core program paper. These resources are then utilized by the health authority in their performance improvement planning processes.

This evidence review was developed to identify the current state of the evidence based on the research literature and accepted standards that have proven to be effective, especially at the health authority level. In addition, the evidence review identifies best practices and benchmarks where this information is available.

2.0 METHODOLOGY

The purpose of this evidence review is to provide an evidentiary base from which to formulate best practices for health authority programs in the area of healthy communities. The focus of this paper is broad health promotion interventions that are designed to enhance health and improve the physical and social environments in which people live, work, study and play. Specific programs intended to prevent particular diseases and injuries are, by and large, not the focus here, but are included in other evidence review papers as part of the Ministry's Core Public Health Functions process.

There is a large body of literature on creating healthy settings and healthy communities, a thorough review of which is beyond the scope of this paper. This evidence review is a review of reviews, with an emphasis on systematic reviews, meta-analysis and other reviews of evidence related to healthy workplaces, schools and health care facilities, and community capacity building.

A literature search of systematic reviews and meta-analysis up to and including January 2006 was conducted using Econlit, PsycInfo, Current Contents, Sociological Abstracts, Science Citation Index and Medline, and the keywords listed in Table 1.

Table 1: Keywords Used in Literature Search

Settings	Keywords
Schools	school, health, healthy, health promotion AND intervention, program, evaluation, assessment
Workplaces	work, occupation, job, career, health, healthy, health promotion, mental health, job strain, effort reward, control demand, stress AND intervention, program, evaluation, assessment

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Settings	Keywords
Health Care Facilities	healthy, hospital, health promotion, primary care, primary health care, Planetree, design, long-term care, nursing home AND Intervention, program, evaluation
Community Capacity Building	community capacity building, community engagement, community development, quality of life, social capital, sustainability, healthy community, partnerships, regional health authority, organizational capacity

A grey literature search was also conducted of academic and government websites and through contact with leading academics and practitioners working within the field of settings-based health promotion. Relevant articles were then searched by hand for additional references. Key evidence-based web resources were also consulted for studies and reviews, including: Health-Evidence.ca, Public Health Excellence at NICE, Google Scholar, Cochrane Collaboration, Campbell Collaboration, the Canadian Health Network, HP Source, Evidence-Based Public Health Practice, and the Independent Inquiry Into Inequalities in Health (the Acheson Report).

3.0 BACKGROUND

The Ottawa Charter for Health Promotion states, “Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love” (World Health Organization 1986). These settings have become increasingly important in public health. Many determinants of health are specific to those everyday settings, and health is created in the relationship between individuals, groups and communities with their environment. Individuals cannot be treated in isolation from their environments (Green, Poland and Rootman 2000).

According to a United States Institute of Medicine report on social and behavioural influences on health, "most behaviours are not randomly distributed in the population, but are socially patterned and often occur together" (2001). The social environment influences behaviour in a number of ways including:

- Shaping norms.
- Enforcing patterns of social control.
- Providing (or failing to provide) environmental conditions that encourage particular behaviours.
- Reducing or producing stress.
- Placing constraints on individual choice (Institute of Medicine 2001).

This patterning of social and behavioural influences on health raises the profile of the environmental context, of which the community is a significant component.

3.1 What is a Healthy Community?

Communities and cities are complex organisms that are living, breathing, growing and constantly changing:

A healthy city is not a finished product created at one point in time; it is a dynamic place where citizens and government have established relationships and processes that allow them to collaborate in tackling any problems that arise. The healthy city approach calls for collective action, in which all the sectors—local government as well as community, religious and other groups and individual citizens—work together for a common purpose. (Duhl and Hancock 1997).

A healthy community works to improve its environments and share its resources so that people can support each other in achieving their highest potential (WHO 1997a). Healthy communities have a number of key characteristics, including:

- Clean and safe physical environments.
- Peace, equity and social justice.
- Adequate access to food, clean water, shelter, income, safety, work and recreation for all.

- Strong, mutually-supportive relationships and networks.
- Wide participation of residents in decision-making.
- Opportunities for learning and skill development.
- Strong local cultural and spiritual heritage.
- Diverse and robust economy.
- Strong civic engagement.
- Access to health services, including public health and preventive programs.
- Protection of the natural environment (Ontario Healthy Communities Coalition 2003).

Healthy communities are marked by the key principle outlined in the Ottawa Charter for Health Promotion (WHO 1986), that people cannot achieve their fullest potential unless they are able to take control of the factors that determine their well-being. This means that in the process of creating a healthy community, communities are responsible for addressing their own priorities. As a witness to the Select Standing Committee on Health (2004) reported:

actions needed to make a community healthier will differ for each community and it is up to the community to decide. Some may decide to focus on providing cleaner and safer environments, others may want to work on increasing social capital through more open and welcoming governance, others may want to work on providing better recreation opportunities, bike trails for commuters, or sidewalks in subdivisions.

A healthy communities approach integrates four key building blocks: community involvement, intersectoral partnerships, political commitment and healthy public policy (BC Healthy Communities 2006).

3.2 Healthy Communities in Canada

British Columbia, Ontario and Quebec all have a history with formal healthy communities initiatives. As the Select Standing Committee report (2004) details, these provinces:

...initiated healthy community initiatives at the same time when federal seed money became available during the late 1980s. When funding dried up in the mid 1990s, BC's movement largely withered and died, although individual communities continue to adopt health-promoting policies and individually launch their own programs, such as good food box programs. Ontario and Quebec, however, set up different models. Then and now, the organizations are at arms-length from government. They help coordinate the actions and help communities build the skills and ability to address their own priorities now and into the future—often described by the term "capacity building." In Ontario the organization is a non-profit charity called the Ontario Healthy Communities Coalition; in Quebec it is called Villes et Villages en Sante,

and is part of the Institute of Public Health. Both organizations have flourished over the last decade. Both organizations have a number of things in common:

- Both organizations depend on provincial government funding, but the arms-length nature means the provincial government does not dictate the programs and the funding is stable.
- Both organizations are based on the membership of communities, who also form the basis of the board of directors. In both organizations, provincial governments do not have members on the boards.
- Neither organization provides direct funding to communities, but instead provides a wide range of education, training and support to enable the communities themselves to strengthen their social, environmental and economic well-being. In Ontario, for example, two thirds of the organization's staff are regionally-located community "animators" who are typically invited by a local community government or organization to come in to support, resource, or guide a process in which the community is addressing an issue themselves.
- Both organizations rely on close collaboration and partnerships with other organizations and networks that have shared interests - pooling resources and skills to achieve common goals (Select Standing Committee on Health 2004).

3.3 Healthy Communities in BC

3.3.1 BC Healthy Communities

BC Healthy Communities (BCHC) is a new initiative that aims to increase the capacity of communities in British Columbia to create more supportive environments and address issues leading to the improved health of their citizens. BCHC receives funding from the BC Ministry of Health's ActNow BC program and is part of the international Healthy Communities/Healthy Cities movement. BCHC offers support to communities in BC that want to integrate the healthy communities approach into their everyday thinking and practice (BC Healthy Communities, 2006). BCHC is presently in the start-up phase. However, the plan is to hire facilitators in the five regions of the province to work with communities to implement the healthy communities approach. A small seed grant program will also be offered to communities to support local work.

3.3.2 Public Health Renewal in BC – A Framework for Core Functions in Public Health

Recent Canadian reports (Institute of Population and Public Health 2003; National Advisory Committee on SARS and Public Health 2003) have emphasized the need for public health to be better structured and resourced, in order to improve population health. In British Columbia, the Ministry of Health released the document *A Framework for Core Functions in Public Health* as part of its commitment to renewing public health in BC. This framework defines core functions as “the key set of public health services that health authorities will provide...the Core Functions Framework includes core programs—long-term core programs, representing ... public health services that health authorities would provide in a renewed and modern public health system—and public health strategies that can be used to implement the core programs” (Ministry of

Health 2005). The healthy communities approach has been identified as one of the health improvement programs, which aim to improve overall health and well-being. Such programs are capable of preventing a wide range of diseases, disability and injuries.

3.4 The Role of Evidence in Healthy Communities Work

The role of evidence in the health promotion field is dealt with differently than it is in more clinical- or treatment-oriented areas. Because effective use of healthy communities strategies necessarily incorporates the social determinants of health, the interaction of multiple risk factors that can be linked to the development of disease or injury is complex. Those risk factors have genetic, biological, behavioural, psychological, environmental, social, economic and cultural aspects, and they are not easily teased apart for the purposes of evaluation and research. Other challenges related to effectiveness research in healthy communities include:

- The amount of funding devoted to health promotion is a fraction of that for clinical care and clinical research. Resources for the comprehensive evaluation of healthy communities activities are therefore often not available.
- Much of the research that is available tends to focus on biological risk factors and narrowly-focused behavioural changes, rather than on the more social aspects of individual or community capacity.
- The long time frames and large sample sizes needed to pursue intervention studies in healthy communities pose challenges for research.
- The type of research required for population health studies is different from the “gold standard” randomized controlled trials of clinical medicine. The more an intervention is related to the social determinants of health, the less the possibility of using a controlled trial to evaluate it. Instead, quasi-experimental designs and qualitative research methodologies are more often used (Ministry of Health 2003).

3.4.1 Challenges in Dissemination of Best Practices Information

Traditionally, these and other challenges have made it difficult for health promotion teams to use rigorous evaluation techniques to rate the effectiveness of a particular intervention. Fortunately, that trend is changing, and over the last decade, a great deal has been learned about what constitutes best practice in health promotion within workplaces, health care facilities, schools and communities. In developing and disseminating that information, however, the following challenges continue to exist:

- Health promotion and prevention spans an extremely broad area, from clinical prevention done in a physician’s office to the work of community-based coalitions. This breadth makes it difficult to provide one set of guidelines that can be applied to many or all projects.
- Healthy communities work is best done with the community itself directing the efforts as much as possible. Paid staff working to support the project, then, can have limited control over the strategies chosen and the data that are collected to evaluate those strategies.

- Sharing of best practices information can be difficult, given the multi-disciplinary nature of health promotion, and the lack of one organization/education venue to which all staff working in the area belong.

3.5 The Settings Approach to Health Promotion

As one of the strategies to emerge from the Ottawa Charter for Health Promotion (WHO 1986), the settings approach works with people in the physical and social settings in which they live, work, play, shop and lead their daily lives. Such settings, which include the examples here of schools, workplaces, communities and health care facilities, combine the physical and social environments and involve large sections of the population who share a wide range of risk factors for illness and injury. The Ministry of Health's vision of healthy communities includes healthy schools, healthy workplaces, healthy care facilities and community development and capacity building.

4.0 HEALTHY WORKPLACES

A significant proportion of waking hours is spent at work or in the workforce. It therefore follows that the settings and conditions in which people work are very important to health and well-being. Burton describes our understanding, and the evolution, of this concept:

Our collective understanding of the term “healthy workplace” has evolved greatly over the past several decades. From an almost exclusive focus on the physical environment (the realm of traditional health and safety), the definition has broadened to include health practice factors (lifestyle) and psychosocial factors (work organization) that can have a positive or negative impact on employee health. It has become clear that to achieve a workplace that is healthy in all three areas, an employer must adopt an integrated and comprehensive approach to workplace health (Burton 2004).

In British Columbia, healthy workplaces have been designated as part of the healthy communities core public health program by the Ministry of Health. Articulating the rationale for including healthy workplaces within the Core Functions Framework, the Ministry of Health states:

There is growing evidence of the importance of psychosocial working conditions and social relationships in the workplace for both mental health and physical health problems such as cardiovascular disease. Here too, there is extensive evidence in how to create healthier workplaces, to the benefit of workers, employers, and society at large (Ministry of Health 2005).

The traditional field of occupational health and safety—whose focus is mainly on the physical work environment—is within the domain of the Workers’ Compensation Board and thus is not included within the healthy communities core program definition or within the scope of this review.

The purpose of this healthy workplaces evidence review is to review the literature around the determinants of healthy workplaces and interventions promoting healthy workplaces.

4.1 Determinants of Healthy Workplaces

Psychosocial factors related to how work and organizational structure contribute to work-related stress and affect health have gained increasing recognition as important determinants of health. A number of conceptual models have been developed to explain this mechanism, two of the most prominent being the models of job strain (job demand-control) and effort-reward imbalance.

4.1.1 Job Strain

The job strain (or job demand-control) model has two central components: job demands and decision latitude. This theory suggests that workers who experience both low decision latitude and high demands, typically assembly line workers or clerical support staff, become subject to

high stress at work and therefore are at increased risk of disease (Karasek and Theorell 1990). The job strain model has been used to explain patterns of depression, exhaustion, job dissatisfaction, cardiovascular disease, poor health functioning and sickness absenteeism. Job strain is especially harmful to those people with low social support at work, as social networks can buffer the effects of job strain (Kuper and Marmot 2003).

4.1.2 Effort-Reward Imbalance

Similar in some respects to the job strain model is Siegrists' effort-reward imbalance model. This model assumes that effort at work is part of a contract based on expectation of rewards in terms of money, esteem, career opportunities and job security. According to this model, the experience of a lack of reciprocity in terms of high costs and low gains creates negative emotions, paralleled by sustained strain reactions in the autonomic nervous system. In the long run, the imbalance between high effort and low reward at work increases illness susceptibility as a result of continued strain reactions (Siegrist et al. 2004).

4.1.3 Stress and Characteristics of the Work Environment

There are particular characteristics of the working environment that contribute to increased job strain and stress, including long working hours and job satisfaction.

Sparks et al. (1997) conducted a meta-analysis of the effects of working hours on health. Nineteen studies were included in the analysis, comprising twenty-one independent samples (n=37,623). Sparks et al. found a significant and positive relationship between working more than 48 hours per week and a variety of physiological health measures (e.g., somatization, headaches, work accidents, myocardial infarction, coronary heart disease and general physical health symptoms) and psychological health measures (e.g., hostility, depression, poor sleep, irritability/tension, problems with relationships, lack of concentration, tiredness, role strain, anxiety, frustration, exhaustion, insomnia, social dissatisfaction, mood symptoms and general mental stress).

The HERMES (Health and Employment Review: a MEta-Analysis Study) project conducted a systematic and thorough review of the research evidence linking work-related stress factors with ill-health (Faragher, Cass and Cooper 2002). They report a meta-analysis of almost 500 studies of job satisfaction (n=250,000) from organizations based throughout the world. The meta-analysis findings indicate that, on average, employees with low levels of job satisfaction are most likely to experience emotional burnout, to have reduced levels of self-esteem and to have raised levels of both anxiety and depression.

Michie and Williams (2003) conducted a systematic review of the work factors associated with psychological ill-health and sickness absence. The authors included 49 studies in their review. The most common factors associated with both psychological ill-health and sickness absence were long work hours, high workload, high levels of pressure, lack of control over work and poor support from managers.

4.2 Health Outcomes

These theoretical constructs are associated with significant health outcomes. Health Canada reported the health impact of high demand/low control job conditions, high effort/low reward job conditions and combinations of these conditions (Health Canada 2000). High demand/low control conditions *at the extreme* (highest 25 per cent demand level, lowest 25 per cent control level) compared with high demand/high control and low demand/high control conditions are associated with:

- More than double the rate of heart and cardiovascular problems (these conditions are said to be the equivalent of the combined effects of smoking, being overweight, being unfit and eating poorly).
- Significantly higher rates of anxiety, depression and demoralization.
- Significantly higher levels of alcohol, and prescription and over-the-counter drug use.
- Significantly higher susceptibility to a wide range of infectious diseases.

High effort/low reward conditions *at the extreme* (highest 33 per cent effort level, lowest 33 per cent reward level) compared with high effort/high reward conditions are associated with:

- More than triple the rate of cardiovascular problems.
- Significantly higher incidence of anxiety, depression and conflict-related problems.

High demand/low control conditions and high effort/low reward conditions are associated with:

- Higher incidence of back pain (up to three times the rates found in high demand/high control and high effort/high reward conditions).
- Higher incidence of repetitive strain injuries (excess rates of up to 150 per cent have been reported).
- Higher incidence of colorectal cancer (with five times the colorectal cancer found among those experiencing these and other workplace stressors).

Job strain and effort-reward imbalance are also associated with health inequalities as represented by the health gradient. Marmot et al. (1999) found that psychosocial work characteristics (such as low control, low use of skills, low support at work and a slow pace of work) are responsible for about 25 per cent of the gradient of sickness absence between high and low grade employment among men and about 35 per cent of the gradient among women; elsewhere Marmot notes that in the Whitehall II study, "more than half the gradient [in the occurrence of coronary heart disease] appeared to be accounted for by low control in the workplace."

The importance of psychosocial working conditions in the workplace is also reflected in employee's knowledge and perceptions. In a 1993 survey of employees in European Union member states (n≈42 million), 25 per cent identified heavy physical work, 20 per cent identified time pressure, 35 per cent identified small decision latitude and 60 per cent identified monotony as workplace risks to their health and safety (International Union for Health Promotion and Education [IUHPE] 2000).

4.3 Economic Costs

The economic burden associated with workplace health is significant. Burton summarizes these economic costs as follows (Burton 2004):

- Stress-related absences cost Canadian employers about \$3.5 billion each year.
- Health care expenditures are nearly 50 per cent greater for workers who report high levels of stress.
- Costs of lost productivity due to mental illness in Canadian businesses equals \$11.1 billion per year.
- Mental health problems cost Canadian businesses \$33 billion per year, if non-clinical diagnoses are included (e.g., burnout, sub clinical depression, etc.).
- Employers pay an extra \$597/year for each employee who consumes excessive amounts of alcohol.
- Employers pay an extra \$488/year for every sedentary employee.
- Every smoker costs a company \$2,500/year.

In examining the effect of work-life conflict, Duxbury, Higgins and Johnson (1999) found that respondents classified as working under conditions of “high work-life conflict” reported 45 per cent more visits to physicians in a 12-month period than their “low work-life conflict” counterparts, representing a cost of at least \$425.8 million to the public health care system.

4.4 Legal Ramifications

In addition to the health and economic costs associated with work stress, there is also an emerging legal principle which holds employers responsible for their working environment, as evidenced by a recent 2003 case, *Zorn-Smith vs. Bank of Montreal*. This case involved a plaintiff suing the Bank of Montreal for wrongful dismissal, the intentional infliction of mental distress, loss of disability benefits and punitive damages for callous disregard after being fired for not returning from disability leave at the company’s request. This disability leave was the result of depression caused by burnout related to excessive overtime, weekend work and job demands accumulated over a 21-year career. After reviewing all the facts, the court held that the tort of intentional infliction of mental suffering was proven because:

- The bank knew that the plaintiff was exhausted and worn out as a result of chronic understaffing.
- The bank was well aware that the plaintiff had suffered burnout on a previous occasion, requiring a short leave of absence.
- Supervisors knew that the plaintiff had been requesting relief from her workload.
- Despite this knowledge, the bank continued to reduce staffing levels, thus increasing the workload on the plaintiff.

- Despite the plaintiff’s pleas for relief, the bank continued to keep on the pressure.
- The bank knew of her history of long hours and missed lunches.
- The bank took advantage of the plaintiff’s generous nature “in total disregard to” the toll its demands were taking on her health, and the health of her family” (Shain 2004b).

“The implications of this...are profound because it signals the intention of Common Law courts to entertain suits complaining of how employees are treated during the course of the employment relationship, not just at the point of dismissal. In other words, courts are now willing to pass judgment on the conduct of employers with regard to the protection of employees’ emotional safety during the course of the employment relationship” (Shain 2004a).

4.5 Creating Healthier Workplaces

4.5.1 Workplace Health Promotion

Workplace health promotion comprises all joint measures of employees, employers and society to improve the health and well-being of people at work (European Network for Workplace Health Promotion 1997).

The nature and structure of the workforce and workplace has evolved considerably over the past few decades. For example, a large proportion of jobs have shifted from the manufacturing to the service sector, the idea of knowledge workers and knowledge management has permeated organizational theory and practice and the workforce is aging. Workplace health promotion has also evolved from its earlier focus on occupational health and safety—which is outside of the scope of this review—to a focus on healthy lifestyles, using the workplace as a setting to address behavioural determinants, and finally to a focus today on those working conditions which both condition behaviour and independently affect health. As Polyani et al. (2000) stated “the promotion of health in the new workplace must go beyond traditional occupational health and health promotion strategies. Neither the achievement of safe physical environments nor the promotion of healthy lifestyles is sufficient.”

This was also echoed in the findings of Murphy (1996), who reviewed 64 articles on the health effects of worksite stress-management interventions and found that the most positive results were obtained from multi-component stress management interventions. This led him to comment on the need to address context, “to alter or modify the sources of stress in the work environment” and not rely on health education to target workplace stress.

4.5.2 Effectiveness of Workplace Health Promotion Programs Targeting Healthy Lifestyles

While not sufficient, the promotion of healthy lifestyles through workplace health promotion programs can be effective. Breucker and Schroer (2000) conducted a review of workplace health promotion intervention reviews based on an expert survey and reference search, and selected 4 reviews—collectively reviewing over 650 studies—for analysis that used clearly defined assessment criteria in their assessment of the strength of evidence and had quality review designs. The overall results of these studies show a “remarkable weight of evidence indicating a positive effect of workplace health promotion programs on individual health awareness and behaviour as well as long-term health and social outcomes.” These reviews found the strongest

evidence for workplace health promotion programs targeting hypertension/blood pressure control, smoking cessation and fitness. A large variety of intervention designs were effective, including but not limited to individual smoking cessation, organizational smoking policies, fitness classes, health education classes and nutrition education.

This identification of hypertension/blood pressure control, smoking cessation and fitness as being particularly amenable to workplace health promotion efforts may be due to the social conditioning of smoking rates, the opportunity for fitness classes of a “captive audience” at work and the heightened blood pressure associated with stress at work.

Breucker and Schroer (2000) identified the following factors as being associated with successful workplace health promotion programs:

- Interdisciplinary effort involving many different players in the company.
- Participation and cooperation of all players.
- A comprehensive approach, combining activities that focus on the individual with those that address the design of the working and organizational conditions.

They also indicate that there is strong evidence for the health effectiveness of both behavioural and structural approaches, for the importance of combining them in a comprehensive program of workplace health promotion, and for benefits to improved productivity and the quality of both product and process in the work site, making workplace health promotion a positive competitive factor in addition to its health benefits.

Further characteristics of successful programs were identified by Heaney and Goetzel (1997), who reviewed 47 evaluation studies of the health-related effects (i.e., health risk modification and reduction in worker absenteeism) of multi-component worksite health promotion programs. The evidence indicates that worksite health promotion programs are likely to reduce employee health risks, if certain conditions are met:

- Change in risk can best be achieved if individualized risk reduction counselling is provided in a personal and consistent manner to high-risk employees. In contrast, an approach that depends solely on exposing the entire employee population in a uniform manner to behaviour change messages does not appear to be as effective as the individual counselling and support approach.
- Programs must be of sufficient duration to achieve results. The data suggest that a program must be in operation for a year in order to bring about risk reductions among employees at the one-year mark.
- Program effects are more likely to be maintained if the worksite continues to support and reinforce employee risk reduction.

4.5.3 Methodological Critiques

There are a number of methodological issues in workplace health promotion research that weaken its evidence base (Engbers et al. 2005), including a lack of studies with control groups, a lack of randomization, anecdotal evidence and cross-sectional study designs.

In a review of 15 studies of health promotion interventions in the workplace (Effective Public Health Practice Project 2001), the reviewers reported that most evaluations lacked control or comparison groups—weakening the ability to draw conclusions about program effectiveness. They found little evidence that workplace-based health risk appraisal alone can produce sustainable changes in individual health behavior or risk status. However, they provided a number of examples where specific interventions were found to be effective and concluded that:

- A sustained program based on principles of empowerment and/or a community-oriented model using multiple methods, visibly supported by top management and engaging the involvement of all levels of workers in an organization, is likely to produce the best results.
- A focus on a definable and modifiable risk factor, which constitutes a priority for the specific worker group, can make an intervention more acceptable and increase their participation.
- Interventions should be participatory and tailor-made to the characteristics and needs of the employees.

The absence of control groups was also noted by Wilson, Holman and Hammock (1996), who reviewed the effectiveness of worksite health-related programs, looking at 316 studies published through 1994. The majority of these studies evaluated individual or group educational programs designed to impact health-related behaviours by effecting knowledge, attitudes, skills, intent, behaviour and/or risk status. The majority of studies did not randomly assign participants, a further methodological weakness, yet Wilson et al. found conclusive evidence for health promotion programs targeting hypertension, strong evidence for weight control and stress management, suggestive evidence for exercise, nutrition/cholesterol and alcohol, and weak evidence for HIV/AIDS and health risk appraisal.

In their chapter on health promotion in the workplace, Polyani et al. (2000) noted that many corporate reports of workplace health promotion are anecdotal, short-term and cross-sectional, making it difficult to determine causality, and that many reports do not evaluate program cost-effectiveness.

4.5.4 Sustainability of Worksite Health Promotion Program Results

Polyani et al. (2000) found that benefits can extend beyond health to reductions in health care costs, numbers of employee sick days, outpatient costs and hospitalization costs, and improved worker morale, labour-management relations and productivity. Benefits attributable to workplace health promotion appear to be persistent and sustainable. Pelletier (2001), in the most recent of a series of reviews of the clinical and cost-effectiveness studies of comprehensive, multi-factorial

health promotion and disease management programs conducted in corporate worksites, notes that four- to six-year follow-up shows sustained reductions in risk, morbidity and cost.

4.6 Improving Work Organization and Conditions

As the literature makes abundantly clear, a focus on healthy lifestyles alone is insufficient in workplace health promotion. What is necessary is to focus on the working conditions and organizational structures and processes which contribute to job strain and stress, as articulated in the theories of job-strain and effort-reward imbalance.

The Independent Inquiry into Inequalities in Health reviewed factors associated with improvements in employee health, and reported (Acheson 1998):

A recent review of international case studies on improving psychosocial health in the workplace found that it was possible to make improvements by tailoring changes to specific workplaces. Examples included increasing the variety and understanding of the different tasks in a production process, workforce participation in identification of problems and their solutions, and altering shift patterns to make them less tiring and disruptive to workers' personal lives. Although effective changes were likely to be specific to particular workplaces, successful interventions had some common features. They were: appropriate commitment and effort from management; support by management and the workforce; participation of the workforce in planning and implementation; and the creation of trust. Conversely, aspects which inhibited the success of policies included: schemes which directed attention away from difficult working conditions and attempted to treat the symptoms only; technical solutions alone, imposed from the top; and cases where management retained control over the *dialogue*.

Michie and Williams (2003) conducted a systematic review of interventions that have been successful in reducing psychological ill-health and sickness absence. Six interventions were included in their review: three randomized controlled trials, one randomized pre-post intervention (no controls), one matched controlled study and one observational study. Results include:

- Teaching social support and problem-solving skills results in reductions in depression among those at highest risk, and among all participants, more supportive feedback increased coping ability, and better work team functioning and climate.
- Stress management sessions result in a significant reduction in stress hormone (prolactin) levels.
- Psycho-educational programs targeting anxiety, depression, psychological strain and emotional burnout found significant improvements in comparison to baseline, both post-intervention and at 9 months follow-up.
- Early referral to occupational health (2-3 months into sickness absence as compared to the 6-month standard) found a 15-week reduction in sickness absence (25 weeks in the

intervention group compared to 40 weeks in the control group). Large financial savings were also reported.

Graham Lowe (2003) comments on the process and features associated with successful workplace health improvement:

Actions required to create a healthy organization must address all aspects of how work is organized and managed. Programs that deliver tangible improvements to employee health outcomes and productivity cannot simply be “added on.” Rather, they require systemic change in an organization’s structures, processes and culture. This is suggested in a review of firms that have “leading practices” in health promotion related to performance and productivity. These firms exhibit ten distinguishing features:

1. Health and productivity management strategies are aligned with the firm’s business strategies using an interdisciplinary approach;
2. Leaders or champions show vision and make things happen;
3. Interdisciplinary team members are enthusiastic about health promotion;
4. Senior management strongly supports this integrated approach and provides resources;
5. Business operations managers are key members of the team;
6. Prevention and health promotion staff are closely involved;
7. Improving the quality of work life is expected to increase productivity and cost containment will follow;
8. Data integration happens later in the process;
9. Ongoing communication among team members and senior management keeps health promotion in the forefront; and
10. There is constant improvement and learning from others.

What this list describes is the process for achieving change. As such, healthy organizations are created and sustained through strong leadership, coordinated and collaborative efforts, support from all levels of management, and on-going communication and learning.

The IUHPE (2003) identifies the following factors as essential for effective workplace health promotion activities:

- Interdisciplinary effort involving many different players in the company (occupational health and safety, human resources management, quality management, training, etc.).
- Participation and cooperation of all players.
- A comprehensive approach, combining activities that focus on the individual with those that address the design of the working and organizational conditions.

The United Kingdom's National Health Service (NHS) conducted a ten-year evaluation of their Health at Work (HAW) in the NHS initiative, a ten-year initiative that aimed to achieve the improvement of the health and well-being of NHS employees through a variety of workplace health programs, integrating approaches from health and safety, occupational health and health promotion. In particular, Health at Work sought to take the focus of health improvement initiatives away from the individual, towards a focus on how organizations affect the health of those they employ (National Health Service [NHS] Health Development Agency 2002).

Key recommendations from the evaluation include:

- The instigation of HAW as an initiative needs to be implemented at the director level to ensure there is the authority to build HAW into the core strategies of the organization and to advocate the importance of HAW to the rest of the organization.
- A board-level champion for HAW is essential to its success and will help to obtain funding for key strategic initiatives.
- The work of the group should be considered strategic to the organization, and incorporated into business planning, while also including staff consultation in the planning process.
- HAW groups should develop their strategy and draw up clear success criteria. Evaluation and review methodology should be considered at an early stage of strategy development.
- Groups should not be put off by limited resources—many trusts have achieved a range of activities by taking an innovative and creative approach, gaining community sponsorship and utilizing links with other organizations to mutual benefit.
- Organizations should endeavour to establish staff needs through monitoring organizational records, consultation with staff and staff surveys. Although the initiative has flourished where members of staff have a personal interest in HAW, they should avoid the initiative being driven purely by those interests as the broad focus of the initiative may be lost.
- Success will be achieved by going beyond the superficial and investigating and addressing the real issues causing ill-health. High incidences of absence through back pain will not be resolved by providing fast-track physiotherapy, although it may help to decrease absence times. Identifying the cause of the problem and campaigning for improvements, whether it be procedural, cultural or technical in nature, will demonstrate long-term sustainable benefits to the organization.
- Establish a clear communication strategy. Find out what forms of communication are most favoured by employees. Ensure that communication is targeted at the widest possible audience. Review and revise communication if necessary.

The NHS conducted an evidence review of work and health, and reported that “work which provides fulfillment and allows individuals control over their working lives confers considerable health benefit, types of jobs which are lacking in self-direction and control seem to confer far

fewer health benefits, and people with such jobs seem to experience consistently higher rates of mortality and morbidity” (NHS 2004).

Health Canada (2000) notes that there is good evidence that all these health and safety outcomes can be modified by introducing changes to the organization of work with particular attention being paid to increasing control and reward conditions.

The Northern Ireland Civil Service created a Healthy Workplace Policy in 1996, to give “a strategic and holistic focus to promoting, maintaining and improving the physical and mental well-being of all employees. The key features of the policy are:

- Tying in the major causes of ill-health in Northern Ireland to the workplace situation.
- Maintaining a safe and healthy workplace.
- Encouraging the concept of shared responsibility, where employer, employee and other partners can play a role in improving health and social well-being.
- Establishing the NICS Workplace Health Committee as the main policy instrument (Addley 1999).

4.7 Cost-Effectiveness of Interventions

Golaszewski (2001) reviewed 12 studies selected by an expert panel as being the most influential in offering evidence for or against the financial impact of workplace health promotion programs. The review provides moderate support for the economic value of workplace health promotion programs. The strongest evidence is for reduced employer health care costs and absenteeism, while recruitment and retention benefits from workplace health promotion programs lack empirical support. Golaszewski concludes that “absenteeism reduction may represent health promotion’s most defensible economic argument.”

Pelletier (2001) reviewed 15 American studies of the cost-effectiveness of comprehensive health promotion and disease management programs at worksites. Interventions included: exercise and fitness programs, back care, weight control, health risk assessment, mammography, prostate cancer screening and referral, educational programs, immunization, hemochromatosis screening, headache screening, prenatal education and a range of comprehensive wellness programs. The weight of the evidence confirms that multi-component or comprehensive interventions have higher clinical effectiveness and cost-effectiveness compared with single factor disease management programs. This review concludes that there is “moderate to strong evidence” that comprehensive health promotion and disease management programs show cost-effectiveness.

Bertera (1990) used a pre-test/post-test control group design to assess the impact of a comprehensive worksite health promotion program. The study focused on absenteeism outcomes, and emphasized group and individual classes focusing on healthy lifestyles, fitness, nutrition, stress management, smoking cessation, health risk surveys, safety and counselling. The two-year program resulted in 11,726 fewer disability days in program sites compared to control sites, with an accompanying return on investment of \$2.05 for every dollar invested.

Exercise/fitness programs have also shown net financial benefits, including reduced health care costs, absenteeism, injury rates, turnover and improved job performance, productivity and morale (DiNubile and Sherman 1999).

Reviews of the financial impact show cost/benefit ratios ranging from \$0.76 to \$3.43 and from \$1.15 to \$5.52 when fitness programs are part of a comprehensive health promotion strategy. Other research documents cost-benefit ratios of between USD \$3 and \$8 for every \$1 invested in health promotion programs within 5 years of the program being launched (Aldana 2001; Goetzel et al. 1998; Anderson, Serxner and Gold 2001).

Chapman (1996) analyzed 30 studies and concluded that a reduction in employer costs is achievable when multi-component, comprehensive programs are involved. Chapman found very strong economic effects for programs focusing on medical self-care and high-risk intervention, and major cost savings for hypertension control programs, back injury prevention, prenatal care programs and programs containing a high proportion of physical activity. Programs focusing on smoking cessation and stress management showed only modest economic outcomes. Weak economic outcomes were associated with programs on nutrition education, weight management and cholesterol reduction (Chapman 1996).

4.8 Conclusion

As has been repeatedly emphasized in this review, and consistent with the philosophy of health promotion and our increasing understanding of the social determinants of health, “the underlying determinants of health and productivity can only be altered through changes to job design, organizational systems, human resource management practices, and the overall culture of the workplace” (Lowe 2003).

The promotion of healthy lifestyles, while insufficient, can be effective. There is a significant weight of evidence indicating a positive effect of workplace health promotion programs on individual health awareness and behaviour as well as long-term health and social outcomes. The strongest evidence is for workplace health promotion programs targeting hypertension/blood pressure control, smoking cessation and fitness. Workplace health promotion program benefits also extend beyond health to include improved productivity.

Many reviewers commented on methodological weaknesses in this literature including a lack of control groups, a lack of randomization, anecdotal evidence and cross-sectional study designs.

In addition, due to the nature of this “review of reviews” and the nature of, and variety in types of, systematic reviews, it was not always possible to pinpoint specific interventions and specific outcomes, as there is a tendency for some published reviews to generalize and summarize both their sample and their results.

The weight of the evidence confirms that multi-component or comprehensive interventions have higher clinical effectiveness and cost-effectiveness compared with single factor disease management programs. The strongest evidence exists for reduced employer health care costs and absenteeism.

Comprehensive approaches to workplace health promotion address the underlying determinants of workplace stress and the psychosocial determinants of ill-health in the workplace. Examples included increasing the variety and understanding of the different tasks in a production process, workforce participation in identification of problems and their solutions, and altering shift patterns to make them less tiring and disruptive to workers' personal lives. Successful interventions have some common features, including: appropriate commitment and effort from management; support by management and the workforce; participation of the workforce in planning and implementation; and the creation of trust. Conversely, aspects which inhibit the success of policies include: schemes that direct attention away from difficult working conditions and attempt to treat the symptoms only; technical solutions alone, imposed from the top; and cases where management retained control over the dialogue.

5.0 BUILDING HEALTHY HEALTH CARE FACILITIES

The following section outlines the evidence for the ways that the administration within health care facilities can incorporate a health promotion approach. Much of the discussion below comes from literature relating to the incorporation of health promotion principles and strategies within hospitals. As high-profile facilities, hospitals have gained the most attention in this area, but much of what has been learned from “healthy hospitals” approaches can also be used in other facilities, including long-term care facilities and outpatient clinics.

The evidence regarding the success of “healthy health care facilities” programs is still in its early stages, led by the work of the World Health Organization’s Health Promoting Hospitals networks. At this point there is little evidence demonstrating that multi-faceted, comprehensive health promotion programs in health care facilities have led to specific health gains or cost savings. However, there is a great deal of evidence that shows the individual components of such programs (e.g., the way patients are treated in the facility, the ways in which the facility is architecturally designed) can help to improve health among both patients and staff. That evidence is summarized here. Please also note that in most cases the evidence with respect to healthy workplaces reviewed in the previous section will also apply to health care facilities as workplaces.

The term “health-promoting health care facilities” can be confusing to some who may argue that health promotion is not the function of these institutions. Health care facilities may not be the main agents in community-based health promotion, but they can contribute to creating health-promoting internal and external environments. Hospitals and other facilities can play a role in healthy communities work through the following:

- As institutions with a large number of workers and service users, they can reach a large section of the population (personnel, patients and relatives).
- As centres of modern medicine, research and education that accumulate much knowledge and experience, they can influence professional practice in other centres and social groups.
- As producers of large amounts of waste, they can contribute to the reduction of environmental pollution and, as large-scale consumers, they can favour healthy products and environmental safety.

Health promotion within health care facilities in general, and in hospitals especially, needs to broaden the concerns of the staff and management beyond clinical outcomes of individual patients, to include consideration of health-related quality of life and satisfaction of those patients, their families and the broader community. When using the settings approach to health promotion, the health impact of the health care setting is an important effect to be observed, controlled and improved. The total potential health gain of facility-based health promotion is therefore the outcomes of health promotion services provided plus the general impacts of the setting for patients, staff and the community.

In a review of the health promotion practices of Australian hospitals, Johnson and Baum (2001) grouped the types of health promotion activities undertaken by hospitals into five categories:

- Patients and their families.
- Staff.
- The organization as a whole.
- The physical environment.
- The community that is served by the hospital.

A description of each of these categories of initiatives is provided below, with an outline of the evidence.

5.1 Health Promotion Initiatives for Patients and their Families

5.1.1 Self-care

Health promotion within hospitals or other health care facilities is often geared to encouraging or facilitating self-care among patients and their families. Self-care can take place before, during or after a stay in the facility. To make self-care possible under the difficult conditions of illness, injury or disease, professional health care needs to be as empowering as possible, taking into account cultural differences of patients. While the health effects of this type of strategy have not been systematically studied, there are examples that have been successfully implemented in several countries (Pelikan et al. 2005). On a broader level, the manner in which interactions occur between patients and health care providers can have an impact on health, regardless of the type of medical intervention provided. For instance, DiBlasi et al. (2001), in a review of randomized controlled trials, found that physicians who attempted to form a warm and friendly relationship with their patients, and reassured them, were found to be more effective than practitioners who kept their consultations impersonal, formal or uncertain.

5.1.2 Encouraging Patient/Resident Participation in Care

In other initiatives, efforts are made to change clinical and administrative practice within hospitals or other health care facilities to support patient and family participation in treatment and care. For example, patients and families may be given education, training or counselling so that they feel supported and empowered to get actively involved in treatment-related decision-making. There is clear evidence that this type of patient empowerment can reduce post-surgical complications and speed up recovery (Pelikan et al. 2005).

5.1.3 Chronic Disease Management

The main part of the day-to-day management of chronic illness occurs outside of health care facilities, and so must be performed by the patient and family themselves. This aspect of chronic disease lasts much longer and is out of the direct control of health care staff, but it is crucial for the outcome of regaining health and quality of life.

The Expanded Chronic Care Model (ECCM) (Barr et al. 2003) suggests ways in which health authorities can facilitate better chronic disease management among their patients, while at the same time incorporating advocacy and community capacity building, and supporting changes to the physical and social environments—all key elements of a healthy communities approach. The ECCM is based on a merging of the Chronic Care Model (Wagner 1998) and the Ottawa Charter for Health Promotion (WHO 1986). The model has received significant interest since its introduction, and is currently being used across Canada and internationally.

5.1.4 Promoting Lifestyle Changes Among Patients and Families

The future health of patients can be improved by hospitals or other health care facilities by encouraging lifestyle changes (e.g., smoking cessation programs, physical activity interventions, nutritional programs, etc.). Hospitals and other major health care facilities are in a good position to offer such programs, having already developed a relationship with patients in a crisis situation, being centres of knowledge and having a high prestige in the area of health. Most of these programs focus on educating and supporting patients to make lifestyle changes.

A recent review of the evidence (Tonnesen, Fugleholm and Jorgensen 2005) for specific lifestyle interventions in hospital settings suggested that hospitals implement the following programs:

Table 2: Lifestyle Interventions in Hospital Settings

Area	Intervention
Tobacco	<ul style="list-style-type: none"> • Identification of smokers and establishing a thorough history. • Oral and written information to patients on damaging effects of smoking and health benefits of quitting. • Advice and recommendations with regard to cessation. • Establishment of smoking cessation services.
Alcohol	<ul style="list-style-type: none"> • Identification of patients with harmful and dependent alcohol consumption. • Oral and written information to patients on the damaging effects of excess alcohol use and the health benefits of stopping or reducing consumption. • Recommendations for heavy drinkers to stop or reduce consumption. • Brief interventions or referrals to an alcohol unit.
Physical Activity	<ul style="list-style-type: none"> • Identification of patients with a need for counselling on physical activity. • Counselling on exercise in accordance with international guidelines. • Establishment of systematic training programs for relevant patients (heart and lung patients, diabetes, surgery, psychiatry, overweight and underweight).
Nutrition	<ul style="list-style-type: none"> • Identification of undernourished patients and patients at risk of under-nourishment. • Initiation of relevant nutrition treatment and continued observation of body weight and food intake throughout the patient’s stay in the facility. • Communication of information on discharge. • Identification of overweight patients and screening for diabetes and other complications. • Counselling on diet and physical training. • Establishing of systematic training programs for relevant patients. • Secure follow-up in the primary care sector.

In licensed community care facilities, some of the above interventions (e.g., physical activity programs, identification of patients at risk of under-nourishment, etc.) are mandatory (*Community Care and Assisted Living Act 2004*).

5.2 Creating a Healthy Workplace for Staff

Hospitals and other health care facilities can be dangerous workplaces. They provide physical risks (e.g., exposure to chemical or biological agents, dealing with violent patients/clients and work-related injuries, especially from lifting patients), mental risks (e.g., stress, work-related exhaustion and burnout), and social risks (e.g., night shifts). In order to ensure the greatest productivity and to model the promotion of health in the community, administrators of hospitals and other health care facilities have a responsibility to provide a safe and healthy workplace for their staff.

According to recent reviews, the mental health of hospital and other health care staff can be improved or sustained by:

- Establishing routine organizational structures.
- Creating a composed and uncluttered environment.
- Ensuring clear, smooth and timely communication of critical information.
- Providing social support groups among peers, as needed.
- Encouraging rituals and ceremonies.
- Ensuring staff and administration mission and goals are aligned (Ryndes 1997).

Job sharing, flexible work hours, on-site daycare, parenting seminars and arrangements that enable staff to care for sick children or older relatives can also help to reduce workplace stress (Leach 1995).

Empowerment of staff is another important component of a healthy workplace. Facilitating a “workplace democracy” (Hancock 1999, p. xii) by involving staff in the design of the hospital’s physical environment or work-related policies can have a positive impact on individual job satisfaction and can go a long way in building a healthy workplace. To encourage a healthy and productive workplace, hospitals and other health care facilities can build formal and informal processes that allow workers a say in their work life. The same services offered to patients can also help staff to maintain or improve their health; services to deal with chronic illness (Killan and Paul 1996) or to improve lifestyle are effective health promotion strategies with staff.

The physical working conditions are key contributors to work stress and burnout among health care staff. Environmental support for work has become more critical, as the typical patient is more seriously ill, patient loads increase, technology changes and documentation requirements increase. This is especially the case in settings such as long-term care, where worker injury is prevalent (Workers’ Compensation Board of BC 2006). Many of the recommendations for providing healthier environments within health care facilities equally support staff as well as patients (see Section 5.5 for those recommendations).

5.3 Building a Health-Promoting Organization

In order to achieve the greatest gains in health, the health authority's organizational structures and processes need to reflect health promotion principles. The organization's development should be geared to creating a healthy corporate culture (Hancock 1999). Pelikan et al. (2005) suggest that the following criteria be in place to most effectively build a health-promoting organization:

- Health promotion has to be an explicit aim and value in the mission statement of the organization. That statement should include reference to, for instance, patients' rights, and the health of patients, staff and the community.
- There must be a clear commitment by top management towards health promotion. There should be a structured health promotion strategic policy document that specifies the aims, goals, targets, health promotion strategies and necessary policy changes. The organization should have an annual health promotion plan with a specific budget allocated to health promotion.
- The organizational structure and culture should value and facilitate health promotion. Staff from all levels and departments, patients and external stakeholders should be actively encouraged to participate in the planning and implementation of health promotion activities, and there should be a designated health promotion team providing continuous support for health promotion interventions. Health authority staff need to be adequately trained in the principles and practice of health promotion, and regularly updated about new or proposed initiatives.
- In order to influence everyday clinical practice, health promotion must be integrated into standards, guidelines and clinical pathways for routine decisions and actions.
- Networking with external health service providers and other stakeholders in the community should be routinely and actively sought.

Staff training in health promotion work, while an important part of building a healthy organization, is not by itself sufficient to introduce changes in administrative or clinical practice (Grossman and Scala 1993). Such training is only successful when accompanied by organizational development on a structural level. A healthy health care facility has to be structured so that its corporate culture encourages and supports staff in their work life and in their ability to contribute to the health of their workplace and their community (Hancock 1999).

5.4 Health Promotion in the Facility's Physical and Social Environments

Just like the services that promote health and healing, the context or environment of a health care facility has significant impacts on health. It is well documented that the environment can lead to stress, anxiety and depression (among both patients/residents and staff), which can have a deleterious effect on health (Taylor, Repetti and Seeman 1997). Yet modern hospitals and many other health care facilities, with their emphasis on diagnosing and treating, are often noisy, institutional environments. Fortunately, the use of recent research is beginning to encourage architects, health care administrators and others to consider the ways in which facilities are

designed, built and used so that the result is a more healing and health-promoting environment for patients, families and staff.

A recent review by the Center for Health Design in the United States found that the physical environment of the health care facility can be linked to patient and staff outcomes in reducing staff stress and fatigue, increasing effectiveness in delivering care, improving patient safety, reducing patient distress and improving overall health outcomes (Ulrich et al. 2005; Ulrich 2001). These and other reviewers (e.g., Schweitzer, Gilpin and Frampton 2004), recommend that health care facilities incorporate the following elements in basic design of the physical environment:

- Ensure adequate ventilation – The American Environmental Protection Agency estimates that indoor air pollution is one of the top five environmental risks to public health. Adequate ventilation systems in health care facilities (which include windows that open) can increase energy efficiency of buildings as well as reduce the transmission of communicable diseases.
- Reduce noise levels – A considerable body of research has documented the negative effects of noise on both patient outcomes and staff stress levels. Among in-patients, excessive noise can disrupt sleep and affect patients' perceptions of pain levels. Environmental interventions that have proven especially effective for reducing noise and improving acoustics in hospital settings include installing sound-absorbing ceiling tiles, eliminating or reducing noise sources (for example, adopting a noiseless paging system), and installing carpeting when possible.
- Ensure more personal space for patients – Single-bed patient rooms have several advantages over double rooms and open bays. They can reduce infection rates, result in far less noise, better protect patient privacy and confidentiality, lead to better communication among patients and staff and better provide for comfortable family involvement.
- Design to facilitate social connectedness – Studies show that contact with caring individuals (family, friends, health care providers) during stressful situations is beneficial to health (Lepore, Mata and Evans 1993). Health care buildings can be designed to encourage opportunities for social support by carpeting rooms as appropriate, arranging furniture so that people can easily interact, decentralizing nursing stations and providing pleasing outdoor spaces.
- Provide patients and staff with access to nature – Researchers have consistently reported the stress-reducing or restorative benefits of viewing nature (e.g., through the window in patients' rooms) among both patients and staff. For instance, in studies of hospital patients in critical or intensive care units, a view of nature has been correlated with shorter postoperative stays, higher satisfaction with nursing care and decreased use of potent analgesics (Ulrich 1984). Providing patients, families and staff with access to nature by offering indoor and outdoor gardens, views of nature through windows and artwork of nature scenes, can help to relieve stress and foster restoration.

There is a shortage of empirical evidence on the impact of the physical environment on health and quality of life among residents of long-term care settings; given cognitive and physical impairments, it can be difficult to assess that quality of life. However, recent reviews of the available evidence (e.g., Barnes and the Design in Caring Environments Study Group 2002) suggest that arrangements that offer residents a fundamental sense of ownership, privacy and control over their environment enhances their quality of life. For instance, settings that facilitate spatial orientation, wayfinding and easy access to outdoor gardens can allow residents spaces for privacy, activity and stimulation, regardless of their cognitive or physical limitations. Of course, a balance needs to be reached between resident autonomy and security.

5.4.1 Health Care Facilities as Green Buildings

Green buildings, in the context of health care, are facilities designed, constructed and managed to protect the physical and global environments, provide a healing environment and offer the greatest value for the money (Health Care Leaders' Association of BC 2005). Green buildings use a variety of strategies to improve indoor air quality, increase the amount of natural daylight entering the facility, provide views of nature and increase patient control over their immediate physical environment. Beyond the positive effects described above among patients and staff, building and properly maintaining health care facilities as green buildings reduces energy costs, the amount of water needed in the facility and waste generation and air emissions, including greenhouse gases. On some building sites, green buildings can also enhance local environmental features (Green Buildings BC 2005).

Green buildings are constructed with as large a component of local materials and services as can be economically justified. This practice not only reduces transportation activities and their related fossil fuel use and air emissions, it also supports regional manufacturers and labour forces thereby contributing to a more stable tax base and a healthy local economy. In addition, through their efficient use of energy and water and careful management of waste streams, new green health care facilities place much less pressure on local utilities and waste management systems than their conventional counterparts.

Designing and building green hospitals and other health care facilities need not be expensive. Excellent evidence-based guidelines are available that help health care administrators and their partners to improve environmental performance of a new facility (or the extensive upgrade of an existing facility). For example, the Integrated Design Process (IDP) focuses on whole-building optimization rather than concentrating on individual building systems. IDP exploits the interdependence of building systems to capitalize on cost tradeoffs. As well, the Green Guide for Health Care (Center for Maximum Potential Building Systems 2005) offers a best practices guide for healthy and sustainable building design, construction and operation. An approach focused on improving health care design based on empirical evidence, the Green Guide for Health Care presents clear standards that project managers can reference during all stages of the project. Throughout those stages, staff, patients/residents and community stakeholders are encouraged to become involved.

A strong business case has been developed for green building design and construction in health care (e.g., Berry et al. 2004; University of British Columbia School of Architecture 2002; Hancock et al. 2001). The evidence indicates that the one-time incremental costs of designing and building optimal facilities according to green building guidelines can be quickly repaid through operational savings and can result in substantial, measurable and sustainable financial

benefits. Over the long term, building hospitals or other facilities that are sensitive to environmental and health impacts is expected to increase the up-front costs by 0 to 2 per cent. Over the life cycle of the building, however, there is an estimated savings of 20 per cent of total construction costs—more than 10 times the initial investment (Kats 2003).

5.5 Promoting the Health of the Community

While the major determinants of health lie beyond the health care sector in the broad social, economic, political and physical environments in which we work and live, the hospital or health care facility can use its resources and status in the community to improve the health of local residents and reduce health disparities. The hospital or health care facility can reduce its negative impact on the environment in terms of air pollution, waste, noise and traffic, for instance. Hospital space can also be made available for community use, and the hospital can serve as a cultural or recreational centre, if appropriate (Pelikan et al. 2005).

On a broader level, the health care system can act as advocate, supporter and facilitator of a healthy communities approach to health promotion. In these initiatives, a coalition of community leaders, including municipal and regional governments, local businesses, schools, voluntary organizations and other concerned citizens work to identify key health issues in their area and address them. Those health issues can be as diverse as poor environmental conditions, a housing shortage, high crime rates or the lack of social networks. Hospitals and other health care facilities have not traditionally been key players in this process of creating a healthier community, often because the broad social and environmental factors identified by communities lie beyond their realm of expertise and experience. However, representatives from health care facilities can partner with local government and non-profit organizations to develop policies, create environments and enhance community capacity and those skills that are needed to build sustainable, healthier communities. As Len Duhl, one of the founders of the international Healthy Cities movement, aptly put it:

The medical profession made the assumption that "the disease" was the problem. We do not want the patient to be the problem, because the patient will ask questions. Now we discovered, this doesn't work. Healing is not working with patients in isolation. It involves the family. And it is more than the family, it is the community in which you live, and the situations in which you work.

This is a revolution in our thinking, a paradigm shift that says unless we think systemically, ecologically, multidisciplinary, multisectorially, we are not dealing with the core questions.

But that's not "the way things are done." Not only is planning done segmentally, so is the research, the research literature, the training in the university - and then we wonder why nobody can get along together (Duhl, as cited in Flower 1993).

Hancock (1999) suggests that there is much that hospitals and other health care facilities can do to support the healthy communities process. Staff and administrators from health care facilities can:

- Offer health status data that can be used to identify inequities and priorities for a community health needs assessment.
- Work with community leaders to advocate for policy change around issues such as poverty and physical environment.
- Play a vital role in helping to identify and address environmental threats to health and in helping to build more positive physical and social environments. For instance, hospitals can engage in local dialogue about the health impact of urban design, the environmental impact of local industrial activity or the sustainability of economic development in the area.
- Work with disadvantaged groups in their communities by teaching their staff and the population about the benefits of self-care and mutual aid, and assisting community groups to develop and strengthen their capacity for self-care and mutual aid.
- Support the development of personal skills for health by supporting literacy education for staff and community members, and by working to educate the public about the determinants of health, how the health care system operates and how to use it effectively.
- Help to re-orient health services by providing a better balance between prevention and treatment, emphasizing community-based health services and introducing elements of alternative or complementary care.

5.6 The Planetree Hospital Model

Established by a patient in 1978 as a non-profit organization, the Planetree model encourages a philosophy of care that seeks to personalize, humanize and demystify the patient experience. In the model, everything in the health care setting is continuously evaluated from the perspective of the patient, incorporating this perspective into both the culture of the organization and the facility over time (Planetree 2005; Frampton, Gilpin and Charmel 2003).

The organization recommends hospitals and other facilities de-emphasize the rigid hierarchy often present in medicine, and increase patient participation and control by allowing patients complete access to their medical records and encouraging them to insert notes in those records, facilitating self-administered medications as appropriate and providing a number of opportunities for patients to actively learn about their diagnosis and treatment. Families and friends are supported to get involved in the patient's care plan; the important role of spirituality in healing is acknowledged; complementary therapies, like therapeutic touch, acupuncture and Reiki are encouraged; and nutritious food is served in a pleasant and thoughtful way. Finally, Planetree facilities provide patients and families with spaces for both solitude and social activities, including libraries, kitchens, lounges, activity rooms, chapels and gardens. Comfortable space and accommodations are provided for families to stay overnight. Healing gardens, fountains, fish tanks and waterfalls are provided to connect patients, families and staff with the relaxing, invigorating, healing and meditative aspects of nature (Planetree 2005). These approaches are, by and large, incorporated into the work of the hospital at little or no extra cost.

5.7 The Eden Alternative Model for Long-Term Care Facilities

The Eden Alternative is a model of care for residents of long-term care facilities in which the facility becomes a place where the elderly and people with disabilities can receive assistance and support with activities of daily living and care, without the assistance and care becoming the focus of their existence. The residences operating under this model alter the facility size, staffing patterns and methods of delivering professional care with the aim to deinstitutionalize long-term care and create more liveable, social settings. “The Eden Alternative shows us how ...the variety and spontaneity that mark an enlivened environment can succeed where pills and therapies fail” (Eden Alternative n.d.).

For example, in the Green House Project, an initiative now being implemented in several American states, people live in self-contained dwellings for seven to ten people that are designed to look like private homes. The staff and residents of Green House collaborate to create a daily routine that meets individual needs, much as they did in their own homes. There is no institutional routine in terms of medical care. Instead, clinical care and other activities are organized around the needs of the individuals who live there. A Green House is designed to be a person’s home for life; their ability to remain there is not dependent on their medical condition (Green House Project 2006).

Initial results of a preliminary assessment of the Green House Project indicate the following outcomes:

- High satisfaction levels from residents, family and staff.
- No unexplained weight loss, and almost no nutritional supplement use.
- Less decline in activities of daily living.
- Staff turnover of less than 10 per cent.
- No transfer-related back injuries in residents or staff.
- Less prevalence of depression.
- Less incontinence without a toileting plan.
- Less use of anti-psychotics without a relevant diagnosis (Robert Wood Johnson Foundation 2005).

5.8 Health-Promoting Hospitals

Hospitals are in a strong position within the health care system to be advocates for health promotion. Hospitals represent the main concentration of health service resources, professional skills and medical technology. They generally have substantial prestige among community members, and their staff are well respected as credible sources of advice and expertise on health issues. Given the extensive resources that hospitals command, even a small shift in focus to health promotion could, in time, have a significant impact on community health (Johnson and Baum 2001).

Following the production of the Ottawa Charter for Health Promotion (WHO 1986), in 1988, the WHO began a Health Promoting Hospitals (HPH) project, reflecting the fact that hospitals were being urged to consider and attempt concerted health promotion reform. The WHO Network of Health Promoting Hospitals is one way some international hospitals, most of them in Europe, are receiving support. The work of the Network is based on the principles and strategies from key international documents, including the Budapest Declaration on Health Promoting Hospitals (WHO 1991), the Ljubljana Charter for Reforming Health Care (WHO 1996), and the Vienna Recommendations on Health Promoting Hospitals (WHO 1997b). In these documents the WHO recommends that an HPH should:

- Focus on health with a holistic approach as opposed to just curative services.
- Ensure all services contribute to the empowerment of patients.
- Form close links with other levels of health care systems and the community.
- Foster commitment through encouraging participatory, health-gain-oriented procedures that involve all professional groups and build alliances with professionals outside the hospital setting.
- Encourage participatory roles for patients according to their health potential.
- Improve the hospital's communication and cooperation with social and health services in the surrounding community.
- Train and educate personnel in areas relevant to health promotion.

Internationally, there are now 25 HPH Networks, with more than 700 hospitals involved (WHO 2005). A set of draft standards has been pilot-tested that will allow individual hospitals to test their progress in achieving their health promotion goals (Fuglehom et al. 2005; Groene et al. 2005).

Recent reviews of the work of hospitals in the WHO Network suggest that there is a lack of literature about the progress of Health Promoting Hospitals. This is especially the case with regard to the evaluation of HPH activities (Whitehead 2004a). Where evidence of HPH evaluation exists, much of it refers to the lack of progress made and the dilemmas encountered in setting and trying to achieve health promotion goals. For instance, challenges experienced thus far by European hospitals include a lack of appropriate indicators to effectively evaluate health promotion activity, failure to facilitate the participation of target populations, lack of appropriately trained personnel and lack of sustained funding opportunities (Whitehead 2004a).

Johnson and Baum (2001) completed a review of the activities and successes of Australian hospitals with regard to health promotion. In that review, four different, distinct approaches to health promotion within hospitals emerged:

- “Doing a health promotion project” – In these hospitals, health promotion projects are usually ad hoc, isolated events. While not a sustainable strategy, implementing and evaluating an individual health promotion project may serve as a catalyst for gaining more widespread organizational commitment. Many HPH facilities have limited their

activities to a collection of health promotion programs that may or may not be related to each other (Whitehead 2004a). In many cases, these programs are focused on individual-level behavioural changes (e.g., smoking cessation, healthy eating), rather than broad environmental changes (Whitehead 2004b).

- “Delegating it to the role of a specific division, department or staff” – If health promotion is restricted to particular groups of staff within the facility, it remains a marginalized activity and does not necessarily challenge the whole organization to re-orient its role in the community. Nor does it allow for health promotion to be integrated into the roles of staff throughout the organization.
- “Being a health promoting setting” – In these cases, the organization is committed to health promotion in the form of activities that are geared to improving health of patients, staff, the organization and the physical environment. But there is no broader commitment to improve the health of the community served by the hospital.
- “Working to improve the health of the community” – This approach indicates an organizational commitment to re-orient the hospital to be a health promotion setting, as well as improving the health of the community. Hospitals that have taken this broad approach, which includes developing effective and collaborative working relationships with community groups, have typically achieved the best outcomes.

While these and other reviewers acknowledge that the literature on health and quality of life outcomes of patients, staff and the community is still in its infancy with regard to health promoting hospitals, what is available suggests that a dedicated hospital health promotion program needs to be in place and health promotion needs to be integrated into the practice of staff throughout the organization.

5.8.1 Baby-Friendly Hospitals

The Baby-Friendly Hospital Initiative (BFHI), facilitated by UNICEF and the WHO, was launched in 1991 to ensure that all hospitals and maternity units become centres of breastfeeding support. A maternity facility can be designated “baby-friendly” when it does not accept free or low-cost breastmilk substitutes, feeding bottles or nipples, and has implemented 10 specific steps to support successful breastfeeding. Those steps are:

- Have a written breastfeeding policy that is routinely communicated to all health care staff.
- Train all health care staff in skills necessary to implement this policy.
- Inform all pregnant women about the benefits and management of breastfeeding.
- Help mothers initiate breastfeeding within one half-hour of birth.
- Show mothers how to breastfeed and maintain lactation, even if they should be separated from their infants.
- Give newborn infants no food or drink other than breastmilk, unless medically indicated.

- Practice rooming in; that is, allow mothers and infants to remain together 24 hours a day.
- Encourage breastfeeding on demand.
- Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
- Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

The internationally defined term “baby-friendly” may be used only by maternity services that have passed external assessment according to the Global Criteria for the BFHI. There are currently 15,000 facilities in 134 countries designated as Baby-Friendly. In many of those areas, more mothers are breastfeeding their infants, and child health has improved (UNICEF 2006). However, there are only six Canadian Baby-Friendly hospitals and birthing centres, most of them in Quebec (Breastfeeding Committee for Canada 2005). None are in British Columbia.

5.9 Healthy Communities and Primary (Health) Care

Primary health care (PHC) is an approach to health care that pays attention to the broad social, economic and political determinants of health. It is also an overall approach that can guide a nation’s health policy and determine the delivery of community-based health services. The PHC concept was adopted by the WHO in the Alma-Ata Declaration of 1978 and was defined as:

Essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost the community and country can afford to maintain a every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country’s health system, of which it is the nucleus, and of the overall social and economic development of the community.

Five well-known principles for PHC were derived from the Alma-Ata Declaration:

1. **Public participation:** People have the right and responsibility to be active partners in making decisions about their own health and that of their community.
2. **Accessibility:** Communities should have equitable access to a variety of community-based services as well as access to social conditions conducive to health.
3. **Appropriate technology:** Acceptable and affordable technology and methods of service delivery should enable people to access a range of services in their communities; these resources should also support self-care.
4. **Intersectoral collaboration:** Action on health determinants requires cooperation among many sectors at local, provincial/territorial and national levels.
5. **Health promotion:** Broad strategies for community health promotion and programs aimed at disease and injury prevention are essential components of the primary health care approach.

Primary health care, as defined above, is much broader than primary medical care (or primary care) and is very consistent with both the Ottawa Charter for Health Promotion (WHO 1986) and a healthy communities approach. The services of PHC can be practised in a variety of community settings, including community health centres.

5.9.1 Community Health Centres

Community health centres (CHCs) are non-profit, community-governed organizations that provide primary health care, health promotion and community development services, using multi-disciplinary teams of health providers. These teams often include physicians, nurse practitioners, dietitians, health promoters, counsellors and others who are paid by salary, rather than through a fee-for-service basis.

Services provided by CHCs are designed to meet the specific needs of a defined community. In addition, CHCs provide a variety of health promotion and illness prevention services, which focus on addressing and raising awareness of the broader determinants of health such as employment, education, the physical and social environments, isolation and poverty. CHCs have been operating in Canada since the 1920s; today, there are over 300 CHCs across Canada (Association of Ontario Health Centres 2005a), an estimated 51 of them in BC (BC Network of Community Health Centres 2002).

Community health centres, because of the breadth of services they offer, their broad approach to health and their strong ties with their communities, are in a very good position to help build healthy communities. In their 1992 report, *Community Health Centres and Community Development*, Health Canada recommended that CHCs work to build healthy communities by:

- Identifying health issues in the community, especially among disadvantaged groups. Community health centre staff can then make local organizations or governments aware of this information and develop a joint action plan.
- Responding to issues brought forward by the community, taking advantage of strong relationships developed with community groups.
- Facilitating joint action by bringing key players together to discuss an issue that affects the community.
- Helping develop skills among community members by inviting them to take part in committee or other structured work within the CHC.

There is little data available on the specific health impact or cost savings that might result from a CHC's broad healthy communities-type work, like that suggested above. However, in general, recent reviews of the literature have demonstrated that CHCs provide a cost-effective alternative to traditional primary care. As the Association of Ontario Health Centres (2005b) summarized:

Three decades of international and Canadian research show that community-centred, primary health care costs health care systems on average 25 per cent less, per client treated, than traditional fee-for-service health care.

The CHC savings to the overall health system are achieved through their emphasis on illness prevention, continuity of care by multidisciplinary teams, increased access to health care professionals and more routine follow-up by phone and in person (Yalnizyan and Macdonald 2005).

5.9.2 Health Promotion within Primary Care

In contrast to primary health care, *primary care* is often more narrowly defined as the first level of care in a country's health system—where people first encounter health care providers for diagnosis, treatment and follow-up for a specific health problem. In the Canadian system, family physicians and nurses usually provide this care in offices, outpost nursing stations and walk-in clinics. Usually primary care services lack the social development and community orientation of primary health care, and are therefore less able to facilitate the development of healthy communities.

The improvement of our primary care system, as a key part of overall health care reform, includes reorienting policy and service responses to health promotion and prevention (so that, in some ways, it incorporates aspects of primary health care). There is growing evidence worldwide of the benefits and effectiveness of investing in health promotion and prevention programs (Ministry of Health 2003; IUHPE 2000), both within and outside of primary care settings. Recent reviews of the literature suggest that there are best practices in the integration of health promotion and prevention within primary health care.

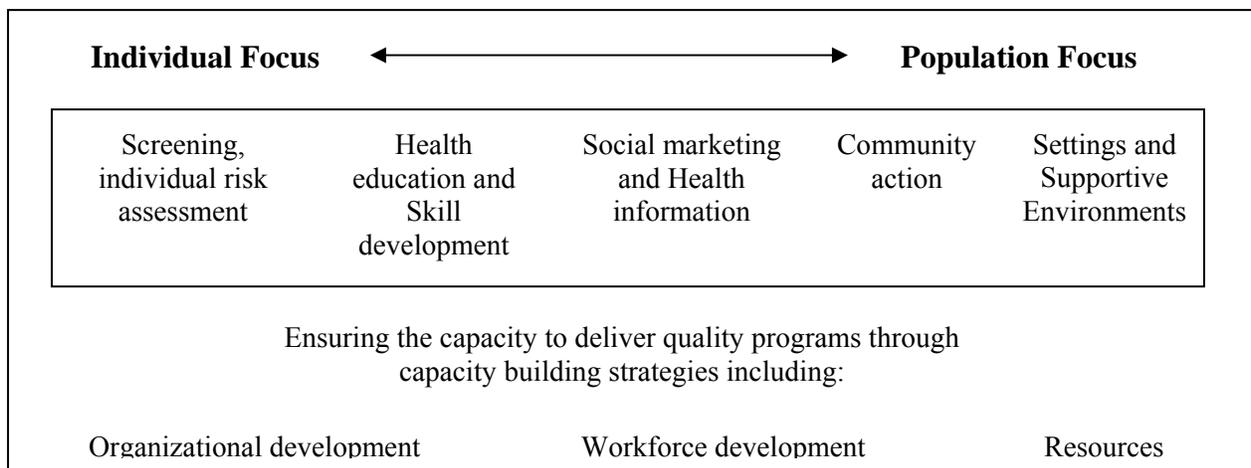
In an effort to facilitate the greater integration of health promotion into primary care across their province, the Department of Human Services in Victoria, Australia has compiled the evidence for effective health promotion and prevention within primary care, and presents some clear recommendations for service providers. According to their 2002 document, *Integrated Health Promotion: A Practice Guide for Service Providers*, the Department of Human Services in Victoria, Australia, suggests that health authorities build the following broad conditions to support effective health promotion and prevention within primary care:

1. The development of partnerships is key. Relationships must be developed among primary care staff and community organizations, providers and interested citizens so that collaboration (and not just a networking/consultation relationship) is achieved.
2. Quality health promotion practice should focus on implementing an appropriate mix of interventions that encompass a balance of both individual and population-wide strategies. These activities should be supported by capacity-building strategies that address the priority issues identified. The literature has consistently demonstrated that health promotion and prevention initiatives are most effective in terms of long-term outcomes for community health when there are comprehensive approaches that use a combination of strategies concurrently and at several levels within a primary care setting and with external partners (State Government of Victoria, Australia 2002).
 - Individual strategies include one-to-one interactions between clients and physicians or other health care providers. Those interactions include screening, risk factor assessment and health education.

- Population-focused initiatives include (as examples) advocating for the provision of safer, more accessible sidewalks and bike lanes and working with schools to ensure reduced access to soft drinks and junk food in school cafeterias.
3. The involvement of stakeholders across a broad range of sectors is essential to address the determinants of health in primary care settings. Organizations outside the ‘traditional’ health care sector, such as local government, schools, housing, recreation and the business community must be key partners in the development, implementation and evaluation of health promotion initiatives.
 4. Those strategies chosen need to adhere to the following principles:
 - Address the broader determinants of health.
 - Based on the best available evidence and data, both with respect to why there is a need for action and what is most likely to effect sustainable change.
 - Act to reduce social inequities and injustice.
 - Emphasize consumer and community participation, so that people are encouraged to have a say about what influences their health and well-being and what would make a difference.
 - Empower individuals and communities through information, skill development, support, advocacy and structural change strategies.
 - Explicitly consider differences in gender and culture.
 - Work in collaboration. While programs might be initiated by the health care sector, partnerships must be actively sought across a broad range of sectors, including those organizations that may not have an explicit health focus. The focus here is to build on the capacity of a wide range of sectors to deliver health promotion programs, and to reduce duplication and fragmentation of effort in those programs.

Figure 1 illustrates the broad range of interventions that are necessary for effective health promotion and prevention within primary care.

Figure 1. Health Promotion Interventions and Capacity Building Strategies



Source: State Government of Australia 2002, p. 44.

5.10 Conclusion

The literature surrounding best practices within health care facilities is still at an early stage. There is currently little evidence demonstrating that multi-faceted programs like Health Promoting Hospitals have led to specific health gains or cost savings. There is, however, a significant body of evidence that demonstrates that the individual components of such programs, including patient-centred care and improving the physical environment of facilities, can help to improve health and quality of life among patients and staff.

Health care facilities may not be the main agents in community-based health promotion, but they can contribute to health-promoting internal and external environments. Health promotion within health care facilities should consider more than just the clinical outcomes of patients; equal consideration should be given to health-related quality of life and empowerment of those patients, their families and the broader community. When using the settings approach to health promotion, the total potential health gain of facility-based health promotion is therefore the outcomes of health promotion services provided for patients, staff, the organization and the community, plus the general health-promoting qualities of the setting itself.

6.0 HEALTHY SCHOOLS

Along with the home, the school is one of the main settings for the formative stages of a child's development. The majority of children attend school regularly, and while in school, comprise a "captive audience", providing a large window of access to this population.

In a review of school health promotion, Miller (2003) outlined the history and development of health promotion in schools. Some of the landmark events and developments include:

- The 1850 Shattuck report, which recognized that the public school system could be used as a vehicle to promote public health and prevent disease and helped establish the school as a place to vaccinate during disease outbreaks.
- At the end of the 19th century, school health consisted of routine medical inspections for contagious diseases and in-school nursing services
- In the early 20th century, information about the effects of alcohol, tobacco, and narcotics on humans was included in curricula.
- A focus on the psychological and behavioural aspects of school-aged children was emphasized in schools, resulting from the poverty, malnutrition and dire health of many during World War I.
- The legislated establishment of the School Breakfast Program and the Nutrition Training Education Program and permanent reimbursements for school lunches served to needy students as part of the United States War on Poverty during the 1960s and 1970s.

The Ottawa Charter for Health Promotion (WHO 1986) has been highly influential in prescribing the course and development of health promotion and health interventions. Applied to the school setting, the principles of the Ottawa Charter result in a shift from school-based health promotion to the concept of the health-promoting school, where the context and the characteristics of the school environment are seen as fundamental to health.

In British Columbia, the Ministry of Health has designated "healthy schools" as part of the healthy communities core public health program by the Ministry of Health. Articulating the rationale for including healthy schools within the Core Functions Framework, the Ministry of Health states:

Public health has a long history in the school setting. The evidence shows that to be effective, school health interventions need to be linked to the principal focus of schools (education and developing the knowledge base of young people); have strong connections with parents and health services; and address most if not all of the following: the curriculum, the environment, health services, partnerships, and school policies (St. Leger and Nutbeam 2000). Moreover, a healthy school program is not one that is simply focused on tobacco use, physical activity, problematic substance use, and healthy eating, but also addresses the development of social-emotional competence, issues of violence and bullying, healthy sexuality, healthy peer relationships, access to healthy food choices,

environmental quality in the school and school grounds, and the relationships between home, school, and community (Ministry of Health, 2005).

The purpose of this healthy schools evidence review is to first review the literature around the effectiveness of school-based health promotion and then the literature on health-promoting schools.

6.1 Health of Children and Youth

The McCreary Centre's 2003 Adolescent Health Survey provides a picture of the health of BC youth (McCreary 2004). The survey found that in comparison to 1998, there was:

- An 18 per cent drop in smoking among BC youth.
- Almost nine out of ten teenagers reported good or excellent physical health, consistent with 1998 results.
- An increase in safe sex and youth waiting longer to have sex.
- A slight decrease in substance use, including alcohol, drugs and marijuana.
- A decline in injuries from motor vehicle accidents.
- A significant decline in drinking and driving, with three quarters of licensed drivers reporting no drinking and driving (74 per cent), a significant improvement over 64 per cent in 1998 and 67 per cent in 1992.
- A slight decrease in seat belt use.

They also found that:

- Less than half of students always felt safe at school.
- More youth were overweight and obese than a decade ago.
- Internet safety was an emerging issue, especially for girls. Almost one in four girls had been in contact with a stranger on the Internet who made her feel unsafe.
- More than half of youth gambled in the past year.
- Almost one in ten youth ran away from home in the past year, and were at danger for virtually every risk: abuse, poor health, suicide, pregnancy, and alcohol and drug use.
- Youth with a health condition or disability, and those who looked older than their age were at higher risk.
- Youth who moved three or more times in the past year felt less connected to their families and school, and were more likely to run away from home.
- Many girls who were a healthy weight thought they were overweight, and about half were trying to lose weight.

- While physical and sexual abuse of youth had declined in the past decade, a positive development, too many youth still faced abuse.
- The number of youth who considered or attempted suicide had not declined in the last ten years.
- Many students continued to face harassment and discrimination.
- The proportion of youth who used alcohol and marijuana frequently had not decreased over the past decade, and the percentage of boys who were heavy marijuana users continued to increase.

The identification of these trends and issues offers the opportunity to focus school-based health promotion efforts and healthy school initiatives in areas of higher need.

6.2 School-Based Health Promotion

As summarized by Parcel, Kelder and Basen-Engquist (2000), the school is an attractive setting for health promotion for a number of reasons:

- The amount of time children spend in school on a daily and weekly basis provides a large window of access to this population.
- The breadth of activities that students engage in during this time, including learning, playing, eating and socializing, provides a diverse array of controlled environments in which children can learn, practice and be reinforced in making healthy decisions.
- The school is an important social and physical environment for children.
- The availability of teachers and other adult role models can provide reinforcement and support for children in the development of healthy behaviours.
- Promoting the health of children and adolescents is consistent with improved academic achievement.

6.2.1 Prevention of Adolescent Risk Behaviours

Thomas et al. (1999) conducted a systematic review of the effectiveness of school-based prevention programs in reducing adolescent risk behaviours (i.e., smoking, alcohol and other drug abuse, sexual risk behaviours and emotional/behavioural problems). Eighteen studies of strong methodological quality were included in their review. The authors found that:

- Drug use prevention programs and sexual risk reduction programs have been more comprehensively evaluated than emotional/behavioural problem prevention programs.
- Knowledge-based didactic programs have no effect on behaviour.
- Interactive programs are more effective than non-interactive ones.
- Interactive programs based on social learning theory, including developmental, social norms and social reinforcement are most effective.

- Results are modest.
- Some programs work for some subgroups of youth (e.g., programs focused on delaying initiation of sexual activity among the uninitiated).
- Timing of program implementation is important. Programs seem to work best for those who are not yet engaging in the behaviours or for very high-risk adolescents.
- The role of booster sessions after program completion appears important, although the timing and frequency to produce positive effects is unclear.
- Because the successful programs do not focus on the behaviour per se, but on skill development to resist the activity, generic programs that address all risk behaviours could be developed (including sections related to the specific behaviours) and evaluated. This would streamline current programs and free up school time.

6.2.2 Prevention of Smoking

Thomas (2006) conducted a systematic review of school-based programs for smoking prevention. Thomas identified 16 high quality randomized controlled trials. Thomas found no strong evidence for offering school-based programs that provide information only. Of the 15 trials in which social influences was the dominant mode of intervention, 8 showed some positive effect of intervention on smoking prevalence, while 7 studies failed to detect an effect on smoking prevalence. Of these, however, the authors highlighted one study that stood out both for the quality of the intervention and the duration and methodological rigor of the evaluation. The Hutchinson Smoking Prevention Project (HSPP) ran for 15 years from 1984 to 1999 and aimed to assess the effect of a comprehensive enhanced social influences approach. The intervention included 65 classroom lessons, and the intervention program ran from grades 3 to 10. This review shows that there is some evidence that school programs incorporating social influences models can affect smoking behaviour in the short term. However, the trial followed participants 2 years after leaving school and no effect of the intervention on the prevalence of smoking was found either at school-leaving or later follow-up, suggesting that there were not longer-term impacts on smoking.

6.2.3 Prevention of Illicit Drug Use

Faggiano et al. (2005) conducted a systematic review of school-based programs for the prevention of illicit drug use. A total of 32 studies (29 randomized controlled trials) were included in their review. These studies compared knowledge versus usual curricula, skills versus usual curricula, skills versus knowledge, skills versus affective, affective versus usual curricula, affective versus knowledge, interactive versus passive technique and peers versus external educators. The three groups of prevention programs (knowledge, skills and affective-focused) displayed different patterns of efficacy with regard to outcomes. Knowledge-focused programs improved mediating variables (especially drug knowledge) compared with usual curricula, but were not more effective than skills-based programs. When final outcomes were considered (drug use), their effects were comparable to those of the usual curricula and the other two types of programs. Affective-focused programs improved decision-making skills and drug knowledge compared to usual curricula and knowledge-focused interventions. Skills-focused programs had

a positive effect on both mediating variables (drug knowledge, decision making, self-esteem and peer pressure resistance) and final outcomes, compared to usual curricula. The reviewers concluded that programs that developed individual social skills were the most effective form of school-level intervention for the prevention of early drug use.

Cuijpers (2002) conducted a systematic review to identify effective ingredients of school-based drug prevention programs. This review included three meta-analyses, seven studies examining mediating variables of interventions, and twenty-one studies comparing prevention programs (four studies on boosters, twelve on peer versus adult-led programs and five on adding community interventions to school programs).

Cuijpers found strong evidence supporting the following characteristics of effective school-based drug prevention programs:

- The superiority of interactive programs compared to non-interactive programs.
- “Prevention programs based on the ‘social influence mode’² are the most effective programs that are available, and prevention programs should use this model.”
- A focus on norms, commitment not to use and intention not to use.
- The inclusion of community interventions (family interventions, mass media campaigns, community mobilizing committees) with school-based interventions.
- The use of peer leaders.

There was some evidence that adding life-skills training to social influence programs increased effectiveness. There was no evidence that booster sessions, resistance skills training or increased program intensity have a positive impact on drug prevention programs.

Midford et al. (2002) conducted a study to identify the conceptual underpinnings of effective school-based drug education practice. Their research involved a review of the literature, a national survey of 210 Australian teachers and others involved in drug education and structured interviews with 22 key Australian drug education policy stakeholders. The authors identified principles that underpin effective drug education, including:

- Parents and the wider community are involved.
- Health is a whole school responsibility.
- Instruction should be sequential and developmentally appropriate.
- Instruction should have a basis in expressed student needs.
- Instruction should begin before the onset of harmful practices.
- Interaction versus didactic learning is a best fit for health instruction.

² The social influence approach to drug prevention is based on the idea that “inoculation” in the classroom against active or indirect social pressure to use drugs will help prevent substance use.

- Peer leaders hold promise for health instruction.
- Classroom teachers play a central role.
- The values and attitudes of the broader community must be considered.
- Focus should be on harm minimization as an end goal.
- Social skills are superior to factual information alone in achieving improvements.

6.2.4 Nutrition

Bhattacharya, Currie and Haider (2004) analyzed National Health and Nutrition Examination Survey III data to examine the effect of the availability of school breakfast programs in the United States. The authors found that the availability of a school breakfast program:

- Increased children's scores on the healthy eating index, reduced the percentage of calories from fat and reduced the probability of low fiber intake.
- Reduced the probability that children had low serum vitamin C, vitamin E, and folate serum levels, as well as reducing the probability of low fibre, iron and potassium intakes.
- Resulted in both adults and pre-school children, in households with school-aged children, having healthier diets and lower percentages of calories from fat.

The authors concluded that the school breakfast program “is an important tool for improving the quality of the diets consumed by families” and that “improved diets, in turn, are likely to have important consequences for future health and well-being.”

Roe et al. (1997) examined the effectiveness of healthy eating interventions in children, adolescents and university students, focusing on studies reporting diet and cholesterol outcomes. Twenty-one studies were included in their review. Of these, ten interventions showed a positive effect on dietary intake or cholesterol. Variations in age groups, theoretical models and the amount of home activity/parental involvement had no impact on effectiveness. The authors did report that longer-lasting and more frequent interventions were associated with a more sustained effect.

Contento et al. (1995) analyzed the effectiveness of nutrition education interventions. The authors found that most general nutrition education programs resulted in knowledge gains and attitude change but not in behavioural change (13 of 17 studies), with a strong dosage effect reported. The authors reported that 15 hours of nutrition education brought about a change in knowledge, but that it took 50 hours to bring about changes in attitude and behaviour.

There are also many school nutrition policies designed to improve the nutritional quality of the school environment.³ However, there are few evaluations of these policies, making it difficult to draw any conclusions regarding their effectiveness.

³ For examples of such policies, see the Directorate Agency for School Health's website at: <http://www.dashbc.org/article.asp?c=65>.

6.2.5 Sexual Activity

An IUHPE report found that health promotion interventions with a strong educational focus (cognitive and social objectives in relation to sexuality) are effective in meeting their goals if:

- The programs are conducted by well-trained and sensitive personnel.
- Students have the opportunity to talk and discuss their feelings and opinions within the school community and at home.
- Content and issues are raised at appropriate ages and levels of maturity.
- The direction for the program is on the positive aspects of sexuality (St Leger and Nutbeam 2000).

6.2.6 Prevention of Eating Disorders

Ciliska et al. (2001) conducted a systematic review of the effectiveness of various school-based strategies for the primary prevention of eating disorders. Thirty-six relevant articles were found. Seventeen studies were rated “moderate” or “strong” in the methodology by the authors, with outcome measures of known reliability and validity. While all of the studies were aimed at prevention of eating disorders, all used outcome measures of knowledge, attitudes or behaviours that are associated with eating disorders, not an actual clinical assessment or diagnosis of eating disorders. Interventions directed to primary school children (versus high school), of at least nine weeks duration, and targeted to healthy eating (versus discussion of signs, symptoms and treatment of eating disorders), were more effective in increasing knowledge, changing attitudes and decreasing the importance of social acceptance in the short term, with diminishing effects as the length of follow-up increased. Within this group of studies, programs specifically for healthy eating and exercise show similar promise.

6.2.7 Prevention of Violence

Mytton et al. (2002) conducted a systematic review and meta-analysis of randomized controlled trials to explore and quantify the effect of school-based violence prevention programs on aggressive and violent behaviours in children at high risk for violent behaviour. Twenty-eight trials were included in their review. The authors found that school-based violence prevention programs for high-risk children modestly reduced both aggressive behaviours and school or agency actions in response to aggressive behaviour. Effects on aggressive behaviour were similar regardless of whether the programs focused on training in skills of non-response (i.e., conflict resolution or anger control) or on training in social skills or social context changes. The benefits of violence prevention programs were similar in programs introduced in both primary and secondary schools, but appeared to be greater among mixed-sex groups.

6.2.8 School-Based Mental Health Services

Rones and Hoagwood (2000) conducted a synthetic review of the evidence base for mental health services delivered in schools. Forty-seven evaluations of mental health services were included in their review. The authors identified several important features of the implementation

process that increase the probability of service sustainability and maintenance. These key program components include:

- Consistent program implementation.
- Inclusion of parents, teachers or peers.
- Use of multiple modalities (e.g., the combination of informational presentations with cognitive and behavioral skill training).
- Integration of program content into general classroom curriculum.
- Developmentally appropriate program components.

This review also revealed that those programs with the strongest evidence of an impact were those that were directed toward changing specific behaviours and skills associated with the intervention (e.g., depression, conduct problems, drug use), whereas extraneous activities, such as field trips, one-week residential summer camps or optional parenting groups, did not seem to offer any comparative advantage.

6.2.9 Suicide Prevention

Ploeg et al. (1999) conducted a systematic review of the effectiveness of school-based curriculum suicide prevention programs for adolescents. Nine studies were included in their review. The authors found that “rigorous evaluation of curricula in five studies indicated that programs may improve suicide-related knowledge and attitudes, as well as mental health indicators, such as perceived stress, reduced anger, and increased self-esteem. When findings from four less rigorous studies were taken into account, negative program effects were identified, especially for males who may be at higher risk for suicide.” This led the authors to conclude that “the evidence is mixed, indicating both significant and non-significant findings for similar outcomes, and both beneficial and harmful effects for some participants... there is insufficient evidence to support a school-based curriculum suicide prevention program for adolescents.”

6.2.10 Physical Activity

An IUHPE report found good evidence to indicate that school based health promotion interventions directed at physical activity will achieve positive cognitive, social, behavioural and in some cases biological outcomes if:

- The intervention is comprehensive and integrated, including curriculum time for physical activity, policies encouraging participation and partnerships with local sports and recreation providers.
- Properly trained personnel lead the program.
- Adequate time is allocated (approximately 60-80 minutes per week) and quality facilities/resources are available.
- The intervention occurs regularly during the week (St Leger and Nutbeam 2000).

Campbell et al. (2001) conducted a review of the effectiveness of interventions to prevent obesity in children. Seven studies were included in the review. Because the outcome measures and interventions utilized were so diverse in these studies, the authors were not able to combine results or make a general conclusion about the effectiveness of interventions targeting obesity prevention in children.

Dobbins et al. (2001) carried out a systematic review to summarize the evidence of the effectiveness of school-based interventions in promoting physical activity and fitness in children and adolescents. Nineteen studies were included in their review. Dobbins found that compared to usual physical activity programs, school-based physical activity promotion programs were moderately effective in promoting physical activity and the duration of physical activity in children and adolescent girls, but were not effective in altering most physiological measures such as blood pressure, body mass index and pulse rate. The most effective interventions included curricula that promoted increased physical activity during the whole day (recess, lunch, class time and physical education classes) and included printed educational materials. The authors reported, “there is some evidence that exposure to school-based physical activity programs as a child results in greater physical activity as an adult, despite the absence of a positive effect in childhood. Furthermore, there is some evidence suggesting that...increases in physical activity are usually associated with improved physical health status.” The authors recommended that:

- Since school-based physical activity interventions do not cause harm and do have some positive effects on activity rates, and their duration, and on television viewing among children and adolescents, such activities should continue and be encouraged by local public health unit staff to local schools and school boards.
- At a minimum, school-based interventions should include printed educational materials distributed to children, adolescents, and parents, as well as changes to other school curricula (including recess, lunch, and activity events) that promote an environment more conducive to increased daily activity.
- School-based physical activity interventions should focus on fostering positive attitudes toward physical activity and be geared toward the developmental level of the participants.
- Teachers and school staff should be encouraged to act as role models by demonstrating more physical activity during the course of the school day.
- Public health staff should work in collaboration with teachers, schools, and school boards to lobby local and provincial policy makers to increase resources for the promotion of physical activity within the school system.

Stone et al. (1998) reviewed 14 studies of school-based physical activity interventions. Stone found that improvements in knowledge and attitudes related to physical activity were positively affected. The most effective interventions used more extensive interventions and school environmental changes and targeted students in the upper elementary grades.

6.3 Cost-Effectiveness

IUHPE reports on the cost-effectiveness of school health promotion in tobacco use, substance abuse and sexuality education. They reported ratios of benefits relative to costs for a quality comprehensive school health promotion program of 26.5:1 for tobacco use, 5.7:1 for substance use, and 5.1:1 for sexual behaviour. They further reported that the cost-effectiveness of comprehensive and exemplary school health promotion interventions was 13.8:1 (St Leger and Nutbeam 2000). They also comment that there is a paucity of cost-effectiveness studies done in this area.

6.4 Health-Promoting Schools

While school-based health promotion is important, research has shown that adolescent health is influenced by several interlinked factors, requiring a more comprehensive approach addressing the context of health, and not just the behaviour. Focus is increasingly shifting from programs that are specific to certain health behaviours or risk factors, to those that have a holistic approach to health promotion. This switch in focus is captured in the change in terminology from school-based health promotion to the concept of the health-promoting school.

The WHO (n.d.) defines a health-promoting school as “one that constantly strengthens its capacity as a healthy setting for living, learning and working.” Their definition continues to identify traits of health-promoting schools. According to the WHO, a health promoting school:

- Fosters health and learning with all the measures at its disposal.
- Engages health and education officials, teachers, teachers' unions, students, parents, health providers and community leaders in efforts to make the school a healthy place.
- Strives to provide a healthy environment, school health education, and school health services along with school/community projects and outreach, health promotion programmes for staff, nutrition and food safety programmes, opportunities for physical education and recreation, and programmes for counselling, social support and mental health promotion.
- Implements policies and practices that respect an individual's well being and dignity, provide multiple opportunities for success, and acknowledge good efforts and intentions as well as personal achievements.
- Strives to improve the health of school personnel, families and community members as well as pupils; and works with community leaders to help them understand how the community contributes to, or undermines, health and education.

A health-promoting school also focuses on:

- Caring for oneself and others.
- Making healthy decisions and taking control over life's circumstances.
- Creating conditions that are conducive to health (through policies, services, physical/social conditions).

- Building capacities for peace, shelter, education, food, income, a stable ecosystem, equity, social justice, sustainable development.
- Preventing leading causes of death, disease and disability: helminths, tobacco use, HIV/AIDS/STDs, sedentary lifestyle, drugs and alcohol, violence and injuries, unhealthy nutrition.
- Influencing health-related behaviours: knowledge, beliefs, skills, attitudes, values, support.

Over the last decade, health-promoting schools have been implemented in many countries and regional networks have been established. Examples of jurisdictions with health-promoting schools programs and networks include Scotland, Northern Ireland, Australia, New Zealand, British Columbia, the Pan American Health Organization, and the World Health Organization.

Evaluations of health-promoting schools have been slow in coming. In 1997, Lynagh, Schofield and Sanson-Fisher reported that “there has been no attempt to implement and evaluate a programme which has adopted the Health Promoting School completely to date for any of the three health issues of smoking, alcohol and solar protection.”

Mukoma and Flisher (2004) conducted a review of evaluations of health-promoting schools in 2004, and found that “Overall, positive development of health-promoting schools was reported in the process evaluations. Changes were made to school policies and organizational structures to facilitate the health-promoting activities. In some projects, health promotion was successfully integrated into the school curriculum. Parents and local communities were also involved in various capacities in the planning and implementation of the interventions.” However, they were “unable to conclude that there is strong evidence for the efficacy of the health-promoting interventions on the health of students, staff and the community, and on the school ethos and environment.” They also reported that “the paucity of evaluation research on health-promoting schools is evident in that we found only nine studies...the health-promoting schools concept is still grappling to establish the most appropriate approach to evaluation.”

This is consistent with a new review released in March 2006, which concluded that health-promoting school programs “that were effective in changing young people’s health or health-related behaviour were more likely to be complex, multi-factorial and involve activity in more than one domain (curriculum, school environment and/or community)...the findings of the synthesis also support intensive interventions of long duration...there is...no evidence that the approach (health-promoting schools) in its entirety is more effective than other approaches to health promotion in schools” (Stewart-Brown 2006).

As part of British Columbia’s approach to health-promoting schools, Action Schools! BC has been developed as a means of integrating physical activity into the fabric of elementary schools and then to maintain it through partnerships with family and community—seeking to achieve long-term, measurable and sustainable health benefits. The outcomes targeted by this program include cardiovascular fitness; bone health; muscle fitness; positive self-esteem; tobacco use prevention and tobacco cessation; healthy weight; nutrition; academic performance; and inclusive, safe, healthy school communities (Action Schools! BC 2006).

A Pilot Evaluation Report of Action Schools! BC found that this model was an effective means of improving the health of children in physical activity, cardiovascular health, healthy bones, with no decrease in academic performance due to the reduced amount of instructional time. The Action Schools! BC model was effectively delivered by the generalist teacher in the classroom, the gymnasium and as a part of extracurricular activities. However, it was not possible to discern a benefit of the Action Schools! BC model on healthy weight, likely due to the relatively short intervention timeframe (McKay 2004).

6.5 Creating Healthy Schools

While the literature on the effectiveness of health-promoting schools is still developing, there are a number of key ingredients to successful healthy schools that have been identified.

A 2003 report of the BC Provincial Health Officer, *An Ounce of Prevention: A Public Health Rationale for the School as a Setting for Health Promotion*, identified key factors to successful school health programs. These include:

- Teacher training.
- Teacher comfort with the topic.
- Administrator support.
- Respect for the subject from administrators and teachers.
- Room in the day to teach it.
- Challenging content.
- Focus on both social and cognitive outcomes.
- Endurance over years and throughout grades.
- Student involvement and engagement.
- Challenging, adequate classroom resources.

The report also found that poor or diminished outcomes are associated with:

- Addressing crises, especially through preaching or scare tactics.
- Little broad school/family/community involvement (classroom only).
- Programs based on external speakers or assemblies with little involvement of school staff.
- Little or no investment in teacher training or provision of support resources.

An IUHPE report found that school health interventions are most effective if:

- The focus is on cognitive and social outcomes as a joint priority with behaviour change.

- Programs are comprehensive and holistic, linking the school with agencies and sectors dealing with health.
- The intervention is substantial, over several school years, and relevant to changes in young peoples' social and cognitive environment.
- Adequate attention is given to capacity building through teacher training and provision of resources.
- School health programs address all or a combination of the curriculum, the environment, health services, partnerships, and/or school policies (St Leger and Nutbeam 2000).

Micucci, Thomas and Vohra (2002) conducted a review of reviews looking at the effectiveness of school-based strategies for the primary prevention of obesity and for promoting physical activity and/or nutrition. They identified certain trends contributing to the effectiveness of school-based programs:

- School-based interventions should be multi-faceted, combining a classroom program with environmental changes in the school, home or community.
- School-based interventions should include environmental changes (cafeterias, physical education classes, class-time, lunch or recess).
- Interventions should be behaviourally focused. General education programs are effective for knowledge gains only.
- A dose-response effect was evident in that effective interventions were longer in duration and had frequent booster sessions.
- When measured, age, sex and ethnic groups had different outcomes, possibly necessitating the need for interventions to be tailored to the different groups.

Other opportunities for creating healthy schools include the creation of healthy public policies, such as the recent introduction of guidelines for food and beverage sales in BC schools to help districts eliminate the sale of all “not recommended” foods in BC schools (Ministry of Health and Ministry of Education 2005).

6.6 Conclusion

The school is an attractive setting for health promotion for a number of reasons, including the access provided to students through school, the variety of activities students engage in at school (each of which provides an opportunity for learning and practicing), the availability of teachers and adult role models to reinforce healthy behaviours and the improvement in academic outcomes associated with improved child health and well-being.

Health promotion in the school setting has demonstrated effectiveness for a range of risky behaviours including smoking, drug use, nutrition, sexual activity, eating disorders, violence, mental health services and physical activity.

Programs have an increased likelihood for success if they:

- Are interactive instead of didactic.
- Have a sufficient daily and weekly dosage.
- Are led by well-trained program staff with suitable skills.
- Involve changes to the environment and context for behaviour.
- Include partnerships with parents and/or community organizations.

Some evidence of cost-effectiveness has been found for programs on tobacco use, substance use and sexual health. The evidence for cost-effectiveness of school-based health promotion is limited and inconclusive.

Evaluations of the effectiveness of health-promoting schools are few in number. Existing evaluations suggest that while health-promoting schools can be effective from a process perspective with changes in school policies and organizational structures, there is as yet inconclusive evidence of positive impacts on the health of students, staff and the community.

7.0 COMMUNITY CAPACITY BUILDING

Capacity building for the purposes of improving health is about “enhancing the ability of an individual, organization or a community to address their health issues and concerns” (Ontario Prevention Clearinghouse, 2002, p. 1). Community capacity is the set of knowledge, skills, participation, leadership and other resources needed by community groups to effectively address local issues and concerns. Community capacity building (CCB) is an important element of effective health promotion practice (NSW Health Department, 2001). It increases the range of people, organizations and communities who are able to address health and social problems. Often, the problems that are addressed have arisen out of social inequity or social exclusion.

Much of the work done when using a healthy communities approach is about building community capacity. In addition, a healthy communities approach also includes healthy urban design and planning, which is not discussed here, but is included in a separate evidence review paper.

7.1 How is Community Capacity Building Done?

The process of capacity building relies heavily on collaboration and partnerships. It involves working collaboratively to gain support from the people, organizations or communities who are affected by or concerned about a particular health or social issue. By building capacity, health authorities and other stakeholders can help to make sure that working partners in the community are developing the skills and resources to identify health issues, work to address those issues, and then hold programs together in the long-term. This bottom-up process of building capacity has been shown to build sound community-based infrastructures, provide long-term sustainability for programs, solve ongoing community problems and contribute to efficiency and effectiveness (Ontario Prevention Clearinghouse 2002). On an individual level, capacity building can help to generate a sense of inclusion, self-respect and self-esteem among those who participate (Burton et al. 2004).

Capacity building promotes independence. It can be:

- A means to an end, where the purpose is for others to take on programs.
- An end in itself, where the intent is to enable others, from individuals through to government departments, to have greater capacity to work together to solve problems.
- A process, where capacity building strategies are routinely incorporated as an important element of effective practice (NSW Health Department 2001).

There are many ways to go about capacity building. Crisp, Swerissen and Duckkett (2000) suggest four alternative approaches:

- A top-down organizational approach, which might begin with changing agency policies or practices.
- A bottom-up organizational approach (e.g., providing staff with additional skills).
- A partnerships approach, which involves strengthening the relationships between organizations.

- A community organizing approach in which individual community members are drawn into forming new organizations or joining existing ones to improve the health of community members.

7.1.1 Social Capital and Community Development

The community organizing approach mentioned above is most similar to a community development process. Community development involves the transfer of power and control from one group of people to another (Health Canada 1992). It is a process that emphasizes the importance of working with people as they define their own goals, mobilize resources and develop action plans for addressing problems they have collectively identified. Community development is frequently (but not always) used with disenfranchised groups in our society: those with low incomes, immigrants and refugees, the unemployed, or victims of crime. Community development goes far beyond consultation—every interaction with clients, groups and community agencies is affected:

community development is not a program, but a way of working with communities. It is a philosophy—thus it cannot be ‘done’ but rather must be understood—that can support and guide the way an organization works, shaping every activity from the one-to-one encounter between a client and a health professional to a campaign of social action. It cannot and should not be considered only one person’s job, since it will affect almost every one in the [health] centre in one way or another (Health Canada 1992, p. 20).

Community development works to develop social capital, “the ‘glue’ that holds our communities together” (Hancock 2001, p. 276). Informally, social capital is related to levels of social cohesion and participation in society. There are also more formal aspects of social capital that include the adequacy of social development programs to ensure equitable access to basic needs like food, shelter, education, income and employment, as well as the legal, political and constitutional structures that societies create and that underpin the functioning of society. Social capital is critical to the health, wealth and well-being of populations. It is a key indicator of the building of healthy communities through collective and mutually beneficial interaction and accomplishments.

Community development can be considered one way in which to build community capacity. The evidence presented below summarizes ‘best/better practices’ in the general process of capacity building, including community development and community mobilization/action to promote health.

It should be noted that the same process of capacity building to promote health is used to address many types of health, social and economic issues, including economic development, reducing poverty, improving the quality of housing, organizational change, chronic disease prevention and sustainable development. Therefore, a broad literature has been consulted here that focuses on the (health promoting) process of CCB, regardless of the specific problems addressed.

7.2 What Works in Community Capacity Building?

In an effort to reduce inequalities in health among population groups, some governments, particularly in the United Kingdom, are implementing widespread programs designed to build community capacity. For instance, the New Deal for Communities program in the United Kingdom is aimed at delivering significant and lasting improvements in housing, education, unemployment, crime and health in 39 neighbourhoods across England (Neighbourhood Renewal Unit 2003). To assist communities with this broad, CCB work, the program organizers have provided community members with a variety of tools, including some excellent reviews of the evidence for best (or better) practices. This review of what works and promising approaches in community development and community capacity building (and others) suggests that community leaders and intersectoral partnerships consider the following:

- Recognize that a “cookbook” approach to good practice in community development and CCB does not work. Instead, community groups need to translate general, evidence-based principles into practice approaches tailored to the needs of their neighbourhood and the wider *context* (Work Group on Health Promotion and Community Development 2006; Burton et al. 2004). Then, once those interventions are in place, they need to be monitored and reviewed to check their effectiveness and relevance to changing circumstances.
- Define the nature of local problems by examining local data and using other evidence, including taking into account the views of service providers and local citizens themselves. It is vital to understand the perspectives of the target group (including policy-makers) and the contexts in which they live and work (Work Group on Health Promotion and Community Development 2006). Of course, the best way to do this is to have the members of this target group drive the CCB process as much as possible.
- Adopt an approach to the project that is based on the best evidence about what works when dealing with that particular health or social issue. Clear baselines should be set, measurable objectives proposed and an effective monitoring, review and evaluation system should be in place from the start (Burton et al. 2004).
- Understand the scale or level of a particular problem or set of problems and their causes, and plan your approach to deal with those problems accordingly.
- Interventions to address complex issues in the community are often best implemented in partnership with a variety of health and social service sectors, municipal or regional governments, non-profit organizations, ad hoc community groups and individual citizens.
- Take account of what is happening (or about to happen) outside of your particular strategy or initiative. This includes what actions are planned or in progress by other community groups, municipal governments and those operating at a wider scale (e.g., related provincial or federal initiatives). The evidence indicates that effective interventions often complement the activities of other agencies or groups. However, it is just as important to avoid interfering with other, related initiatives. Specific actions taken to address health issues should be vertically integrated; they should be consistent with

other levels of policy action—local, regional, provincial and federal (Neighbourhood Renewal Unit 2003).

- Ensure that adequate resources are allocated to support CCB activities. Community work requires a special skill set and a long-term vision. All participants need support, not just community members (Burton et al. 2004).
- Manage the CCB practice as well as possible to make sure that it is an effective and efficient process. For instance, encourage intersectoral collaboration and open communication, make roles and responsibilities as clear as possible, acknowledge the importance of process as well as outcome, create accessible and transparent decision-making structures, build on existing structures of community representation and provide skills development and education for all stakeholders as required (Burton et al. 2004).

All of the above actions are essential components of a healthy communities approach.

7.3 Community Capacity Building and the Social Determinants of Health

When health authorities get involved in community capacity building, often the focus is a specific health issue, like infant mortality rates, high smoking prevalence rates or high levels of chronic disease among disadvantaged groups. These are important and worthy concerns to address, but it is vital to always consider the complex interaction of the economic, social and environmental determinants of health when planning and evaluating these broad initiatives. In their recent study of the evidence surrounding the success of health-focused interventions in communities, the Neighbourhood Renewal Unit, United Kingdom Government (2003), found that even well-resourced and effectively planned programs can have limited success if the neighbourhood or target population group experiences:

- Limited access to health care services in the area, particularly primary care services;
- Poor quality housing.
- Limited employment opportunities.
- Poor health knowledge among residents.
- High local crime rates.
- Limited leisure opportunities in the area.

While all health programs and services should consider the impact of the social determinants of health on potential outcomes, that consideration is especially necessary when planning and implementing CCB initiatives. Community development and CCB are geared to have direct effects on the social environments in which we live. Both approaches present excellent ways in which health authorities can acknowledge and integrate knowledge of the social determinants of health into their everyday work. Anderson et al. (2003) offer a number of concrete suggestions for other ways that health authorities (with their community partners) can help to promote health-enhancing social environments.

7.3.1 The Role of the Health Sector in Reducing Health Disparities

Due to inequalities in the distribution of the underlying determinants of health across populations, there are significant differences in health status that occur among population groups across the province. Socio-economic status, Aboriginal identity, gender and geographic location are some important factors associated with these health disparities. For instance:

- Men in the lowest income quintile live an average of five years less than men in the highest quintile; the gap among women is two years.
- Canadians in the bottom socio-economic status quintile are five times more likely to rate their health as fair or poor as people in the highest.
- Personal health practices, such as smoking, diet and physical activity, vary with educational and income level.
- Men in Canada live seven years longer than First Nations men; for women the gap is five years.
- Injuries, including suicides, are the largest cause of potential years of life lost for First Nations on reserve—four time the rate for all of Canada (Health Disparities Task Group 2004).

Health disparities drive up the costs of the health care system. People in the lowest income groups are more often sick or injured, and so use approximately twice as much health care services as those in higher income groups. It is estimated that approximately 20 per cent of total health care spending may be attributable to income disparities (Health Disparities Task Group 2004). Some countries, including Sweden and the United Kingdom, have developed comprehensive, integrated strategies for addressing health disparities. In the United Kingdom, a government-wide agenda has been set.

The Health Disparities Task Group of the Federal/Provincial/Territorial Advisory Committee on Population Health and Health Security (2004) has recently put forth a set of recommendations for ways in which the health sector (which includes health authorities but is not limited to them) can address health disparities. Their recommendations include:

- Make health disparities reduction a health sector priority.
 - Set health disparities reduction targets, monitor trends and produce periodic reports on progress.
 - Develop an integrated strategy to reduce health disparities.
 - Assess the impact of current and potential health sector policies on health disparities to guide policy and program decisions.
 - Facilitate and support all governments to make the reduction of health disparities a public policy priority and a key measure of overall government performance.

- Develop priority areas on which to focus policies and interventions within the health sector, starting with an initial focus on the main disadvantaged groups.
- Integrate disparities reduction into health programs and services:
 - Ensure that health disparities reduction is considered in the design, implementation and evaluation of all health programs and services.
 - Reduce financial and other barriers to health care and public health.
 - Develop communications and educational strategies to foster public awareness and understanding of the importance of reducing health disparities.
- Engage with other sectors in health disparities reduction:
 - Facilitate the participation of the public, private and voluntary sectors in action to reduce health disparities.
 - Collaborate with other sectors in the development of structures and mechanisms for setting policy, developing programs and sharing resources.
- Strengthen knowledge development and exchange activities:
 - Support research that advances our understanding of health disparities, including the development of key indicators to measure the impact of disparities on the economy, the community and individual well-being.
 - Enhance and refine information systems for improved surveillance, monitoring and reporting.
 - Pull together, maintain and disseminate a record of best practices in reducing health disparities.

7.4 Type and Quality of Evidence in Community Development and Community Capacity Building

As indicated earlier in this paper, there is some evidence of effective or promising approaches to CCB for health. However, the overall evidence base is not as definitive as it is in some areas of health care because:

- There is currently no universally accepted definition of CCB; terminology in the area is used inconsistently by a number of different fields. It is quite common for projects to label themselves as CCB, but then not practice the principles intrinsic to this type of community-based work (Crilly 2003).
- There is a lack of in-depth research into CCB to address complex health and social issues. For example, the evidence does not often show which groups in the community have most benefited from a particular intervention.

- Much of the research to date is of a static nature, and so does not capture the amount of time required for broad health and social changes to take place.
- There is little data available that weighs the costs and benefits of CCB, although many studies have argued that the costs of involvement should be better recognized (Burton et al. 2004).
- Much of the available literature is based on a few case studies. Relying too much on this type of evidence can be problematic because it can mislead the reader and its information is of limited use to generalize (Neighbourhood Renewal Unit 2003).
- Each project that uses CCB may use a unique set of approaches and strategies, which requires each project to use a different set of process, output and outcome indicators. It is important that project components are geared specifically to that community's needs and strengths, but this variability does make generalizing from the literature more challenging (Crisp et al. 2000).
- Because capacity building is an evolving process, different indicators of success may be required at different stages of the intervention (Hawe et al. 1997). As Burton et al. (2004) put it, "there is a problem in trying to hit a moving target" (p. 7). The CCB process can be seen as having no end because communities are constantly growing and changing (Kwan et al. 2003). Again, this variability can make it difficult to draw up a simple list of best practices.
- It is frequently difficult to assess what would have happened in the absence of a particular community-based intervention (Burton et al. 2004). Often it is neither feasible nor effective, given limited time and resources, to complete a research study using one intervention community and a control or comparison community.
- Broad community-based initiatives work in complex environments in which the social, economic and other determinants of health all interact. It is impossible to separate the impact of the capacity building work from that of what else is happening in the environment.

Many of the traditional rules of quantitative research, therefore, do not apply to the evaluation of CCB initiatives. Program administrators in community development and CCB should not ignore proper rigor in evaluations, but their conceptualization of that rigor should include qualitative work that highlights a community's definition of success (Frankish and Gram 2006). Good evidence, then, can include individual stories, the results of informal discussions and work around community mapping. The lack of evidence, as traditionally defined, cannot preclude continuing to work collaboratively with communities to address health issues.

7.4.1 Measuring Community Capacity

As CCB work becomes more common in the health sector, governments and non-governmental organizations in Canada and internationally are working to build better measures of community health and quality of life. At present, however, there is no accepted set of indicators that can help to assess the health or capacity of communities (Crilly 2003; Kwan et al. 2003), and there are no consistent standards for defining success for any given indicator (Frankish et al. 2002). It is

difficult then, for project leaders to determine whether their community has become healthier following the policy or environmental changes that might have come from a CCB process (or whether the community has become healthier as a result of the CCB process itself).

7.5 Organizational Capacity for Community Capacity Building/Community Development within Health Authorities

In an in-depth study of organizational capacity within Alberta health authorities, Germann and Wilson (2004) found that four major components must be in place for health authorities to build and sustain successful community development work:

- Organizational commitment – the organization as a whole hold values and beliefs congruent with community development that, when enacted by organizational leaders, result in commitment to community development philosophies and practices.
- Organizational structures – the health authority has an infrastructure and systems in place to support its day-to-day community development work. That support includes some flexibility in community-based planning work, the willingness and ability of the organization to collaborate with groups, communities and other organizations, flexibility in evaluation and accountability practices and a clear understanding of community development roles and responsibilities in terms of job design.
- Resources – those staff within the health authority that are participating in community development work have adequate funding, information, time and skills to complete the work.
- Modeling – the organization actively demonstrates that it shares the values and principles of community development, through supportive leadership, staff participation in making decisions that influence their work, creation of a sense of community within the team, communication and dialogue.

7.6 Conclusion

Community development and CCB work, in part, to build strong social networks that create the social capital that is so strongly linked to community health and quality of life. The evidence for the effectiveness of these processes is still developing, partly because this kind of broad health promotion work is complex, can take a great deal of time and is difficult to measure.

Yet what is clear from the available literature is that community development and CCB initiatives need to be geared to that individual community's needs, strengths and desires. A "one-size-fits-all" approach will not be effective. In addition, programs need to acknowledge and work towards reducing health disparities, so that individual community members, and communities as whole entities, have the capacity to more effectively maintain or improve their own health.

8.0 CONCLUSION

The evidence for healthy workplaces, health care facilities, schools and community development and capacity building has been summarized in each respective section of this paper. In addition to those conclusions, there are some general conclusions that can be drawn concerning the healthy communities approach.

Public health research has demonstrated that broad interventions that look to change societal norms and values are among the most effective in improving population health. Such interventions, like healthy communities initiatives in the workplace, schools, health care facilities or the broader community, can take a great deal of time and expertise to prove successful. As well, their success can be a challenge to measure. Regardless of the challenges such broad programs present, it is important that they be part of public health renewal in BC.

A good health promotion approach operates in the many settings where people spend their time—where they work, live and play. As presented in this review of the evidence, taking a "settings approach" to health promotion can be effective in improving health among some segments of the population. However, it is a complex process that requires participation from a number of sectors, including those workers, patients and community members whose health these programs are meant to be improving.

As has been repeatedly emphasized in this review, and consistent with the philosophy of health promotion and our increasing understanding of the social determinants of health, the promotion of healthy lifestyles in any of these settings, by itself, is insufficient to effectively improve health and quality of life outcomes. A consideration of the social and physical environments of the setting itself is at least as important. In addition, the weight of the evidence confirms that multi-component or comprehensive interventions have higher effectiveness and cost-effectiveness compared with those programs that focus on a single component.

In this “review of reviews”, many researchers commented on methodological weaknesses in this literature, including a lack of comparison groups or communities, anecdotal evidence and cross-sectional study designs. Yet broad healthy communities work, with its emphasis on necessary policy and environmental changes, as well as the empowerment of the target group, needs to be evaluated rigorously using qualitative as well as quantitative methods. Our definitions of success must be broad enough to capture aspects of quality of life, social cohesion and sustainability.

As well, healthy communities initiatives like those reviewed here need sufficient time to achieve their objectives:

There are no quick-fix solutions to the creation of healthier cities and communities, instead a long-term commitment to multiple small steps must be taken. In essence, a healthy community and a healthy city is created one household at a time, one street at a time, one block at a time, one neighbourhood at a time, and one day at a time. Multiple small strategies provide multiple opportunities to learn and also provide a margin for failure, because failure will occur and is a learning experience that needs to be accepted, not penalized. The

challenge for cities is to learn how to create community capital as a fundamental strategy for creating a healthy city (Hancock 2001, p. 280).

Despite our knowledge that the social and economic environments have the greatest impact on health (Wilkinson 1996), the health care system continues to place most of their emphasis on the challenges of acute care services, rather than how they can address the broad determinants of health. Yet health care systems are actually quite well placed to have some impact on these determinants, both directly and indirectly. The mandate of health authorities is the health and well-being of the populations they serve, and they are well-positioned to participate in collaborative efforts with communities and other sectors that have a long-term vision of healthier cities and communities. By approaching broadly based health promotion work in each of these four settings, health authorities can continue to help build healthier and more sustainable communities. Len Duhl (as cited in Flower 1993) raised this challenge to health authorities worldwide:

I am not asking the health people to take on the world. If you are in the health business, stay in the health business. But let's start looking at the health business realistically...

The data show that improvements in the health of people around the world came from the rising standard of living, especially the education of women. What do we do in the health business? We have to start asking, "How much money do I put into medical care, in rehab work, in health promotion and prevention, in cooperating with the neighborhood around me, the community, the schools? What is the right balance for my community and for my institution? Who do I collaborate with? ...

Collaborations with schools, workplaces, care facilities and in community development and community capacity building offer health authorities the opportunity to bring the voice of the health sector to the table and to create health-promoting partnerships that can improve the quality of the larger environment that has such a significant impact on health.

These collaborations may require some shifts in strategy and operations, but as Duhl expresses so eloquently, "if you can change the process, things will change" (Flower 1993). To work towards the vision of healthy communities, such change is necessary.

REFERENCES

- Acheson, S.D. 1998. *Independent inquiry into inequalities in health*. United Kingdom: The Stationary Office. Retrieved February 05, 2006, from <http://www.archive.official-documents.co.uk/document/doh/ih/contents.htm>.
- Action Schools! BC. 2006. *What is AS! BC?* Retrieved March 11, 2006, from <http://www.actionschoolsbc.ca/Content/home.asp>.
- Addley, K. 1999. Developing programmes to achieve a healthy society: Creating healthy workplaces in northern island. *Occupational Medicine* 495:325-330.
- Aldana, S.G. 2001. Financial impact of health promotion programs: A comprehensive review of the literature. *American Journal of Health Promotion* 155:296-320.
- Anderson, D.R., Serxner, S.A., and Gold, D.B. 2001. Conceptual framework, critical questions, and practical challenges in conducting research on the financial impact of worksite health promotion. *American Journal of Health Promotion* 155:281-288.
- Anderson, L.M., Scrimshaw, S.C., Fullilove, M.T., Fielding, J.E., and the Task Force on Community Preventive Services. 2003. The Community Guide's model for linking the social environment to health. *American Journal of Preventive Medicine* 243S:12-20.
- Association of Ontario Health Centres 2005a. *What are CHCs and AHACs?* Retrieved February 17, 2007, from http://www.aohc.org/app/DocRepository/2/Research/CHCs_and_AHACs.pdf.
- Association of Ontario Health Centres 2005b. *CHCs: Cost-Effective and Affordable*. Retrieved February 17, 2007, from http://www.aohc.org/app/DocRepository/2/Research/CHCs_Cost_effective_and_Affordable.pdf.
- Barnes, S., and the Design in Caring Environments Study Group. 2002. The design of caring environments and the quality of life of older people. *Ageing and Society* 22:775-789.
- Barr, V J., Robinson, S., Marin-Link, B., Underhill, L., Dotts, A., Ravensdale, D., and Salivaras, S. 2003. The Expanded Chronic Care Model: An integration of concepts and strategies from population health promotion and the Chronic Care Model. *Hospital Quarterly*, 71:73-82.
- BC Healthy Communities. 2006. *BC healthy communities: People. Place. Potential*.
- Bertera, R.L. 1990. The effects of workplace health promotion on absenteeism and employment costs in a large industrial population. *American Journal of Public Health* 809:1101-1105.
- Berry, L.L., Parker, D., Coile, R.C., Hamilton, D.K., O'Neill, D.D., and Sadler, B.L. 2004. The business case for better buildings. *Frontiers of Health Services Management*.

Core Public Health Functions for BC: Evidence Paper
Healthy Communities

- Bhattacharya, J., Currie, J., and Haider, S. 2004. *Breakfast of champions? The school breakfast program and the nutrition of children and families* [Working Paper 10608]. Cambridge, MA: National Bureau of Economic Research.
- Breastfeeding Committee for Canada. 2005. *Baby-friendly hospitals and birthing centres in Canada*. Retrieved February 17, 2007, from <http://www.breastfeedingcanada.ca/html/bfi.html>.
- Breucker, G., and Schroer, A. 2000. Settings 1 - effective health promotion in the workplace. In *The Evidence of Health Promotion Effectiveness - Shaping Public Health in a New Europe* (pp. 98-109), edited by International Union for Health Promotion and Education. France: IUHPE.
- Burton, J. 2004. *Creating healthy workplaces*. Ontario: Industrial Accident Prevention Association.
- Burton, P., Goodlad, R., Croft, J., Abbott, J., Hastings, A., Macdonald, G., and Slater, T. 2004. *What works in community involvement in area-based initiatives? A systematic review of the literature*. London: Home Office UK Government. Retrieved February 17, 2007, from www.homeoffice.gov.uk/rds/pdfs04/rdsolr5304.pdf.
- Campbell, K., Waters, E., O'Meara, S., and Summerbell, C.D. 2001. *Interventions for preventing obesity in children*. Oxford, UK: The Cochrane Library.
- Center for Maximum Potential Building Systems Sept. 2005. *Green guide for health care: Best practices for creating high performance healing environments* [Version 2.1 Pilot]. Retrieved February 17, 2007, from <http://www.gghc.org/index.cfm>.
- Chapman, L. 1996. *Proof positive: An analysis of the cost-effectiveness of worksite wellness* [3rd ed.]. Seattle, WA: Summex Corporation.
- Ciliska, D., Beyers, J., Vohra, J., and McVey, G. 2001. *The effectiveness of primary prevention of eating disorders*. Hamilton, ON: Effective Public Health Practice Project.
- Contento, I.R., Balch, G.I., Bronner, Y.L., Lytle, L.A., Maloney, S.K., and Olson, C.M. 1995. The effectiveness of nutrition education and implications for nutrition education policy, programs, and research: A review of research. *Journal of Nutrition Education* 276:277-420.
- Crilly, R.G. 2003. *Synthesis research on community capacity*. Ottawa, ON: Health Canada.
- Crisp, B.R., Swerissen, H., and Duckkett, S.J. 2000. Four approaches to capacity building in health: Consequences for measurement and accountability. *Health Promotion International* 152:99-107.
- Cuijpers, P. 2002. Effective ingredients of school-based drug prevention programs - A systematic review. *Addictive Behavior* 27:1009-1023.
- DiBlasi, Z., Harkness, E., Ernst, E., Georgiou, A., and Kleijnen, J. 2001. Influence of context effects on health outcomes: A systematic review. *Lancet* 357:757-762.

Core Public Health Functions for BC: Evidence Paper
Healthy Communities

- DiNubile, N.A., and Sherman, C. 1999. Exercise and the bottom line: Promoting physical and fiscal fitness in the workplace: A commentary. *Physician and Sportsmedicine* 272:37-43.
- Dobbins, M., Lockett, D., Michel, I., Beyers, J., Abate, N., and Feldman, L. 2001. *The effectiveness of school-based interventions in promoting physical activity and fitness among children and youth: A systematic review*. Hamilton, ON: Effective Public Health Practice Project.
- Duhl, L., and Hancock, T. 1997. Healthy cities, healthy children. In *The Progress of Nations*, UNICEF. Retrieved February 17, 2007, from <http://www.unicef.org/pon97/indust1.htm>.
- Duxbury, L., Higgins, C., and Johnson, K. L. 1999. *An examination of the implications and costs of work – life conflict in Canada*. Ottawa, ON: Health Canada.
- Eden Alternative. n.d. *What is Eden?* Retrieved February 17, 2007, from <http://www.edenalt.com/about.htm>.
- Effective Public Health Practice Project. 2001. *The effectiveness of health promotion interventions in the workplace*. United Kingdom: Health Development Agency.
- Engbers, L.H., van Poppel, Mireille N.M., Chin A.P., Marijke J.M., and van Mechelen, W. 2005. Worksite health promotion programs with environmental changes: A systematic review. *American Journal of Preventive Medicine* 291:61-70.
- European Network for Workplace Health Promotion, 1997. *The Luxembourg Declaration on Workplace Health Promotion in the European Union*. Retrieved February 13, 2006, from http://www.enwhp.org/fileadmin/downloads/Luxembourg_Declaration_June2005_final.pdf.
- Faggiano, F., Vigna-Taglianti, F.D., Versino, E., Zambon, A., Borraccino, A., and Lemma, P. 2005. School-based prevention for illicit drugs' use. *The Cochrane Database of Systematic Reviews*.
- Faragher, E.B., Cass, M., and Cooper, C.L. 2005. The relationship between job satisfaction and health: A meta-analysis. *Occupational and Environmental Medicine* 62 (2):105-112.
- Flower, J. 1993. Building healthy cities: Excerpts from a conversation with Leonard J. Duhl, MD. *Healthcare Forum Journal*:363.
- Frampton, S.B., Gilpin, L., and Charmel, P.A. 2003. *Putting patients First: Designing and practicing patient-centered care*. San Francisco, CA: Jossey Bass.
- Frankish, J., and Gram, C. 2006. *Community development – An effective tool for health promotion*. Presentation at Health Promotion, Prevention and Population Health: Working Towards a Common Understanding, Vancouver Coastal Health, February 22-23, 2006, Richmond BC.
- Frankish, J., Kwan, B., and Flores, J. 2002. *Assessing the health of communities: Indicator projects and their impacts*. Vancouver, BC: Institute of Health Promotion Research, University of British Columbia.

Core Public Health Functions for BC: Evidence Paper
Healthy Communities

- Fugleholm, A.M., Jorgensen, S.J., Moller, L., and Groene, O. 2005. Development of standards for disease prevention and health promotion. In *Health Promotion in Hospitals: Evidence and Quality Management*, edited by O. Groene and M. Garcia-Barbero. Europe: World Health Organization Regional Office for Europe. Retrieved February 17, 2007, from www.euro.who.int/document/E86220.pdf.
- Germann, K. and Wilson, D. 2004. Organizational capacity for community development in regional health authorities: A conceptual model. *Health Promotion International* 193:289-298.
- Goetel, R.Z., Anderson, D.R., Whitmer, R.W., Ozminkowski, R.J., Dunn, R.L., and Wasserman, J. 1998. The relationship between modifiable health risks and health care expenditures: An analysis of the multi-employer HERO health risk and cost database. *Journal of Occupational and Environmental Medicine* 4010:843-854.
- Golaszewski, T. 2001. Shining lights: Studies that have most influenced the understanding of health promotion's financial impact. *American Journal of Health Promotion* 155:332-340.
- Green, L.W., Poland, B.D., and Rootman, I. 2000. The settings approach to health promotion. In *Settings for Health Promotion - Linking Theory and Practice* (pp. 1-43), edited by B.D. Poland, L.W. Green and I. Rootman. Thousand Oaks, CA: Sage Publications.
- Green Buildings BC. 2005. *What is a green building?* Retrieved 2005 from http://www.greenbuildingsbc.com/new_buildings/definition.html.
- Green House Project 2006. *Concept: Autonomy, dignity, choice*. Retrieved February 17, 2007, from <http://thegreenhouseproject.com/concept.html>.
- Groene, O., Jorgensen, S.J., Fugleholm, A.M., Moller, L., and Garcia-Barbero, M. 2005. Standards for health promotion in hospitals: Development and pilot test in nine European countries. *International Journal of Healthcare Quality Assurance*, 184 (5):300-307.
- Grossman, R., and Scala, K. 1993. *Health promotion and organizational development: Developing settings for health*. Vienna: World Health Organization Europe.
- Hancock, T. 1999. Creating health and health promoting hospitals: A worthy challenge for the twenty-first century. *International Journal of Health Care Quality Assurance* 122:vii-xix.
- Hancock, T. 2001. People, partnerships and human progress: Building community capital. *Health Promotion International* 163:275-280.
- Hancock, T., Whate, R., Wolnik, C., and Del Matto, T. 2001. *Healthcare success stories*. Ontario: Canadian Coalition for Green Health Care. Retrieved February 17, 2007, from http://www.greenbuildingsbc.com/new_buildings/pdf_files/3-HealthcareSuccessStories.pdf.
- Hawe, P., Noort, M., King, L., and Jordens, C. 1997. Multiplying health gains: The critical role of capacity building within health promotion programs. *Health Policy* 39:29-42.

Core Public Health Functions for BC: Evidence Paper **Healthy Communities**

- Health Canada. 1992. *Community health centres and community development*. Ottawa, ON: Author.
- Health Canada. 2000. *Best advice on stress risk management in the workplace*. Ottawa, ON: Author.
- Health Care Leaders' Association of BC. 2005. *Advocacy position paper: Better care through smart building practices*. British Columbia: Author.
- Health Disparities Task Group, Federal/Provincial/Territorial Advisory Committee on Population Health and Health Security. 2004. *Reducing health disparities – Roles of the health sector: Recommended policy directions and activities*. Ottawa, ON: Government of Canada.
- Heaney, C.A., and Goetzel, R.Z. 1997. A review of health-related outcomes of multi-component worksite health promotion programs. *American Journal of Health Promotion* 114:290-307.
- Institute of Medicine. 2001. *Health and behaviour: The interplay of biological, behavioural and societal influences*. Washington, DC: National Academies Press.
- Institute of Population and Public Health, Canadian Institutes of Health Research. 2003. *The future of public health in Canada: Developing a public health system for the 21st century*. Retrieved March 11, 2006, from <http://www.cihr-irsc.gc.ca/e/19573.html>.
- International Union for Health Promotion and Education. 2000. *The evidence of health promotion effectiveness: Shaping public health in a new Europe*. Brussels: Author.
- Johnson, A., and Baum, F. 2001. Health promoting hospitals: A typology of different organizational approaches to health promotion. *Health Promotion International* 163:281-287.
- Karasek, R., and Theorell, T. 1990. *Healthy work: Stress, productivity, and the reconstruction of working life*. New York: Basic Books.
- Kats, G. 2003. *The costs and financial benefits of green buildings: A report to the California Sustainable Building Task Force*. Retrieved February 17, 2007, from http://www.greenbuildingsbc.com/new_buildings/pdf_files/7-The_Costs_and_Fin_Ben_of_GB.pdf.
- Killan, K. and Paul, R. 1996. Staff empowerment as a measure of progress in occupational health promotion: Theoretical foundation and baseline data from a health promoting hospital. *Health Gain Measurements as a Tool for Hospital Management and Health Policy. Proceedings of the 3rd International Conference on Health Promoting Hospitals*. Linköping, Sweden
- Kuper, H., and Marmot, M. 2003. Job strain, job demands, decision latitude, and risk of coronary heart disease within the Whitehall II study. *Journal of Epidemiology and Community Health* 57:147-153.

***Core Public Health Functions for BC: Evidence Paper
Healthy Communities***

- Kwan, B., Frankish, J., Quantz, D., and Flores, J. 2003. *A synthesis paper on the conceptualization and measurement of community capacity*. Vancouver, BC: Institute of Health Promotion Research, University of British Columbia.
- Leach, E. 1995. The Canadian health care facility as a model environment, *Canadian Health Care Management* (July):88-90.
- Lepore, S., Mata, A.K., and Evans, G. 1993. Social support lowers cardiovascular reactivity in an acute stressor, *Psychosomatic Medicine* 55:518-524.
- Lowe, G.S. 2003. *Healthy workplaces and productivity: A discussion paper*. Ontario: Economic Analysis and Evaluation Division, Health Canada.
- Lynagh, M., Schofield, M.J., and Sanson-Fisher, R.W. 1997. School health promotion programs over the past decade: A review of the smoking, alcohol and solar protection literature. *Health Promotion International* 121:43-60.
- Marmot, M., Siegrist, J., Theorell, T., and Feeney, A. 1999. Health and the psychosocial environment at work. In *Social Determinants of Health* (pp. 105-131), edited by M. Marmot, and R. Wilkinson. New York: Oxford University Press.
- McCreary Centre Society. 2004. *Healthy youth development - highlights from the 2003 adolescent health survey III*. Vancouver, BC: The McCreary Centre Society.
- McKay, H. 2004. *Action schools! BC phase I pilot evaluation report and recommendations*. British Columbia: Action Schools! BC.
- Michie, S., and Williams, S. 2003. Reducing work related psychological ill health and sickness absence: A systematic literature review. *Occupational and Environmental Medicine* 60:3-9.
- Micucci, S., Thomas, H., and Vohra, J. 2002. *The effectiveness of school-based strategies for the primary prevention of obesity and for promoting physical activity and/or nutrition, the major modifiable risk factors for type 2 diabetes: A review of reviews*. Hamilton, ON: Effective Public Health Practice Project.
- Midford, R., Munro, G., McBride, N., Snow, P., and Ladzinski, U. 2002. Principles that underpin effective school-based drug education. *Journal of Drug Education* 324:363-386.
- Miller, G. 2003. *Ecological approach to school health promotion - Review of literature*. Canadian Institutes of Health Research.
- Ministry of Health. 2003. *Prevention that works: A review of the evidence regarding the causation and prevention of chronic disease* [Consultation Draft]. Retrieved February 17, 2006, from <http://www.healthservices.gov.bc.ca/prevent/pdf/cdp/cdpepaper.pdf>.
- Ministry of Health, Population Health and Wellness. 2005. *A framework for core functions in public health*. Victoria, BC: Author. Retrieved February 17, 2007, from http://www.health.gov.bc.ca/prevent/pdf/core_functions.pdf

Core Public Health Functions for BC: Evidence Paper
Healthy Communities

- Ministry of Health, and Ministry of Education. 2005. *News release - Food guidelines to help schools improve student health*. Victoria, BC: Authors.
- Mukoma, W., and Flisher, A.J. 2004. Evaluations of health promoting schools: A review of nine studies. *Health Promotion International* 193:357-368.
- Murphy, L.R. 1996. Stress management in work settings: A critical review of the health effects. *American Journal of Health Promotion* 11 (2):112-135.
- Mytton, J.A., DiGuseppi, C., Gough, D.A., Taylor, R.S., and Logan, S. 2002. School-based violence prevention programs. *Archives of Pediatrics and Adolescent Medicine* 156:752-762.
- National Advisory Committee on SARS and Public Health. 2003. *Learning from SARS - renewal of public health in Canada*. Retrieved March 11, 2006, from <http://www.phac-aspc.gc.ca/publicat/sars-sras/naylor/>.
- National Health Service, Health Development Agency. 2002. *Health at work in the NHS: An evaluation*. United Kingdom: Author.
- Neighbourhood Renewal Unit, United Kingdom Government. 2003. *What Works? Reviewing the evidence base for neighbourhood renewal*. Retrieved February 17, 2007, from http://www.renewal.net/Documents/RNET/Policy_percent20Guidance/Whatworksreviewing.pdf.
- New South Wales Health Department. 2001. *A framework for building capacity to improve health*. Retrieved February 17, 2007, from http://www.health.nsw.gov.au/pubs/f/pdf/frwk_improve.pdf.
- Ontario Healthy Communities Coalition. 2003. *What makes a community healthy?* Retrieved March 4, 2006, from http://www.healthycommunities.on.ca/about_us/healthy_community.htm.
- Ontario Prevention Clearinghouse. 2002. *Capacity building for health promotion: More than bricks and mortar*. Retrieved February 17, 2007, from http://www.opc.on.ca/english/our_programs/hlth_promo/resources/capacity_building.pdf.
- Parcel, G.S., Kelder, S.H., and Basen-Engquist, K. 2000. The school as a setting for health promotion. In *Settings for Health Promotion: Linking Theory and Practice* (pp. 86-137B), edited by D. Poland, L.W. Green and I. Rootman. Thousand Oaks, CA: Sage Publications.
- Pelikan, J.M., Dietscher, C., Krajic, K., and Nowak, P. 2005. Eighteen core strategies for Health Promoting Hospitals. In *Health Promotion in Hospitals: Evidence and Quality Management*, edited by O. Groene and M. Garcia-Barbero. Europe: World Health Organization Regional Office for Europe. Retrieved February 17, 2007, from www.euro.who.int/document/E86220.pdf.

Core Public Health Functions for BC: Evidence Paper
Healthy Communities

- Pelletier, K.R. 2001. A review and analysis of the clinical and cost-effectiveness studies of comprehensive health promotion and disease management programs at the worksite: 1998-2000 update. *American Journal of Health Promotion* 162:107-116.
- Planetree, Inc. 2005. *Planetree components*. Retrieved February 17, 2007, from www.planetree.org/about/components.htm.
- Ploeg, J., Ciliska, D., Brunton, G., MacDonnell, J., and O'Brien, M.A. 1999. *The effectiveness of school-based curriculum suicide prevention programs for adolescents*. Hamilton, ON: Effective Public Health Practice Project.
- Polanyi, M.F.D., Frank, J.W., Shannon, H.S., Sullivan, T.J., and Lavis, J.N. 2000. Promoting the determinants of good health in the workplace. In *Settings for Health Promotion: Linking Theory and Practice* (pp. 138-174B), edited by D. Poland, L.W. Green and I. Rootman. Thousand Oaks, CA: Sage Publications.
- Provincial Health Officer. 2003. *An ounce of prevention - A public health rationale for the school as a setting for health promotion*. Victoria, BC: Ministry of Health Planning.
- Robert Wood Johnson Foundation. 2005. Developing small community homes as alternatives to nursing homes: "Green House" model a new approach to long-term care. Retrieved February 17, 2007, from <http://www.rwjf.org/newsroom/newsreleasesdetail.jsp?id=10375>.
- Roe, L., Hunt, P., Bradshaw, H., and Rayner, M. 1997. *Health promotion effectiveness reviews: Health promotion interventions to promote healthy eating in the general population: A review* [6th ed.]. London: Health Education Authority.
- Rones, M., and Hoagwood, K. 2000. School-based mental health services: A research review. *Clinical Child and Family Psychology Review* 34:223-241.
- Ryndes, T. 1997. Creating an environment to prevent burnout. *Healthcare Forum Journal* (July/August):54-57.
- Schweitzer, M., Gilpin, L., and Frampton, S. 2004. Healing spaces: Elements of environmental design that make an impact on health. *Journal of Alternative and Complementary Medicine* 10 (S1):S71-S83.
- Select Standing Committee on Health. 2004. *The path to health and wellness: Making British Columbians healthier by 2010*. Victoria, BC: The Legislative Assembly of British Columbia.
- Shain, M. 2004a. *Beyond corporate social responsibility: The role of the workplace in building population health*. Ottawa, ON: Workplace Health Bureau, Health Canada.
- Shain, M. 2004b. *What's a good policy? maximizing the transfer of health from the workplace to society*. . Ottawa, ON: Workplace Health Bureau, Health Canada.

- Siegrist, J., Starke, D., Chandola, T., Godin, I., Marmot, M., Niedhammer, I., and Peter, R. 2004. The measurement of effort-reward imbalance at work: European comparisons. *Social Science and Medicine* 58 (8):1483-1499.
- Sparks, K., Cooper, C., Fried, Y., and Shirom, A. 1997. The effects of hours of work on health: A meta-analytic review. *Journal of Occupational and Organizational Psychology* 70:391-408.
- St. Leger, L., and Nutbeam, D. 2000. Effective health promotion in schools. *The Evidence Of Health Promotion Effectiveness - Shaping Public Health In A New Europe* [2nd ed.] (pp. 110-122), International Union for Health Promotion and Education. Brussels: International Union for Health Promotion and Education.
- State Government of Victoria, Australia, Department of Human Services. 2002. *Integrated health promotion: A practice guide for service providers*. Retrieved February 17, 2007, from http://www.health.vic.gov.au/healthpromotion/what_is/index.htm.
- Stewart-Brown, S. 2006. What is the evidence on school health promotion in improving health or preventing disease and, specifically, what is the effectiveness of the health promoting schools approach? *Health Evidence Network Report*. Copenhagen: WHO Regional Office for Europe. Retrieved March 16, 2006, from <http://www.euro.who.int/document/e88185.pdf>.
- Stone, E.J., McKenzie, T.L., Welk, G.J., and Booth, M.L. 1998. Effects of physical activity interventions in youth: Review and synthesis. *American Journal of Preventive Medicine* 15:298-315.
- Taylor, S., Repetti, R.L., and Seeman, T. 1997. Health psychology: What is an unhealthy environment and how does it get under the skin? *Annual Review of Psychology* 48:411-447.
- Thomas, H., Siracusa, L., Ross, G., Beath, L., Hanna, L., Michaud, M. et al. 1999. *Effectiveness of school-based interventions in reducing adolescent risk behaviour: A systematic review of reviews*. Hamilton, ON: Effective Public Health Practice Project.
- Thomas, R. 2006. School-based programmes for preventing smoking. *The Cochrane Database of Systematic Reviews*.
- Tonnesen, H., Fugleholm, A.M., and Jorgensen, S.J. 2005. Evidence for health promotion in hospitals. In *Health Promotion in Hospitals: Evidence and Quality Management*, edited by O. Groene and M. Garcia-Barbero. Europe: World Health Organization Regional Office for Europe. Retrieved February 17, 2007, from www.euro.who.int/document/E86220.pdf.
- Ulrich, R.S. 1984. Benefits of nature: View from a hospital bed. *Science* 224:420-421.
- Ulrich, R.S. 2001. Effects on healthcare environmental design on medical outcomes, *Design and Health: Proceedings of the 2nd International Healing by Design Conference*. Center for Health Systems and Design.

Core Public Health Functions for BC: Evidence Paper
Healthy Communities

- Ulrich, R., Quan, S., Zimring, C., Joseph, A., and Choudhary, R. 2005. Center for Health Design releases findings on how design can improve the standard of care in health care facilities, *AIArchitect* (February 21). Retrieved February 17, 2007, from http://www.aia.org/aiarchitect/thisweek05/tw0218/0218bp_pebble.htm.
- UNICEF. 2006. *The Baby-Friendly Hospital Initiative*. Retrieved February 17, 2007, from http://www.unicef.org/nutrition/index_24806.html.
- University of British Columbia School of Architecture. 2002. *Why build green? 10 key questions answered*. Vancouver, BC: Greater Vancouver Regional District and University of British Columbia School of Architecture. Retrieved February 17, 2007, from http://www.greenbuildingsbc.com/new_buildings/pdf_files/1-Why_per_cent20Build_per_cent20Green.pdf.
- Wagner E.H. 1998. Chronic disease management: What will it take to improve care for chronic illness? *Effective Clinical Practice* 1:2-4.
- Whitehead, D. 2004a. The European Health Promoting Hospitals HPH project: How far on? *Health Promotion International* 19:259-267.
- Whitehead, D. 2004b. Health promoting hospitals: The role and function of nursing, *Journal of Clinical Nursing* 14:20-27.
- Wilkinson, R. 1996. *Unhealthy societies: The afflictions of inequality*. London: Routledge.
- Wilson, M.G., Holman, P.B., and Hammock, A. 1996. A comprehensive review of the effects of worksite health promotion on health-related outcomes. *American Journal of Health Promotion* 10:429-435.
- Work Group on Health Promotion and Community Development, University of Kansas 2006. *Best processes and practices that promote community change and improvement: A framework*. Retrieved February 17, 2007, from http://ctb.ku.edu/tools/bp/en/tools_bp_sub_section_68.jsp.
- Workers' Compensation Board of BC. 2006. *Backgrounder: Residential care in BC*. Retrieved February 17, 2007, from http://www2.worksafebc.com/PDFs/Healthcare/residential_care_backgrounder_feb_2006.pdf.
- World Health Organization. 1978. *Declaration of Alma-Ata*. Copenhagen: Author. Retrieved February 17, 2007, from http://www.euro.who.int/AboutWHO/Policy/20010827_1.
- World Health Organization. 1986. *The Ottawa Charter for Health Promotion*. Copenhagen: Author. Retrieved February 17, 2007, from <http://www.phac-aspc.gc.ca/ph-sp/phdd/docs/charter/>.
- World Health Organization. 1991. *The Budapest Declaration of Health Promoting Hospitals*. Copenhagen: Author. Retrieved February 17, 2007, from <http://www.euro.who.int/document/IHB/hphbudadecl.pdf>.

Core Public Health Functions for BC: Evidence Paper
Healthy Communities

- World Health Organization. 1996. *Ljubljana Charter on Reforming Health Care*. Copenhagen: Author. Retrieved February 17, 2007, from http://www.euro.who.int/AboutWHO/Policy/20010927_5.
- World Health Organization. 1997a. *Twenty steps for developing a healthy cities project* [3rd ed]. Copenhagen: Author. Retrieved February 17, 2007, from <http://www.euro.who.int/document/e56270.pdf>.
- World Health Organization. 1997b. *The Vienna recommendations on Health Promoting Hospitals*. Copenhagen: Author. Retrieved February 17, 2007, from <http://www.euro.who.int/document/IHB/hphviennarecom.pdf>.
- World Health Organization. 2005. *Health Promoting Hospitals*. Copenhagen: Author. Retrieved March 10, 2006, from <http://www.euro.who.int/healthpromohosp>.
- World Health Organization. n.d. *What is a health promoting school?* Retrieved March 15, 2006, from http://www.who.int/school_youth_health/gshi/hps/en/.
- Yalnizyan, A., and Macdonald, D. 2005. *CHC cost-effectiveness: A review of the literature*. Toronto, ON: Association of Ontario Health Centres. Retrieved February 17, 2007, from http://www.aohc.org/app/DocRepository/2/About_the_AOHC/CHC_Cost_Effectiveness_Literature_Review_2005.pdf.