

**MAKING THE HEALTHY CHOICE: NUTRITION POLICY  
AND RECREATION FACILITIES**

by

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## **Abstract**

There is agreement that measures to reduce unhealthy eating practices are helpful in preventing or delaying the development of several chronic diseases. The policy question is how to encourage the population to make healthier food choices. This study looks at the food choices made by users of publicly-funded recreation facilities. Recreation facilities are mandated to enhance people's well-being, thus they represent an appropriate case study. In focussing on nutrition within recreation centres, this study asks - Are there factors that individual recreation centres can control which influence people's willingness to purchase healthy food?

This study makes recommendations that depend on whether the facility is operating with an existing vending machine contract or is at a stage where the contract can be renewed. The recommendations call for an increase in the availability of healthy options and providing price incentives for healthy options.

## Executive Summary

While the mandate of Vancouver recreational facilities is to “enhance the well-being of individuals”, detailed nutrition policy is often left to individual recreation facility staff (Vancouver Parks Board, 2005). This autonomy has resulted in some facilities offering healthy product options to customers while others have not. One important aspect of recreational nutritional policy concerns the use of vending machines. These machines have the potential to be used as a delivery mechanism for healthy or unhealthy food and drink products. This study asks - *Are there factors that individual recreation centres can control which influence people’s willingness to purchase healthy food?*

Information on this topic is gathered from two main sources: recreation centre patron surveys and interviews with recreation centre staff. The surveys revealed a broad support among recreation centre patrons for increasing the availability of healthy products in the facilities. It also found that alternatives must be appealing and of similar portions to current offerings and that people are bringing healthy foods to the facility or taking their children home to feed them after visiting the recreation facilities because they do not consider the products presently available at the facility as healthy.

The results from the interview process established potential key elements for the success or failure of recreation nutrition policies. Interviews were conducted at the following facilities: Dunbar Community Centre, Strathcona Community Centre, The City of Richmond, The City of Grande Prairie and The City of Coquitlam. The interviewees were selected based on the fact that each of these facilities had tried to or have established nutrition policies within their facilities.

The following characteristics were present in all facilities that had success with nutrition policies:

- Proactive recreation managers
- Price Incentives
- Increased availability of healthy product in vending machines
- Visible identification of healthy products
- Media pressure

- Provincial initiative to increase well-being in community

Failure of the implementation of various nutrition policies was observed in situations where there was an assumption by the facility managers that the problem was 'easy to solve' or solutions were 'easy' to implement. The characteristics listed below are factors which make it more likely that the facility will not have a successful nutrition policy:

- Complete elimination of unhealthy products from vending machines as a solution the problem of unhealthy foods in recreation facilities
- Uninterested community
- Lack of city staff to investigate nutrition and its scope
- Passive recreation manager

Based on information from the surveys and interviews, this study develops an appropriate nutrition policy framework for use in the recreation facilities. The policy framework is based on environmental intervention strategies that are aimed at increasing the sale and consumption of healthy products offered through vending machines.

This study also provides two possible recommendations for use in different scenarios – one for facilities with existing vending contracts and one for facilities negotiating new vending supply contracts. Facilities with existing contracts could influence purchases of healthy products through the use and promotion of visible labelling of healthy vs. unhealthy foods. Facilities that are negotiating new vending contracts could require bids to include price incentives for healthy foods and provide visible labelling of healthy products.

This study is significant because the current lack of nutrition policies in recreation facilities is an emerging problem which to date has received little formal research. Recreation facilities have a social responsibility to provide their customers with foodstuffs that promote healthy living strategies. This is in the public interest because nutrition policy is an essential tool for building a healthy body and healthy mind. Recreation facilities are mandated to “enhance the well-being of the community” (Parks Board, 2005) and their vision is to “create healthy communities” (Parks Board, 2005) but neither is completed with the current policy gap. The City of Vancouver has an opportunity to not only make the city a better place for its citizens but also become a best practise model for other communities.

## **Dedication**

“To accomplish great things, we must not only act, but also dream; not only plan, but also believe” – Anatole France

Hey Tash, I am here because of you. I hope this is proof enough that anything you dream can be achieved. You have taught me so much in the little time since your birth. I thank you for inspiring me to be the best I can be and I only hope my accomplishments inspire you to dream the impossible for I believe you can achieve anything.



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# Glossary

| <b>Term</b>                         | <b>Definition</b>  |
|-------------------------------------|--|
| Environmental Intervention Strategy | 1. A term used to describe a program or policy designed to have an impact on a person's environment.   |
| Food Security                       | 1. State in which all persons obtain a nutritionally adequate, culturally acceptable diet at all times through local non-emergency sources.<br>2. Means that all people in the community have access to good nutritious food at all times. (Social Work and Social Policy in Canada, 2001) |
| Health Promotion                    | 1. The process of enabling citizens to increase control over and improve their health  |
| Nutrition                           | 1. Getting enough of the right foods with vitamins and minerals a body needs to stay healthy (Medicare, 2004)  |
| Population Health Strategy          | 1. An approach to health based on research evidence that indicates that strategic actions that affect a large number of people have a greater impact on health than actions that focus on affecting the health status of individuals within a population (PHAC 1998).                      |
| Public Nutrition                    | 1. Addresses population-based dietary and nutritional problems by clarifying their extent, determinants, and consequences, and the policies and programs to address them. (Emery Rollins School of Public Health, 2002)  |
| Recreation Facility / Centre        | 1. A place providing social, educational and recreational facilities for the community.  |

# 1 Introduction

Between 1985 and 1998, the proportion of overweight or obese Canadians almost tripled. The problem of obesity has sparked discussion of the role that governments and individuals play in fighting the obesity battle and the policies that are needed to combat this emerging problem. According to Dr. Gary Lopaschuk, co-chair of the Heart and Stroke Foundation's Research Policy and Planning Advisory "We didn't get this way overnight, so it follows the nation's not going to return to an instant state of health," says (Heart and Stroke, 2005).

Although the nation will not return to an instant state of health, there are ways in which public institutions can become more responsible for public health – and while national and provincial policies may be needed, much can be done at the local and neighbourhood level. From this local point of view, this study examines food choices in Vancouver recreation centres. More specifically, it provides information and analysis about vending machines and nutrition in Vancouver recreation facilities. Although these machines have the potential to be used as a delivery tool for healthy products, they are not often used to enhance the health of community centre patrons. Instead the machines are filled with unhealthy products and do not promote the mandate of the recreation facilities which is to sustain the well-being of the community being served.

Starting with the question - *are there factors that individual recreation centres can control which influence people's willingness to purchase healthy food?* – This study begins by reviewing relevant literature that identifies nine factors that influence healthy purchases in recreation centres including: pricing, availability, visibility, promotion, education, reason for facility use, frequency of use, gender and age. Two data sources are then used to investigate the influence of these factors in a number of Vancouver area recreational facilities. A survey of 147 community centre users conducted between January 2005 and March 2005 in four Vancouver recreation facilities indicate that:

- Education, reason for facility use, frequency of use, gender and age all are factors influencing healthy purchases.

- Support for an increase in the availability of healthy products in the facilities but the options must be appealing and of similar portions to the current unhealthy snacks offered.
- That people are bringing healthy options to the facility or taking their children home to feed them after visiting the recreation facilities because the products presently available are not considered healthy.

Interviews conducted in 6 community centres established key elements for the success or failure of recreation nutrition policies.

As a result of this research, two recommendations are made regarding encouraging healthy eating among recreation centre patrons. The recommendations are based around the existing city policy which is nutrition policy is autonomous to individual facilities. The first recommendation is for facilities with existing vending contracts - influence the purchase of healthy food through a visible labelling of healthy/unhealthy foods and promotion of the labelling around the facility. The second recommendation is for facilities negotiating new vending contracts - require bids to include price incentives for healthy foods and visible labelling of healthy products.

The study is broken down into eight sections. Section two provides the reader with the background and information from relevant literature as well as a review of public nutrition. Section three discusses the methods used to investigate how healthy eating can be encouraged in community centres. Sections four, five, and six examine survey results and interviews, then discuss other related findings. Section seven develops appropriate policy frameworks for recreation facilities' use based on environmental intervention strategies that increase the sale and consumption of healthy options in vending machines. Section eight includes recommendations and future steps for the options. Section nine offers a brief conclusion and further considerations for future studies.



## **2 Nutrition in Canada**

In this section, the history of public nutrition is discussed as is the problem itself. The history is presented first to familiarize the reader with the evolution of health promotion strategies in Canada. This is followed by a discussion of obesity and nutrition initiatives in Canada, and the rationale for nutrition. Finally, the problem facing recreation centres is outlined.

### **2.1 History of Public Nutrition in Canada**

The history of public nutrition is broken into two sections: health promotion and public nutrition. Health promotion has existed in Canada since the conception of Health Canada but the field of public nutrition did not arise until the 1990s. The first section discusses the evolution of health promotion and the second section discusses public nutrition. Public nutrition is a result of successful health promotion. Health promotion places focus on the individual whereas public nutrition is concerned with the population as a whole.

#### **2.1.1 Health Promotion**

The evolution of public nutrition in Canada has a short history. Local government interest in public nutrition is a result of successful health promotion on a national level and media interest regarding obesity and the health of Canadians. Prior to the explosion of information in the 1980s and 1990s, little interest was paid by local governments. Provincially, little regulation or interest has been generated regarding nutrition or dietary guidance. This responsibility was initially placed, federally, with Health Canada.

Since conception, Health Canada has been working in partnership with provincial and territorial governments to provide national leadership in developing health policy, enforcing health regulations, promoting disease prevention and enhancing healthy living for all Canadians. It also works closely with other federal departments, agencies and stakeholders to reduce health and safety risks to Canadians (Health Canada Online, 2004). Health Canada is responsible for pan-Canadian health promotion.

Before the 1990s, policy attention focused on dietary guidance and health promotion rather than public nutrition. Health promotion is the process of enabling citizens to increase control over and improve their health (CDPAC, 2005). The principles of health promotion emphasize that effective programs include a combination of strategies, and that "health education" is only one of a range of important strategies to effect change in this area. The objective of health promotion related to nutrition is to increase the number of people who are at "reduced risk of nutrition-related diseases and who have improved nutritional status" (Health Canada Online, 2004). Four health promotion strategies have been identified as being important for effective programs. These strategies included informing and equipping the public, promoting a supportive social environment, promoting self-help and citizen participation, and stimulating supportive health education and other programs. Nutrition policy and programs in Canada have developed within this context. (Bush & Kirkpatrick, 2003).

Health promotion is not a new idea to Canadians. Health Canada started promoting healthy eating to Canadians with the release of the *Official Food Rules* in 1942. This was part of a wartime nutrition program. The intention was to improve the health of Canadians by promoting better eating habits and focused on patterns of eating that would provide adequate amounts of essential nutrients (Bush & Kirkpatrick, 2003). This trend continues today with *Canada's Food Guide to Healthy Eating*. As science evolves and new evidence emerges—not only about the role of nutrition in promoting health, but also about the role of nutrition in preventing chronic disease – revisions of the Food Guide continue.

Major revisions occurred in the 1970s to investigate the link between diet and cardiovascular disease. This resulted in the *Report of the Committee on Diet and Cardiovascular Disease in 1977*, which included several recommendations to emphasize or reduce certain dietary components. These recommendations were later adapted and endorsed by Health Canada as *Nutrition Recommendations for Canadians* (Bush & Kirkpatrick, 2003). In the 1982, the *Canada's Food Guide*, and the *Nutrition Recommendations for Canadians* were integrated with the addition of information regarding variety in food choices, balance between energy intake and expenditure, and moderation in the consumption of fat, sugar, salt, and alcohol. This marked the first time in Canada that the influence of diet on chronic disease became part of dietary advice from the federal government to the public (Bush & Kirkpatrick, 2003).

The 1980s in general were an exciting time for nutrition in Canada. The relationship between diet and chronic disease was publicized. Developments in the field of health promotion began to shift focusing more on the role of environments and not just lifestyle choices. Sciences

recognized as critical to nutrition initiatives included not only the biological, medical, and environmental sciences, but also social, economic, and political sciences (Bush & Kirkpatrick, 2003).

The explosion of information had one detrimental effect on national health promotion. Organizations and the media raced to keep consumers up to date with the evolving science. Although many of the new organization-specific guidelines shared common elements, different aspects of the diet were emphasized depending on the disease and the organization. This breakdown in the unified front of consistent national nutrition messages resulted in growing confusion among health professionals and consumers alike.

In 1986, the National Institute of Nutrition, a non-governmental organization (NGO) with a mandate to advance the knowledge and practice of nutrition in Canada, hosted a symposium on dietary guidelines. It was agreed that scientific understanding was inadequate to generate disease-specific dietary guidelines and that *Nutrition Recommendations for Canadians* was in need of updating (Bush & Kirkpatrick, 2003).

Health Canada responded by appointing two advisory committees to work together—a Scientific Review Committee and a Communications/Implementation Committee. The Scientific Review Committee was responsible for describing the characteristics of a diet that would supply recommended levels of nutrients, while reducing the risk of chronic disease. The Communications/Implementation Committee was responsible for translating scientific guidelines into actionable messages for consumers (Bush & Kirkpatrick, 2003). The final result was *Canada's Guidelines for Healthy Eating*. The *Guidelines* are five key nutrition messages. The five statements are:

- Enjoy a variety of foods
- Emphasize cereals, breads, other grain products, vegetables and fruit.
- Choose lower fat dairy products, leaner meats and food prepared with little or no fat.
- Achieve and maintain a healthy body weight by enjoying regular physical activity and healthy eating.
- Limit salt, alcohol and caffeine (Region of Peel 2005)

The committees also commenced revision of *Canada's Food Guide to Healthy Eating* during this time. The process included market and communication research, in addition to

widespread consultation. The end result was *Canada's Food Guide to Healthy Eating*, which was launched in 1992 (Bush & Kirkpatrick, 2003).

Implementation steps were included in *Canada's Guidelines for Healthy Eating*. The influence of health promotion was evident in the strategies identified. A plan was developed to assist in the implementation of the Guidelines, including five strategies for action: “the development of food and nutrition policies; collaboration and coordination among partners; multisectoral, community-based nutrition initiatives; the creation of supportive environments in various locations including schools and worksites; and research and evaluation” (Bush & Kirkpatrick, 2003,p.5 ).

In addition, the Guidelines called upon all sectors and consumers to make a commitment to the communication and implementation of the Guidelines. The Guidelines were created to be simple and easily applied. This resulted in a new era of collaboration of government, nutrition educators and disease-specific health charities. For the first time, healthful eating messages were communicated to consumers on food labels and in food advertising (Bush & Kirkpatrick, 2003).

### **2.1.2 Public Nutrition**

Public nutrition originally appeared in the scientific literature in the mid-1990s (Mason, Habicht, Greaves, Jonsson, Kevany, Martorell, & Rogers, 1996). It evolved from an effort to tackle the problems of food insecurity and malnutrition in developing countries (Beaudry, Hamelin, & Delisle, 2004). Public nutrition arose out of the failure of addressing health promotion strategies at the individual, as was previously done through initiatives such as *Canada's Guidelines for Healthy Eating*. Public nutrition, instead address the population as a whole.

Public nutrition largely shares the premises, objectives and key elements of the 'population health' strategy, but applies them specifically to the resolution of nutrition problems. Public nutrition addresses population-based dietary and nutritional problems by clarifying their extent, determinants, and consequences, and the policies and programs to address them (Emery Rollins School of Public Health, 2002) whereas population health strategies support the notion of public nutrition because population health strategies are a belief that population-targeted actions have a greater affect than individual-targeted actions.

Public nutrition targets research, training and intervention. In line with health promotion, it focuses not only on an assessment of the problems and the analysis of their determinants but

also, and above all, on the concerted action required by civil society, the private sector and the government to solve them. This leads to analyzing and recommending policies and programs that target the environment, social inequity and living conditions, as well as the empowerment of individuals to adopt healthy food habits and to exercise better control over their health generally (Beaudry, Hamelin, & Delisle, 2004).

Public nutrition encompasses the areas of "public health nutrition", "community nutrition" and "international nutrition", and extends beyond them. The major share of nutrition problems in society requires action outside of the health sector, with particularly emphasis in regards to food systems. Researchers agree that the resolution of nutrition problems also requires more work on aspects related to public policy (Beaudry, Hamelin, & Delisle, 2004).

The changes to health promotion and the notion of "public nutrition" have led to a shift in the way that nutrition policy is pursued. This is no longer the responsibility of the federal government. Provinces have started to take responsibility for the health of their citizens. For example, in British Columbia, there has been discussion of a "junk food tax", the promotion of a more active population and steps to eliminate junk food in schools (Government of British Columbia News Release, 2004).

The elimination of unhealthy options in BC schools deserves some discussion, as it is similar to the struggles facing recreation centres. In 2004, the Heart and Stroke Foundation referred to fat (obesity) as the new the tobacco (Heart and Stroke Foundation, 2004). On the heels of that announcement, public scrutiny shifted to the rising rate of childhood obesity and eventually schools' lack of attention towards nutrition was criticized. The result has been individual schools and districts working towards healthier schools. Nutrition is autonomous to schools, as is the same for recreation centres. The issue of junk food in schools has opened a policy window for action in food systems. There is an opportunity and community interest in healthy eating. It is essential to capitalize on this window while the public support is strong.

## **2.2 Obesity and Nutrition Initiatives in Canada**

### **2.2.1 Obesity in Canada**

Between 1985 and 1998, the proportion of overweight or obese Canadians almost tripled (Heart and Stroke Foundation, 2004). Access to a dazzling diversity of food and the increasingly availability of processed, precooked and takeaway food over the past 50 years, has fundamentally altered the way we eat and has also altered our waistlines.

Table 2-1: Prevalence of obesity among Canadian adults in 1985, 1990, 1994, 1996 and 1998

|      | Percentage of obese population |
|------|--------------------------------|
| 1985 | 5.6%                           |
| 1990 | 9.2%                           |
| 1994 | 13.4%                          |
| 1996 | 12.7%                          |
| 1998 | 14.8%                          |

Data Source: Katzmarzyk, 2002

Obesity is a condition of excess body fat due to eating more calories than used. Excess body fat increases an individual's risk of premature death from chronic diseases such as coronary heart disease, stroke, type 2 diabetes mellitus, gallbladder disease and some cancers (National Institutes of Health, 1998). Obesity is defined and measured objectively as a Body Mass Index (BMI) of 30 or more. The direct medical costs attributable to adult obesity in Canada are estimated to have been \$1.8 billion in 1997, or 2.4% of total direct medical costs, and rising (Birmingham, 1999).

Table 2-2: Nutrition Facts of Common Vending Products

| Healthy (4 ≤ grams of fat)  |              |         |                   | Unhealthy (≥ 4 grams of fat)       |              |         |                    |
|-----------------------------|--------------|---------|-------------------|------------------------------------|--------------|---------|--------------------|
| Product                     | Serving Size | Fat (g) | Calories          | Product                            | Serving Size | Fat (g) | Calories           |
| Baked Chips                 | 11 chips     | 1.5 g   | 110 (15 from fat) | Plain Chips                        | 11 chips     | 10 g    | 150 (90 from fat)  |
| Popcom                      | 250 ml       | Trace   |                   | Kettle Cooked Chips                | 11 chips     | 7 g     | 150 (80 from fat)  |
| Rice Krispie Treats Squares | 22 g         | 2 g     | 90                | Doritos Nachos                     | 11 chips     | 7 g     | 120 (30 from fat)  |
| Nutrigrain Bar              | 1 bar (37 g) | 3 g     | 140               | Flavoured Chips                    | 11 chips     | 10 g    | 160 (100 from fat) |
| Power Bar                   | 1 bar        | 2 g     | 230 (25 from fat) | Chocolate Bar                      | 1 bar        | 15 g    |                    |
| Fruit Leather               | 1 piece      | Trace   |                   | Kitkat                             | 1 bar        | 14 g    | 220 (100 from fat) |
| York Peppermint Patties     | 1 patty      | 3 g     | 160 (25 from fat) | Ritz Bits Sandwiches - Cheese      | 43 g (1 pkg) | 13 g    | 230 (110 from fat) |
| Twizzler Nibs               | 64 g         | 1.5 g   | 220 (15 from fat) | Skor Bar                           | 39 g         | 12 g    | 210 (110 from fat) |
| Welch's Fruit Snack         | 1pkg         | Trace   | 80 (0 from fat)   | Famous Amos Chocolate Chip Cookies | 4 cookies    | 7 g     | 150 (60 from fat)  |

The table above illustrates the nutrition facts of products offered in the recreation facilities visited. The table is separated into healthy vs. unhealthy products. The food was

determined to be healthy or unhealthy based on fat content. This measure was chosen because it is the common measurement to determine whether food is healthy or not.

### **What is wrong with vending machine food?**

Foods commonly for sale in vending machines feature high levels of salt and fat. For example, more than half the weight of a bag of regular (fried) chips comes from oil, which is fat. Excessive fat intake has been linked to obesity, high blood pressure, heart disease, kidney disease, and cancer. Too much salt can lead to high blood pressure and can cause the body to excrete other needed minerals, like calcium (Ishibashi, 2002).

### **What is wrong with soda?**

The consumption of soda has been linked to broken bones, osteoporosis, obesity, diabetes, kidney stones, nervousness, insomnia, and attention deficit disorder. The caffeine in most sodas interferes with a child's ability to concentrate and stay on task, and the sugar contributes to diabetes, obesity, and tooth decay (Wyshak, 2000).

The risks are even greater for girls. A recent study by a Harvard School of Public Health professor found that physically active teenage girls were 5 times more likely to suffer from broken bones if they were cola-drinkers than girls who did not drink carbonated beverages (Wyshak, 2000). The phosphoric acid in cola is believed to interfere with calcium absorption. In addition, girls who drink soda instead of milk deny their body the calcium it needs to build strong bones, and are likely to suffer from brittle or fragile bones later in life (Ishibashi, 2002).

## **2.2.2 Nutrition Initiatives**

The City of Vancouver has shown interest regarding food policy. In September 2004, the inaugural meeting of the Vancouver Food Policy Council (VFPC) was held. Food policy is defined by the City of Vancouver as an "area of municipal planning that engages individuals from all aspects of the food system to review how the production, distribution, access, consumption and waste management of food impacts [our] lives and [our] neighbourhoods" (City of Vancouver, 2005). The VFPC is an advocacy, advisory and policy development body for food issues in Vancouver. The council is in its infancy and has not yet addressed the issue of nutrition in recreation centres.

Table 2-3 highlights key actions taking place not only in Vancouver but also around the country. The actions are to improve nutrition with a focus on recreation centre initiatives. School

nutrition initiatives were also included because of the similarity between schools and recreation centres.

Table 2-3: Nutrition Initiatives across Canada

| Organization  | Action Being Taken   |
|---|--|
| <b>Community – Vancouver, British Columbia<br/>Food Policy Council (Vancouver Food Policy Council, 2004)</b>  | <ul style="list-style-type: none"> <li>• The Vancouver Food Policy Council (VFPC) will support the development of a just and sustainable food system for the City of Vancouver that fosters equitable food production, distribution and consumption; nutrition; community development and environmental health.</li> </ul>   |
| <b>Community – City of Coquitlam (City of Coquitlam, 2004)</b>  | <ul style="list-style-type: none"> <li>• Memo to the City Manager From: General Manager Leisure &amp; Parks Services</li> <li>• Outlined the need to introduce healthier options in the city recreation facilities</li> </ul>  |
| <b>Community – West Vancouver<br/>The District of West Vancouver</b>  | <ul style="list-style-type: none"> <li>• Unwritten nutrition policy in recreation facilities</li> <li>• Worked with vendors to provide healthier, appealing, affordable options in vending machines</li> </ul>   |
| <b>Alberta – “Community Choosewell Challenge” (Community Choosewell Challenge, 2005)</b>  | <ul style="list-style-type: none"> <li>• Vying for the title of <i>Community Choosewell Challenge Champion</i>, communities (cities, towns, villages) of all sizes rival each other to be recognized as a Champion through demonstrating how their residents are making changes - small or big ones - in their physical activities and eating habits</li> <li>• Encourages Albertans to make simple, healthy choices regarding healthy eating and daily physical activity</li> <li>• 63 competing communities</li> </ul> |
| <b>Community – Grande Prairie, Alberta “Community Choosewell Challenge”</b>   | <ul style="list-style-type: none"> <li>• Community Recreation Department - initial stages of developing a nutrition policy for all city-operated recreation facilities.</li> </ul>   |
| <b>School Nutrition* – Canada<br/>Ontario, Manitoba, Alberta, PEI, Newfoundland and Labrador (University of New Brunswick, 2005)</b>                | <ul style="list-style-type: none"> <li>• All listed provinces have a nutrition framework in place to “make schools healthy”</li> <li>• All have research reports indicating areas for improvement in nutrition and physical activity</li> </ul>  |
| <b>Canadian Institutes of Health Research - INMD Institute of Nutrition, Metabolism and Diabetes (Canadian Institutes of Health Research, 2004)</b> | <ul style="list-style-type: none"> <li>• Held a roundtable discussion about “Obesity In Canada Identifying Policy Priorities”</li> <li>• Emphasized development of policy at community level</li> </ul>  |
| <b>Dieticians of Canada<br/>Eat Well, Play Well series (Dieticians of Canada, 2003)</b>   | <ul style="list-style-type: none"> <li>• Encourages public to pressure local community and recreation centres to offer healthy options</li> <li>• Outlines “How to advocate” for health and activity in the community</li> </ul>   |
| <b>Nova Scotia - Promoting Healthy Eating and Active Living in Children Project (Canadian Diabetes Association, 2002)</b>                           | <ul style="list-style-type: none"> <li>• Outlines “barriers to healthy eating</li> <li>• Two key barriers:               <ul style="list-style-type: none"> <li>○ Lack of availability to healthy options</li> <li>○ Too much junk food available</li> </ul> </li> </ul>   |



### **2.3 Rationale for Nutrition Policy**

The rationale for nutrition policy is it is an essential tool for building a healthy body and healthy mind. Obesity rates are continuing to rise along with the health care costs of treating obesity related illnesses. In a document released by the Office for Nutrition Policy and Promotion (1996), the rationale for nutrition is outlined as follows:

- A well-nourished population contributes to a healthier, more productive population, lower health care and social costs, and better quality of life.
- While the nutritional health of Canadians is good, it is not optimal.
- Eating patterns of many Canadians contribute to the high incidence of nutrition-related chronic diseases.
- Diet and activity patterns are second only to tobacco when considering non-genetic factors that contribute to mortality.
- Inequities in nutritional well-being exist, particularly for the socio-economically disadvantaged.
- Food choices are complex decisions, which are influenced by a dynamic relationship between individual and environmental factors.

Although the City of Vancouver has created a council to address food policy issues recreation centres can begin to address the issue of nutrition individually. Recreation facilities are mandated to “enhance the well-being of the community” (Vancouver Parks Board, 2005) and their vision is to “create healthy communities” (Vancouver Parks Board, 2005) but neither is completed with the current policy gap. Facilities are currently combating the obesity battle by offering leisure activities and promoting an active lifestyle but that is only half of what encourages a healthy population. By offering unhealthy products after physical activity the wrong message is sent - “fun activities deserve fun foods”. This was vocalised during the interviews and surveys conducted. One survey respondent wrote, “The community centre is for fun. I want fun food to go with my fun activities.” An interviewee said, “Community centres are for fun and we want fun foods offered”. Recreation facilities are sending a message that it is okay to eat unhealthy foods after participation in healthy activities.

The facilities have the opportunity to create the link that is missing between activities and food. In addition, if the Parks Board supports a facility encompassing nutrition policy, the City of

Vancouver has an opportunity to not only make the city a better place for its citizens but also become a best practice model for other cities.

## **2.4 Problem Definition and Policy Gap**

The problem definition is articulated as follows: *“There are too few healthy food products available in Vancouver recreation centres”*. Recreation centres were chosen because the policy window for public nutrition was opened in 2004 with the public interest generated by junk food in schools.<sup>1</sup> Recreation centres are public facilities utilized by both children and adults. The problem is defined this way because there is a disconnect between facilities and their mandates. The facilities are committed to enhancing the well-being of the community through physical activities but do not offer proper nourishment for the body after participating in activity.

The policy gap is such that there is a lack of healthy food products and there is no encompassing nutrition policy for Vancouver recreation centres. The latter has caused a disconnect that has led to a situation with some facilities achieving their mandates while others are not properly serving the needs of their communities. Vancouver prides itself as “one of the most liveable cities in the world” and was ranked as the “top city in North America for quality of life” in 2003 by Mercer Human Resource Consulting (Tourism Vancouver, 2005) – Vancouver has a commitment to its residents to be the best city it can possibly be.

The policy gap is a result of a disconnect between facilities. The Parks and Recreation Board oversees recreation facilities in Vancouver. They have designated nutrition policy and promotion as autonomous to each facility. Vancouver has 23 community centres, 9 public pools and 8 ice rinks.<sup>2</sup> No facility in the city has a formal nutrition policy. Each centre reflects the values and needs of the community. For example, Dunbar community association created their healthy options whereas the staff at Strathcona Community Centre initiated the nutrition policy there. Without a facility-encompassing policy, it is likely that there will continue to be exemplary facilities and below average facilities.

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<sup>1</sup> Schools not chosen because too much interest in the field. The issue of recreation facilities and nutrition has not been pursued in a Canadian context.

<sup>2</sup> Some community centres are attached to pools or rinks therefore some overlapping in the numbers

## **3 Current Study**

There is wide agreement that measures to reduce unhealthy eating practices are helpful in preventing or delaying the development of several chronic diseases. The policy question is how to encourage the population as a whole to make healthier food choices.

To date, environmental intervention strategies to reduce the population prevalence of unhealthy food consumption have focused primarily on improving consumer knowledge through mass media, school nutrition programs, and point-of-purchase education. Such interventions have shown positive effects on nutrition knowledge, but changes in food-choice behaviours have been modest in magnitude, variable, and often short lived (French, Jeffrey, Story, Hannan, & Snyder, 1997).

The long-term solution suggested in research circles is environmental intervention strategies designed to influence food choice through mechanisms of availability and cost rather than nutrition education (French, Jeffrey, Story, Hannan, & Snyder, 1997), (French, Jeffrey, Story, et al., 2001) (Glanz & Mullis, 1988). The present study examines the users' purchasing behaviour and looks at mechanisms to increase healthy snack purchases and asks: "Are there factors that individual recreation centres can control which influence people's willingness to purchase healthy food?"

### **3.1 Methodology**

#### **3.1.1 Study Population and Design**

Data was gathered using three methods: survey, literature review and interviews. Initially, a survey and literature review were the primary tools used for data gathering but upon the completion, the researcher discovered there was insufficient data. The researcher then conducted a series of telephone interviews with facilities that had experimented with nutrition policies to identify success and failure models.

Recreation facilities and nutrition has not been studied in Canada. There is very little data available about recreation facilities. Their mandate is to enhance the well-being of the

communities they serve. In Vancouver, these centrally located facilities serve all ages and offer a wide range of city wide resources that focus on recreational, social and cultural pursuits. Programs can include fitness, arts and crafts, culture, dance, swimming, skating, child care and a multitude more. Residents use these centres of activities as meeting places to exchange ideas and meet new friends. Recreation facilities are responsible for identifying the needs of their community and work alongside a community association to meet the needs of local residents.

The researcher faced certain challenges while gathering data. The survey had to be approved by not only the University but also the Parks Board and the individual facilities involved. This was a very time-consuming process. Some facilities requested that their patrons not be solicited directly. This was a challenge because it added an element of self-selection to the process. Many patrons would walk by the survey table without a glance. Even the use of a poster explaining what was being done did not generate much interest. In facilities where solicitation was allowed, patrons were more willing to fill out a survey when approached and explaining to them that the research was for a graduate thesis.<sup>3</sup> In addition, facilities within a close approximation to the University of British Columbia did not want to participate for a number of reasons: too many surveys conducted by other students, felt that graduate student surveys were unprofessional and/or the facility was in the process of conducting its own survey. Access to survey the patrons of the 'unwilling' facilities was granted after having a member of the Parks Board contact the facilities and explain there was support from within the city for this study.

### **3.2 Survey**

For the purpose of this study, the population was a sample of patrons from four recreation facilities across the City of Vancouver.<sup>4</sup> Data for the survey, which focused on patron purchasing behaviour at the recreation facilities, was gathered by the researcher and two research assistants.

Survey research was conducted from January 2005 until March 2005. Researchers attended each facility once for approximately two hours during peak use times. To help randomize the sample, visit times were staggered. For example, surveying was conducted in facilities at different use times (morning, afternoon and evening).

Facilities requested that the public not be inconvenienced. This request attributed to self-selection of the sample survey. The researchers were asked not to approach the public; therefore,

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<sup>3</sup> The survey was biased by not being allowed to solicit patrons. There was an element of self-selection

<sup>4</sup> Concern regarding the sample - Time constraints for approval and not being allowed to solicit patrons led to a self-selection bias

the patrons surveyed are patrons who approached the table from which the researchers were allowed to distribute surveys. An attempt to alleviate some self-selection occurred. When possible, the researchers solicited respondents if they were within the vicinity of the table.

The sample was drawn from four of the approximately twenty-three recreation facilities under administration of Parks and Recreation. The data consists of responses from 145 patrons that participated in the survey. Table 9-2 in Appendix B provides the summary statistics on the socio-economic characteristics of the respondents. Patrons were not required to answer any question that made them uncomfortable. Observations of participants showed that respondents were from a variety of ages, races and backgrounds.

Survey data was collected and the primary data was processed using crosstabs. Cross tabulation was the chosen method of analysis for survey data because the data collected was mostly nominal data.<sup>5</sup> Crosstabs provided the researcher with a method of analysing a combination of cases in different categories. The primary data collected will show whether people are purchasing healthy snacks and drinks and who is purchasing healthy versus unhealthy foods. In addition, the food people bring with them will also be analysed. The primary data collection was done to provide the researcher with a portrait of a Vancouver recreation facility patron.

Respondents were asked to indicate the name of the food and/or drink product purchased instead of whether the food product purchased was healthy or unhealthy. The researcher then coded the product as healthy or unhealthy. The patron was not asked to indicate this because personal perception of healthy and unhealthy can greatly differ from individual to individual. The dependent factor was created from the results. It was made by combining type of food or drink (healthy or unhealthy) together. In the majority of the cases, only one product was purchased but in some cases, food and drink were purchased – one healthy, one unhealthy. In these cases, the variable label was applied based on the type of food purchased. Food was chosen because food consumption is the focus of this study.

Another manipulation occurred when the researcher discovered individuals were purchasing more than one option. The products purchased would be a healthy and an unhealthy snack. A new value label was created for these cases – half-healthy / half-unhealthy.

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<sup>5</sup> Regression was not run because there was bias in the sample. Too few observations and sample size too small

During this process, eleven cases were removed due to missing data. Variables not included in the survey were also added - age, facility name and facility nutrition policy type. The SPSS analysis program was used for crosstab analysis.

### **3.3 Interviews**

In addition to surveys, the researcher conducted six interviews with city recreation managers and programmers. Interviewees and transcripts can be found in Appendix D. Five successful nutrition models were identified at individual recreation centres: Dunbar Community Centre, Strathcona Community Centre, Richmond Arena Services, the District of West Vancouver, and the City of Grande Prairie. In addition, an unsuccessful attempt was identified as well: City of Coquitlam.

### **3.4 Factors that Influence Healthy Choices**

The researcher identified nine factors that might help explain whether people make relatively healthy or unhealthy food purchases at recreation centres. Four of the factors influencing food purchases were investigated using literature review and interviews – pricing, availability, visibility and promotion (French, Jeffrey, Story, Hannan, & Snyder, 1997), (French, Story, Hannan, et al., 1999) (French, Jeffrey, Story, et al., 2001) (Glanz, & Mullis, 1988). This information will help determine how recreation centres can increase sales of healthy foods. The remaining five variables were investigated through survey research –age, gender, education, frequency of use and reason for facility use. These factors may help predict what clientele will purchase healthy food options at the recreation facility.

#### **3.4.1 Hypotheses**

##### **3.4.1.1 Literature Review / Models**

1) Pricing: Basic economic theory and nutrition research suggests that price, in addition to factors such as taste preferences, health concerns, and habits, significantly affects dietary and purchasing habits (French, Story, Hannan, et al., 1999)

**Hypothesis** – People are more likely to purchase healthy items if the price is equal to or less than the price of junk food.

2) Availability of healthy option: The availability of healthy options encourages positive nutrition behaviour by creating opportunities for the patron to eat healthier and removes the

barrier of unavailability of healthy foods so the patron is more able to follow a healthy diet (Glanz, & Mullis, 1988).

**Hypothesis** – People are more likely to purchase healthy options if they are available.

3) Visibility & 4) Promotion/advertising: a recent studies in California found that colour coding vending machine snacks (red = unhealthy, green = healthy) and promoting a price reduction of low-fat snacks led to 80-93% increase in the sales of low-fat foods (French, Jeffrey, Story, Hannan, & Snyder, 1997), (French, Story, Hannan, et al., 1999).

**Hypothesis** – Increase the promotion and visibility of healthy options and people will be more likely to purchase these options.

#### 3.4.1.2 Survey

5) Age: Direct correlation between age and knowledge.

**Hypothesis** - Adults are more likely to purchase healthy options than children.

6) Gender: Studies have shown that women are more likely than men to be dieting and aware of their weight.

**Hypothesis** - Women are more likely to purchase healthy foods than men

7) Education: The assumption is that people with higher educations are more likely to be acquainted with healthy eating practices and have access to healthier options.

**Hypothesis** - People with higher education are more likely to purchase healthy options.

8) Frequency of visits to facility: People who are physically active on a regular basis are more knowledgeable about health than those who are not.

**Hypothesis** - More frequent use of the recreation facility leads to healthier purchases

9) Reason for use of facility: It is assumed, for the purpose of this study, that people who are not using the facility for physical activity are not as concerned about the foods consumed while there. For example, a mother watching her children swim is more likely to purchase a coffee than a mother participating in physical activity.

**Hypothesis** – People who use the facility for physical activity are more likely to purchase healthy options.

## 4 Survey Findings

The survey data was collected to analyze hypotheses but also to aid the researcher in understanding who is purchasing healthy snacks in Vancouver recreation facilities and if there is interest in purchasing healthy snacks. This information is needed to formulate the best possible options for the City of Vancouver.

Crosstabs were run using 145 cases. Originally, the researcher intended to perform surveys at eight Vancouver facilities but the researcher was only able to urge four facilities to participate in the survey process. Table 4-1 shows the number and percentage of patrons surveyed at each individual facility.

*Table 4-1: Distribution of Survey Respondents, by Community Facility*

| <b>Facility Name</b>        | <b>Frequency</b>  |
|-----------------------------|-------------------|
| Kerrisdale Community Centre | 40 (28%)          |
| Lord Byng Pool              | 39 (27%)          |
| Vancouver Aquatics Centre   | 34 (23%)          |
| Trout Lake Community Centre | 32 (22%)          |
| <b>Total</b>                | <b>145 (100%)</b> |

### 4.1 Survey Hypotheses Findings

The survey data was used to provide support or deny five hypotheses. The five are:

- 1) Adults are more likely to purchase healthy snacks.
- 2) Women are more likely to purchase healthy snacks, and
- 3) More education, more likely to purchase healthy snacks,
- 4) People who frequently use the facility (once a week or more) are more likely to purchase healthy snacks,
- 5) People who use the facility for physical activity are more likely to purchase healthy snacks,



It is important to note that the percentages calculated in the above tables are calculated based on the total purchased in each category divided by total healthy products purchased in that category. This was done because the study focuses on factors that increase the purchasing habits of healthy foods. Those who did not purchase are not considered in the percentage below – why people are not purchasing is another study in itself.

#### 4.1.1 Adults are more likely to Purchase Healthy Snacks

Table 4-2 shows the correlation between age and food purchases. As age increases, so does healthy food consumption. The percentages are based on the total purchased in each age category divided by total healthy products purchased in that category.

*Table 4-2: Distribution of food purchases, by age*

| <b>Food Purchase</b> | <b>0-18</b>      | <b>19-34</b>     | <b>35- 54</b>    | <b>55+</b>      |
|----------------------|------------------|------------------|------------------|-----------------|
| Healthy              | 1 (6%)           | 9 (43%)          | 18 (49%)         | 3 (75%)         |
| Unhealthy            | 15 (94%)         | 12 (67%)         | 19 (51%)         | 1 (25%)         |
| <b>Total</b>         | <b>16 (100%)</b> | <b>21 (100%)</b> | <b>37 (100%)</b> | <b>4 (100%)</b> |

#### 4.1.2 Women are more likely to purchase healthy snacks than men

Women and men differ on adopting healthy behaviours. Women are the matriarch of families, typically purchasing and preparing foods for their families. It is based on this assumption that women are more likely to be conscious of their health and their families'. Table 4-5 shows that women did make more healthy purchases.

*Table 4-3: Distribution of food purchases, by gender*

| <b>Food Purchased</b>  | <b>Women</b>     | <b>Men</b>       |
|------------------------|------------------|------------------|
| Healthy                | 16 (43%)         | 15 (37%)         |
| Unhealthy              | 21 (57%)         | 26 (63%)         |
| <b>Total Purchased</b> | <b>37 (100%)</b> | <b>41 (100%)</b> |

#### 4.1.3 More education, more likely to purchase healthy snacks

This hypothesis was supported. As the table clearly shows, healthy purchases do increase with education. For example, the table shows that those who have a Highschool or less are the

least likely to purchase healthy snacks whereas those with college/university are more likely to purchase healthy snacks.

*Table 4-4: Distribution of purchases, type by education level and age*

|                          | <b>Highschool or Less</b> | <b>College Degree or Trade certificate</b> | <b>University Degree</b> | <b>Totals</b> |
|--------------------------|---------------------------|--|--------------------------|---------------|
| <b>Healthy</b>           | <b>6 (24%)</b>            | <b>13 (50%)</b>                            | <b>12 (44%)</b>          | <b>31</b>     |
| 0-18                     | 1                         | 0  | 0                        | 1             |
| 19 +                     | 5                         | 13   | 12                       | 30            |
| <b>Unhealthy</b>         | <b>19 (76%)</b>           | <b>13 (50%)</b>                            | <b>15 (56%)</b>          | <b>47</b>     |
| 0-18                     | 15                        | 0  | 0                        | 15            |
| 19 +                     | 4                         | 13   | 15                       | 32            |
| <b>Total<sup>6</sup></b> | <b>25 (100%)</b>          | <b>26 (100%)</b>                           | <b>27 (100%)</b>         | <b>78</b>     |

#### **4.1.4 People who frequently use the facility (once a week or more) are more likely to purchase healthy snacks**

This hypothesis was proven uncertain. Table 4-5 shows that 99 of the 145 respondents use the facility once a week or more but only 35% of those 99 are making healthy purchases. Those who attend the facility once every two weeks are more likely to purchase healthy options as nine of the thirteen made a healthy food purchase. The percentages are based on the total purchased in each individual category – once a week, once every two weeks, and once a month or less- divided by total healthy products purchased in that category.

*Table 4-5: Distribution of food purchases, by frequency of use of community centre*

| <b>Food Type</b>          | <b>Once a week Or more</b> | <b>Once every two weeks</b> | <b>Once a month or less</b> |
|---------------------------|----------------------------|-----------------------------|-----------------------------|
| Healthy                   | 19 (35%)                   | 9 (69%)                     | 3 (25%)                     |
| Unhealthy                 | 34 (65%)                   | 4 (31%)                     | 9 (75%)                     |
| <b>Total of Purchases</b> | <b>53 (100%)</b>           | <b>13 (100%)</b>            | <b>12 (100%)</b>            |

#### **4.1.5 People who use the facility for physical activity are more likely to purchase healthy snacks**

This hypothesis was supported. Table 4-6 shows that those who participate in or teach activities are more likely to purchase healthy snacks. Those who use the facility “for fun” are the

<sup>6</sup> Total row is the sum of total healthy / unhealthy

least likely to make healthy purchases. The percentages are based on the total purchased in each ‘reason for use’ category divided by total healthy products purchased in that category.

*Table 4-6: Distribution of purchases by reason for using centre*

| <b>Food Type</b>         | <b>For Fun</b>   | <b>Take kids to lessons / activities</b> | <b>Participate in or teach active community centre activities</b> | <b>Other<sup>7</sup></b> |
|--------------------------|------------------|--|---|--------------------------|
| Healthy                  | 2 (17%)          | 12 (39%)                                 | 11 (52%)  | 6 (43%)                  |
| Unhealthy                | 10 (83%)         | 19 (61%)                                 | 10 (48%)  | 8 (57%)                  |
| <b>Total of Purchase</b> | <b>12 (100%)</b> | <b>31 (100%)</b>                         | <b>21 (100%)</b>  | <b>14 (100%)</b>         |

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<sup>7</sup> This category was added for people using the facility for reasons other than the ones listed – for example this included a father checking his son’s hockey schedule, a man picking up his girlfriend from yoga, and the staff at the facilities.

## **5 Interview and Literature Review Findings**

The literature review and interview have been combined. The literature review was conducted first but did not yield enough information for viable options. The researcher found it necessary to conduct interviews to gather more relevant data. The primary findings of the literature review are discussed in section 2.2.2 – Nutrition Initiatives – as those are the findings the literature review yielded.

The interview process yielded findings that created nutrition policy success and failure models. Two of the success models were within the City of Vancouver - Dunbar Community Centre and Strathcona Community Centre. These facilities are unique because both have self-contained nutrition policies.

Dunbar Community Centre is located in Vancouver West. The community centre caters to a diverse population. The community is located just outside of the University of British Columbia Endowment Lands therefore making the community rich with students who occupy basement suites of many of the homes in the area. The homeowners are middle to upper income earners typically with families. The centre is relevant because it worked with the community association to develop a snack bar offering healthy options that are appealing and affordable. The researcher conducted interviews to better understand the evolution of the snack bar, the relationship of the facility to the community association and Dunbar's commitment to the health of its community.

Strathcona Community Centre is located in East Vancouver. The community centre caters primarily to new immigrants, the elderly and low-income families. The community centre is highly relevant because of the nutrition programming. There is a need in the community to educate patrons about healthy, affordable food options. The need is present because many of the patrons are recent immigrants who are not accustomed to western foods. The community centre offers programs, such as "Cooking Fun for Families" and "School Breakfast" programs, to promote healthy eating. In addition, Strathcona is attached to Strathcona Elementary School (K-7). The centre has built a partnership with the school to provide breakfast for all students before

classes, lunches for those in need, and after-school snacks and care. As was done in the Dunbar Community Centre, the centre also uses a snack bar as opposed to vending machines.

The third interview was conducted with West Vancouver Community Services. West Vancouver is situated outside of the City of Vancouver but is still within the Greater Vancouver Regional District (GVRD). The district has recently removed junk food from its recreation centres. The district identified a gap in their policies; their recreation facilities were promoting a healthy lifestyle by only offering activities and were ignoring healthy eating.

The fourth success model interview was conducted with the City of Grande Prairie, Alberta. Grande Prairies' nutrition policy for recreation centres is a citywide initiative. The City is working with vendors to increase the availability of healthy options within facilities. This policy initiative was sparked by Grande Prairies' participation in the "Community Choosewell Challenge". The community is competing with other communities across Alberta to increase physical activity and healthy eating at the community level. The challenge is a program operated by a provincial health action plan called the "Healthy U Project". The foundations of this policy stem from January 2002 - when the Alberta government accepted the recommendations of the Premier's Advisory Council on Health and responded with an action plan to build a better public health care system. The Council recommended that Albertans be provided "with better information about how to stay healthy." "Healthy U" is a website and team of educators who work with communities to provide better information and initiatives to stay healthy.

The final success model was identified in the City of Richmond, British Columbia. The arena services manager, David McBride, sparked this initiative. When the vending machines' contract expired, a stipulation for incoming bids stated that the facility was interested in increasing and promoting healthier snacks. He felt that families committed to healthy eating practises deserved to have healthy options available to them. The result was a contract signed with Crown Vending. The vending company provided the facility with heart stickers that are placed on the pricing label to help identify healthy products. In addition, the healthy products are "value-priced". For example, milk and juice are priced lower than carbonated soft drinks. The Richmond recreation facilities are not at risk of losing money because of the new pricing strategy. Written into the contract is a stipulation that the facilities receive a minimum payment regardless of the volume of sales or price per item. If sales exceed the minimum, the facility is reimbursed. If sales are below the minimum, the vending company is responsible for the loss. The price per item does not affect the revenue of the facility.

The unsuccessful model analyzed came from the City of Coquitlam. This city is also located within the GVRD. On December 1, 2004, two articles appeared in the *Tri-City News* highlighting the issue of nutrition at community leisure facilities. These articles are entitled "Bad Food Battle Shifts to Rec Facilities" (Maloney, 2004) and "Leisure Centre Food Not a Focus Locally for Cities" (Strandberg, 2004). These articles acted as a catalyst for change within the city structure. The General Manager of Leisure and Park Services became interested in what the news articles had to say. He recommended to the Mayor that Council refer the issue of 'Nutritional Food Choice in Community Leisure Facilities' to the Recreation & Cultural Services Advisory Committee as part of its 2005 Work Plan. The issue was referred to the committee but the committee was unable to develop the initiative further because Leisure Parks and Services have yet to provide the committee with a report outlining the scope of the issue of 'bad foods' in recreation centres. The issue has been discussed and interest has been expressed but staffing shortages are hindering further development. Until a staff member can be appointed to explore the issue, the issue has been tabled. At the time this study was conducted, an interim solution had been discussed which involved discussion of increasing healthy options at concessions to 20% of total products. This had not yet been implemented or approved.

The key elements for success or failure, as identified in the interview process, are listed below in Table 5-1.

*Table 5-1: Interview Findings: Predictors of Success of Nutrition Policies*

| Success   | Failure  |
|---|--|
| <ul style="list-style-type: none"> <li>• Proactive recreation managers</li> <li>• Price Incentives</li> <li>• Increased availability of healthy product in vending machines</li> <li>• Visible identification of healthy products</li> <li>• Media pressure</li> <li>• Provincial initiative to increase well-being in community</li> </ul> | <ul style="list-style-type: none"> <li>• Complete elimination of unhealthy products from vending machines as a solution to the problem of unhealthy foods in recreation facilities</li> <li>• Uninterested community</li> <li>• Lack of city staff to investigate nutrition and its scope</li> <li>• Passive recreation manager</li> </ul> |

The literature reviews findings corroborate the key elements listed above. The review focused primarily on nutrition policies – support for and existing. It also established the importance of healthy eating.

All four hypotheses were supported by the information from the interview and literature review analysis:

- 1) Decrease the price of healthy snacks, increased sales<sup>8</sup>,
- 2) Increase the availability healthy options, increased sales,
- 3) Increase the visibility of healthy products, increased sales, and
- 4) Increase promotion, increased sales.

### **5.1.1 ↓ Price of Healthy Snacks, ↑ Sales**

This hypothesis was proven by data gathered during the literature review. The benefits of healthy eating in promoting health and reducing chronic disease have been well established. However, food choices and dietary habits are influenced not just by a consumer's knowledge, but also by a number of factors in the social and physical environment. Many food choice decisions are made at the point of purchase in grocery stores, cafeterias, and restaurants (Jeffery, French, Raether, & Baxter, 1994). Nutrition research suggests that price, in addition to factors such as taste preferences, health concerns, and habits, significantly affects dietary and purchasing habits (French, Story, Hannan, et al., 1999).

Jeffery and French both have conducted studies that prove if price of healthy food is decreased, food purchase increase. The University Of Minnesota School Of Public Health conducted two pilot projects to examine the role of price and variety on the consumption of health food and fruits and vegetables. In the first, the Jeffery study, the number of fruit and salad choices in a University of Minnesota office cafeteria serving about 700 employees was increased by 30 percent. Simultaneously, the price of these items was cut in half and flyers were posted alerting patrons to the changes. In the French study, researchers reduced the price of low-fat vending machine snacks such as pretzels, baked potato chips, popcorn, and granola bars, and utilized bright labels to highlight these choices.

The results of these studies prove that price interventions are effective. In the first intervention, fruit and salad purchases increased by 300 percent when prices were cut in half. In the vending machine interventions, a 50 percent price reduction led to an 80 to 93 percent increase in purchases of low-fat snacks. In both cases, overall purchases increased.

In addition, a question was included in the survey, which asked respondents - what would they purchase if price the price of healthy snacks and unhealthy snacks was the same. An equal number of healthy and unhealthy foods were provided. Of the 145 people surveyed, 91 would be

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<sup>8</sup> Studies have shown that decreasing the price of healthy snacks below the price of unhealthy snacks leads to an increase in the volume of sales of healthy snacks

willing to purchase a healthy option if its price was the same as the price of junk food. It should be noted that only 31 respondents of 145 had made healthy food purchases in the present situation.

*Table 5-2: Distribution of food purchases, if price was the “same”*

| <b>Food Type</b> | <b>“Same Price”</b> | <b>Actual</b>    |
|------------------|---------------------|------------------|
| Healthy          | 91 (63%)            | 31 (40%)         |
| Unhealthy        | 32 (22%)            | 47 (60%)         |
| Mixed            | 22 (15%)            | 0                |
| <b>Total</b>     | <b>145 (100%)</b>   | <b>78 (100%)</b> |

*Sarah Thomas, 2005*

This information confirms that if price is decreased, the sales of healthy food products will increase.

### **5.1.2 ↑ Availability of Healthy Options, ↑ Sales**

Studies have suggested that an increase in the availability of healthy food products will lead to an increase in sales (French, Jeffrey, Story, Hannan, & Snyder, 1997), (French, Story, Hannan, et al., 1999), (Jeffery, French., Raether, & Baxter, 1994). In all studies conducted with pricing interventions, the availability of healthy products was increased as well. This is because healthy products are generally not provided in large quantities. For example, as stated earlier, the City of Coquitlam has suggested increasing the availability of healthy snacks at the snack bars to 20 percent.

The interviews also suggest that increasing the availability of healthy options aids in increasing the sale of healthy products. Grande Prairie and West Vancouver, who have both had success with nutrition policy, have increased the availability of healthy options.

A major complaint of the survey respondents was that there are not enough healthy options. Healthy snacks were in low quantity in the vending machines visited during this study. Appendix C includes a list of the products available at each facility. It is clear from the lists that healthy food choices are limited and many of the healthy choices are unappealing.



### 5.1.3 ↑ Visibility of Healthy Products, ↑ Sales AND ↑ Promotion, ↑ Sales

There is a correlation between visibility and promotion. Visibility refers to whether the healthy products are visible – i.e. the placement of product in the machine. Promotion refers to advertisement. Research suggests that product placement and promotion have a major influence on purchasing habits. For example, Coca-Cola is the largest soft drink producer in North America. The company has possession of approximately 62 percent of the soft drink market (Anwar, 2005, p.B11).

Coke product placement and promotion was in every recreation facility visited. For example, Trout Lake Community Centre was scattered with Coke advertisement placement - the snack bars menu was located on a board advertising Coca-Cola; the pop machines were Coke machines and a large banner advertising an upcoming event was printed on a “sponsored by Coca-Cola” banner. The other facilities all had Coca-Cola machines placed in high traffic areas. This type of placement does sub-consciously influence a persons’ purchasing decision. According to Nielsen Monitor-Plus, in the top 10 TV programs in 2004, the number one brand using product placement was Coca-Cola Classic (Ruskin, 2005). An interesting finding came because of the survey, although every facility had visible product promotion, only 59 people of 145 noticed any type of advertisement.

*Table 5-3: Was Advertisement Noticed?*

|            | <b>Noticed Advertisement</b> |
|------------|------------------------------|
| <b>Yes</b> | 59                           |
| <b>No</b>  | 86                           |

The literature review suggests that if Coke and Pepsi have had success with product placement and promotion, a healthy option could have success as well. Healthy products placed at eye-level are more likely to be consumed than products placed at the bottom of the machine. Vending machine purchases are typically impulse buys. The constant availability and visibility of unhealthy foods leads to impulse buying of these products. To counteract this problem, the researcher has found that increasing the visibility and promotion of healthy products will lead to an increase in the sales of healthy snack. Jeffery and French both used promotion tactics to make consumers aware of pricing interventions and the availability of healthy products. Both French and Jeffery’s saw an increase in the consumption of healthy products therefore promotion and visibility do have a role in increasing the sales of healthy products.

## 6 Discussion of Other Findings

An interesting finding to support the increase of healthy options came from the ‘type of food brought to the facility’. Of the 145 cases, 68 people brought food with them to the facility and 86.6% of the food was healthy. This finding shows that people are interested in healthy foods but due to the lack of healthy options available, people are bringing their own.

*Table 6-1: Distribution of food brought to the community centre*

| Type of Product | Frequency        |
|-----------------|------------------|
| Healthy         | 59 (87%)         |
| Unhealthy       | 9 (13%)          |
| <b>Total</b>    | <b>68 (100%)</b> |

It is in the best interest of the facility and vendor to capitalize on this market to increase sales and support healthy nutrition. Table 6-2, illustrates the food people bring to the facility. The healthy foods brought are simple foods, many of which could be sold from vending machines or at the front counter.

*Table 6-2: Food brought to facility*

| Healthy Food          | Unhealthy Food |
|-----------------------|----------------|
| Juice                 | Chocolate Bar  |
| Granola Bars          | Pop            |
| Fruit                 | Chips          |
| Milk                  | Candy          |
| Water                 | Fries          |
| Eggs                  | Cake           |
| Fresh Veggies and dip | Ice Cream      |
| Trail Mix / Nuts      | Coffee         |
| Sandwich              | Fast Food      |
| Crackers              |                |

Additional support for healthy options came with a question included in the survey – “if price were held constant which products would you purchase”. The survey contained a list of

healthy and unhealthy products and the respondents were asked to circle as many products as they pleased.

Table 6-3 show that of the 145 respondents, 91 people or 62% would purchase a healthy option if price was held constant and the portions were similar to junk food portions. The table also shows that 54 of the 91 picked the healthy choice because it was healthy, 87 picked items they like and four picked items for “other” reasons. These finding support the argument that the residents of the City of Vancouver are interested in purchasing healthy foods but at present, the foods are not available.

*Table 6-3: Distribution of purchases and reason for purchases, if price of health/unhealthy food is the same*

|           | Healthy | Unhealthy | Half/Half | Total |
|-----------|---------|-----------|-----------|-------|
| Healthy   | 50      | 39        | 2         | 91    |
| I like it | 1       | 29        | 2         | 32    |
| Other     | 3       | 19        | 0         | 21    |
| Total     | 54      | 87        | 4         | 145   |

The final finding of interest is that some recreation facilities in the City of Vancouver are situated on school property. Lord Byng Pool is adjacent to Lord Byng School. The school has attempted to promote healthy eating by removing junk food and not allowing children to leave the school property during lunch without parental consent. The problem is that Lord Byng Pool has not implemented a similar policy. The lack of healthy options at the pool undermines the school’s initiatives. While conducting surveys, the researcher took an opportunity to inquire after the volume of sales at Lard Byng Pool. According to pool staff, the vending machine is re-filled two to three times a week because of the amount of school traffic making purchases during breaks. The machine, according to staff, is emptied of junk food by the youth and only ‘healthy’ products remain. The school initiative is failing as the pool facility is providing the children with unhealthy options.

Table 6-4 summarizes each hypothesis and whether there was support for the hypothesis.

*Table 6-4: Hypotheses Support*

| Factor                                  | Hypothesis                                | Finding   |
|---|---|-----------|
| <b>Interviews and Literature Review</b> |   |           |
| <b>Pricing *</b>                        | ↓ price of healthy snack, ↑ sales         | Supported |
| <b>Availability *</b>                   | ↑ healthy options, ↑ sales                | Supported |
| <b>Visibility *</b>                     | ↑ visibility of healthy products, ↑ sales | Supported |

| <b>Factor</b>                  | <b>Hypothesis</b>  | <b>Finding</b> |
|--------------------------------|--|----------------|
| <b>Promotion *</b>             | ↑promotion, ↑ sales  | Supported      |
| <b>Survey</b>                  |  |                |
| <b>Age</b>                     | Adults are more likely to purchase healthy snacks  | Supported      |
| <b>Gender</b>                  | Women are more likely to purchase healthy snacks   | Supported      |
| <b>Education</b>               | ↑ education, more likely to make purchase healthy snack                                      | Supported      |
| <b>Frequency of use</b>        | People who frequent ( once a week or more) are more likely to purchase healthy snacks        | Uncertain      |
| <b>Reason for facility use</b> | People who use the facility for physical activity are more likely to purchase healthy snacks | Supported      |

The result of the survey and literature review / interview findings provided support that there is interest in communities for healthy option in recreation facilities. Findings show that people are bringing their own healthy snacks to the facilities because the products available are not appealing.

## **7 Policy Options and Evaluation**

This section of the study is dedicated to identifying and evaluating the options the researcher has suggested for recreation facilities.

### **7.1 Options for Vending Machines**

The options identified in this section are a result of a literature review, interviews, and surveys. The study focuses attention on vending machines because the machines are a primary mechanism to dispense food products in recreation facilities. The machines have the potential to be used as a delivery tool for healthy products but presently are not being utilized in this manner. Instead the machines are filled with unhealthy products and do not promote the mandate of the recreation facilities which is to sustain the well-being of the community being served.

The consideration of the options was made based on survey results that support the notion that people are willing to purchase healthy products if they are made available and are priced accordingly. Price incentives will encourage the consumption of healthy products. Children's purchasing habits must be considered as well. Of the children surveyed, only one healthy purchase was made. In addition, one of the facilities visited must re-fill its vending machine with unhealthy foods – primarily chips - two to three times a week because the facility is located on school property and the children are accessing the facility (See Appendix C – Observations Lord Byng Pool).

#### **7.1.1 “Colour Code”**

“Green means GO! Red means STOP!”

The slogan above is the cornerstone of Option 1. The central idea is to colour-code the food products in vending machines. Products would be colour-coded to make the purchaser aware of their food choice. Green price labels would be placed below products that are deemed “healthy” (0-3grams of fat) and red (4+grams) would be reserved for “unhealthy” products. Table 2-2 identifies the common “green” and “red” foods. “Healthy” and “unhealthy” do not have to be classified based on fat content. There are others means by which the products can be

rated. The facility should hire a nutritionist to work with the facility to develop the most successful campaign they can.

In addition to the colour-coding the facility would have to implement an advertising campaign as well. The campaign would be centred on the slogan, “Green means GO! Red means STOP!”. Posters placed in strategic areas (change rooms, near vending machines, at the information counter, etc) would help the consumer to make a more informed choice.

If the facility offers after school care or runs children’s programs, the children can participate by making posters. This type of project would provide children with a hands-on learning. Hands-on learning provides learning by doing--helping a student to acquire knowledge and skills outside of books and lectures. Learning can occur through work, play and other life experiences (Apple Learning Interchange, 2003).

### **7.1.2 “Price is Right”**

This option revolves around price incentives. The facility would increase the number of healthy products but offer the products at a lower cost than the unhealthy products. The facility could offset this price decrease by raising the cost of unhealthy products but this would need to be discussed with the vendor.

This environmental intervention strategy has had success. The “CHIPS Study” conducted in Minneapolis-St. Paul, Minnesota found that price reductions of 10%, 25%, and 50% on healthy products were associated with significant increases in sales; percentages of healthy snack sales increased by 9%, 39%, and 93%, respectively. Average profits per machine were not affected by the vending interventions. Promotional signage was independently but weakly associated with increases in sales (French, Jeffrey, Story, et al., 2001).

A similar study was conducted at University of Minnesota, Minneapolis. Sales of healthy and regular snacks were monitored in nine vending machines during a four-week baseline, a 3-week intervention in which prices of healthy snacks were reduced 50%, and 3 weeks post-intervention. The proportion of healthy snacks purchased was 25.7%, 45.8%, and 22.8% in the three periods. There was an increase in healthy snack sales during the price reduction period. There was no advertising to promote this change (French, Jeffrey, Story, Hannan, & Snyder, 1997).

### 7.1.3 “Lead By Example”

The complete elimination of junk food would eliminate the gap between the facility’s mandate and nutrition. Recreation facilities have a commitment to the well-being of the communities they serve. The facilities offer activities that stimulate the body and mind but many fail to properly feed the body and mind after activity. This option calls for the removal of all “unhealthy” products from the facility. For this option to be successful, the facility must hire a nutritionist and work very closely with the vending machine vendors.

As explained previously in this study, the food currently in Vancouver vending machines is not healthy for those utilizing the facility. The findings show that children are the primary junk food purchasers. Most schools have sought to eliminate unhealthy products and recreation facilities could follow suit as well, especially facilities located on school property.

Community consultation and support is needed for the success of this option. Two of the communities interviewed did not succeed using an option that eliminated all unhealthy foods- Grande Prairie and Coquitlam. Grande Prairie faced opposition from within the community. Citizens felt the facility was stepping into a big brother role of legislating what they could and could not purchase. Coquitlam was not successful because the staff was not available to examine the scope of nutrition in its facilities. Success was met in West Vancouver. The North Shore of Vancouver has a reputation as being very health conscious and the citizens in West and North Vancouver agreed with the elimination of junk food from their recreation facility vending machines.

## 7.2 Evaluation of Options

### 7.2.1 Criteria Defined

Table 7-1 defines each criteria of evaluation. The table also indicates the measures and values that evaluate the options.

*Table 7-1: Criteria Definitions*

| Criteria                                 | Definition   | Measures          | Value  |
|--|--|-------------------|--|
| <b>Economic Criteria – Monetary Cost</b> |  |                   |  |
| Cost                                     | Monetary expense of planning and implementation: <ul style="list-style-type: none"> <li>• Cost of staff to explore problem, cost of</li> </ul> | Dollars and Cents | Low – Lowest cost<br>Moderate –<br>Moderate cost |

| Criteria   | Definition   | Measures  | Value   |
|--|--|---|---|
|  | nutritionist, time costs<br>• Any cost incurred  |   | High - High cost  |
| <b>Equity Criteria – Fairness, Impartial</b>   |  |   |   |
| Stigma   | A mark of shame, disgrace or disapproval, which results in an individual being shunned or rejected by others                                   | Ask: Will the change make the patron feel marginalized?<br>If yes, to what degree does the person feel marginalized?  | Low – Little to no stigma<br>Moderate – Some stigma<br>High – stigma will be attached   |
| Inclusive  | Including much or everyone   | Are all parties considered before making the changes?<br>I.E. – families, ethnic diversity of community, economic wealth of surrounding community, people who enjoy unhealthy foods | Low – Not Inclusive<br>Moderate – Mostly Inclusive<br>High – Inclusive as possible  |
| Primary Prevention   | Preventive measures are undertaken in public health. Primary prevention - elimination of factors that are regarded as damaging to one's health | The amount of unhealthy food available in the facility after the implementation of the option   | Low – Not preventative<br>Moderate – the change makes the patron's environment slightly better<br>High – prevention is achieved |
| <b>Technical Criteria – Of, relating to, or derived from proposed change</b>                     |  |   |   |
| Effectiveness  | The extent to which the proposed policy will attain the goals set forth in the problem statement   | Volume of sales of healthy products<br>How many facilities implemented change? Is there still diversity among City of Vancouver recreation facilities?                              | Low – No change<br>Moderate – minimal visible change<br>High- large, quantifiable change  |
| Technical Feasibility  | Asks whether the technology exists or is readily available to implement a proposed option  | Will vendors cooperate?   | Low- No cooperation<br>Moderate – some change<br>High- full cooperation   |
| <b>Political Criteria - Extent a proposed policy option will be accepted by relevant groups.</b> |  |   |   |
| Acceptability / Appropriateness  | Will the proposed changes be appropriate and accepted by the community and City?   | Negative reaction to proposals  | Low – No negative reaction<br>Moderate – Some Negative reaction<br>High – Mostly negative                                       |
| Support  | Are the facilities, equipment, and other support available for the proposed policy?  | Are the supports available?   | Low – No supports<br>Moderate – some supports<br>High- Everything is  |



| Criteria   | Definition  | Measures   | Value   |
|--|---|--|---|
|  |   |  | readily available   |
| <b>Administrative Criteria – The role of those in charge of facilities</b> |   |  |   |
| Authority  | The power to enforce policy change                                  | Does the facility have the authority to implement the proposed policy?<br><br>Who needs to be consulted? City? Community Association? Etc? | Low – No power<br>Moderate – some power<br>High- change can be made in facility itself without further agreement / consultation |
| Commitment   | A pledge from all involved to commit to the implementing the change | Does the proposed policy have the commitment of top managers, field staff, and support staff?  | Low – No commitment<br>Moderate – expressed interest but no concrete commitment<br>High – Full commitment                       |
| Capacity   | The resources need to commit to the change – staff, funds, etc      | Does the agency have the resources to implement the proposed policy, in terms of staff, skills, money, training, expertise, etc.?          | Low- No resources<br>Moderate – Some resources<br>High – readily available  |

### 7.3 Criteria Evaluation

Table 7-2 evaluates each option against the criteria for evaluation. The table below examines each individual option against the evaluation criteria. The table also compares all options against each other. The ‘\*’ indicates the best option for the given criteria. All ‘\*’ are added at the end to determine which option best meets the criteria. If more than one option is ‘\*’ this indicates that both criteria are equally beneficial. In some cases there maybe two options indicating the same value but only one is ‘\*’, this is because the options both maximize the value but the ‘\*’ indicates which does it best.

Table 7-2: Criteria Evaluation

| Criteria                 | Value     |             |      |
|--------------------------|-----------|-------------|------|
| <b>Economic Criteria</b> |           |             |      |
| Criteria                 | Green/Red | Price/Right | Lead |
| A. Cost                  | Low*      | Moderate    | High |

| Criteria                           | Value     |             |          |
|------------------------------------|-----------|-------------|----------|
| <b>Equity Criteria</b>             |           |             |          |
| Criteria                           | Green/Red | Price/Right | Lead     |
| A. Stigma                          | Low       | Low*        | Moderate |
| B. Inclusive                       | High*     | High        | Moderate |
| C. Primary Prevention              | Moderate  | Moderate    | High*    |
| <b>Technical Criteria</b>          |           |             |          |
| Criteria                           | Green/Red | Price/Right | Lead     |
| A. Effectiveness                   | Moderate  | Moderate    | High*    |
| B. Technical Feasibility           | High*     | Low         | Low      |
| <b>Political Criteria</b>          |           |             |          |
| Criteria                           | Green/Red | Price/Right | Lead     |
| A. Acceptability / Appropriateness | High*     | Moderate    | Moderate |
| B. Support                         | High*     | Moderate    | Moderate |
| <b>Administrative Criteria</b>     |           |             |          |
| Criteria                           | Green/Red | Price/Right | Lead     |
| A. Authority                       | High*     | Low         | Low      |
| B. Commitment                      | Moderate* | Moderate    | High     |
| C. Capacity                        | Moderate* | Moderate*   | Low      |
| <b>Total</b>                       | <b>8</b>  | <b>2</b>    | <b>2</b> |

Final consideration of the options used information gathered during the literature review. For example, the literature review found that external intervention strategies are most successful. Jeffrey and French & et al., both used intervention strategies to manipulate consumer-purchasing habits (French, Jeffrey, Story, Hannan, & Snyder, 1997), (French, Jeffrey, Story, et al., 2001), (Jeffery, French, Raether, & Baxter, 1994). Jeffrey used price-incentives and increased the availability of salads at a workplace cafeteria. French & et al., conducted two individual studies both involving vending machines. The studies used promotion and pricing-incentives to influence purchasing habits. The findings in all three studies showed that environmental intervention strategies do increase healthy snack sales.

In addition, evaluation was conducted using the success and failure model from other cities. The table below outlines the advantages and disadvantages of each option based on findings from the literature review and other models consulted.

*Table 7-3: Option Advantages and Disadvantages*

|                     | 1 - "Colour Code"  | 2 - "Price is Right"  | 3 - "Lead By Example"   |
|---------------------|--|---|---|
| <b>Advantage</b>    | <ul style="list-style-type: none"> <li>• Easy to understand</li> <li>• Simple to implement</li> <li>• Includes an education component for children</li> <li>• Visibility and promotion - high</li> <li>• Low Cost</li> <li>• Both products still available for consumer – good for consumer</li> </ul> | <ul style="list-style-type: none"> <li>• Lower cost to the consumer</li> <li>• Easier for consumer to comply</li> <li>• Both products still available for consumer – good for consumer</li> <li>• Promotion and visibility of healthy – moderate</li> </ul> | <ul style="list-style-type: none"> <li>• Policy gap filled</li> <li>• Healthier community</li> <li>• Community leader in nutrition</li> <li>• Facilities in vicinity of schools are accessed by students at lunch - ↑ nutritional awareness and offer only healthy options</li> <li>• Elimination of unhealthy component</li> </ul> |
| <b>Disadvantage</b> | <ul style="list-style-type: none"> <li>• Patron's may feel "pressured" purchased to healthy options</li> <li>• Vendors may be opposed to colour-coding of price labels</li> <li>• Both products still available for consumer – bad for facility</li> </ul>   | <ul style="list-style-type: none"> <li>• Both products still available for consumer – bad for facility</li> <li>• Revenues may ↓</li> </ul>   | <ul style="list-style-type: none"> <li>• Patron's may feel pressured</li> <li>• Grande Prairie experienced unhappiness from patron's with ↑ in healthy products</li> <li>• Large commitment</li> <li>• Implementation will be difficult and time-consuming</li> </ul>   |

## **8 Recommendations and Future Steps**

After extensive research, the researcher concludes that there are two recommendations dependent on the facilities' vending machine contracts. If the facility has a current contract, the researcher suggests Recommendation #1. If the facility's contract has expired, the researcher suggests Recommendation #2.

### **8.1 Recommendations**

#### **8.1.1 Recommendation #1: Facilities with Current Vending Contracts**

##### **RECOMMENDATION - Option #1 – “Colour Code”**

This recommendation is for facilities with current vending contracts. This recommendation is not difficult to implement with an existing contract and should not generate objection from the vendor. The City of Richmond faced minimal problems accomplishing healthy food labelling. Their vending company readily provided the facility with heart stickers to label the healthy foods. In addition, these changes were quickly implemented in the studies reviewed out of the United States (French, Jeffrey, Story, Hannan, & Snyder, 1997), (French, Story, Hannan, et al., 1999). This option is cost-effective and the entire facility can participate in the promotion. Promotion should be conducted with a catch phrase such as “Green means GO! Red means Stop!” The phrase would become a promotional tool to be used citywide. The phrase is to be placed on posters in visible, high traffic areas of the facility. If the facility has a day-care facility or youth programs, the children and youth can participate by making posters, etc.

The option offers an education component easy for young children and youth to understand. Strathcona Community Centre uses education components to make children aware of healthy foods. The facility offers the children an array of healthy food products and promotes nutritional snacking. The Breakfast Program and Cooking Fun for Families are programs that use education to promote nutrition.

Education is important, as children will begin to learn what types of foods are healthy for them. Educating children is essential as the study found that one child or youth under age

eighteen made healthy food purchases at the four recreation centres. Education is especially helpful in communities, such as Strathcona, with a high number of low-income, recent immigrants. Strathcona Community Centre found that many of the children and parents are not familiar with Western culture or foods therefore making healthy choices difficult. In addition, most easy-to-prepare healthy foods are more expensive than junk foods.

Option #2 – “The Price is Right”- was not chosen because of the difficulty of implementation. The option calls for a reduction in the price of healthy snacks with an increase in the cost of unhealthy foods. A facility with an existing contract would be forced to re-negotiate the vending contract. This would be a time-consuming process as the vendors would need to be consulted and there is a possibility that the facility could lose money.

As stated before, Option #3 – “Lead by Example” – has not succeeded in two of the communities interviewed – Grande Prairie and Coquitlam. Grande Prairie faced opposition from within the community. Citizens felt the facility was stepping into a ‘Big Brother’ role of legislating what they could and could not purchase. Coquitlam was not successful because the staff was not available to examine the scope of nutrition in its facilities.

“Lead by Example” can only be implemented with strong community support. Success can be met if the option is implemented as a “community initiative” or there will be little support for it. This option was also not chosen because it is costly and time-consuming to re-evaluate all options offered.

### **8.1.2 Recommendation #2: Facilities with Expired Vending Contracts**

#### **RECOMMENDATION - “Price is Right” combined with “Colour Code”**

Recommendation #2 is suggested for facilities that are placing the vending contracts out to bid. The recommendation is based upon David McBride’s work in the City of Richmond’s ice-arenas and aquatic facilities.

McBride is the Manger of Arenas. In 2004, the vending contract expired for aquatic facilities and arenas. McBride was responsible for renewing the vending contract. McBride felt that with the attention obesity had been receiving in the media that his facilities needed to become more socially responsible. Feelings were that families who want to eat healthy should be able to, but families who use the facility for fun should still have ‘fun’ foods available to them as well.

The solution was to place a stipulation in the bid contract to increase the amount of healthy food.<sup>9</sup> This was achieved with Crown vending. The contract signed increased healthy foods but also came with a promotional tool as well – heart smart stickers for healthy snacks. In addition, pricing incentives were introduced. Healthy products are offered at a lower cost to consumers. The facility does not have to worry about revenue loss as their contract guarantees the facility a fixed amount of profit monthly. If sales generated are below the fixed amount, the vending company is responsible for that cost. If sales exceed the fixed amount, the vending company pays out excess profit at fiscal year’s end.

The recommendation is appropriate for Vancouver facilities. Not only will the healthy snacks be made more visible with labelling but also there is an extra incentive as healthy snacks are offered at a lower cost to consumers. The facility also gains, as there is no loss of revenue because revenues will be fixed in the contract.

## **8.2 Future Steps for Recommendations**

The following is a description of how the implementation of the recommendations could occur at a citywide level and at an individual facility level.

### **8.2.1 Implementation Strategy at City-Wide Level**

#### **Step 1**

The Parks Board and City must first approve the new policy. Before the policy is approved, a promotional strategy and education component must be designed. It would be helpful to bring a nutritionist on board at this point to help direct the policy and ensure that health is maximized.

#### **Step 2**

Both the facility and Community Association are responsible for the operation of programs at the facility. They must be made partners in policy design and implementation or failure will occur.

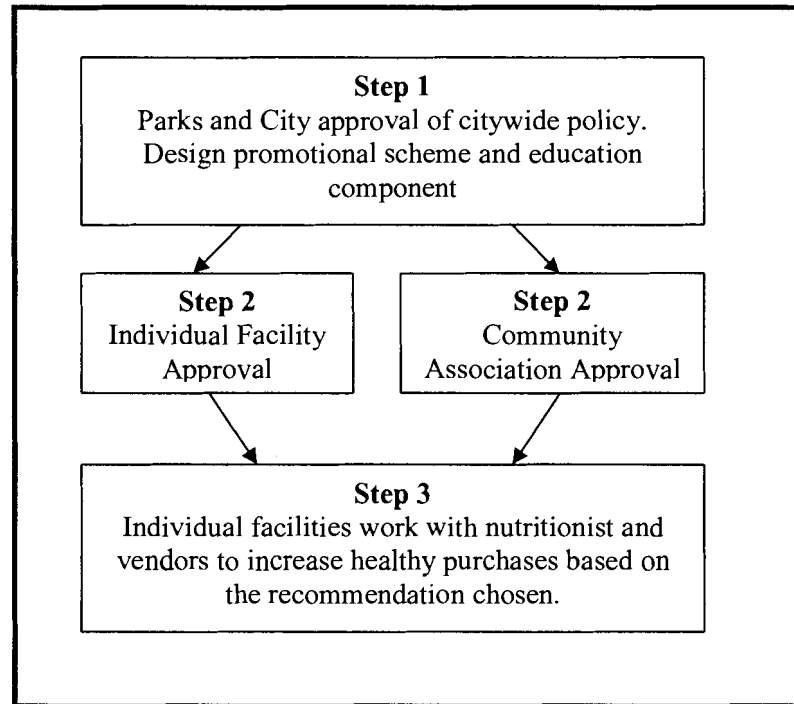
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<sup>9</sup> Healthy food products would increase but there would not be a complete elimination of unhealthy options

### Step 3

Individual facilities must work with vendors and a nutritionist to implement the policy so it best suits that facility. The research conducted in this study finds that facilities in the City of Vancouver differ and each facility needs a malleable nutrition policy.

*Figure 8-1: Implementation Strategy at Citywide Level*



### 8.2.2 Implementation at Individual Facilities

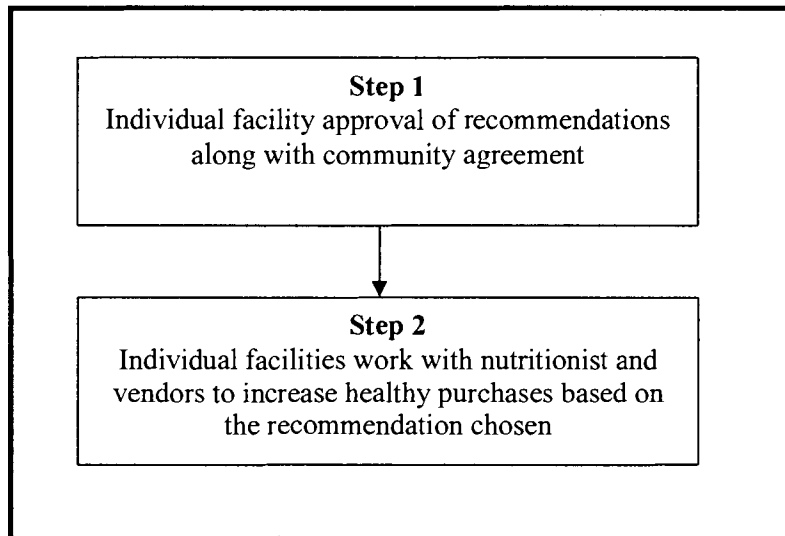
#### Step 1

Individual facilities utilize the recommendations in this study. The first step is choosing and approving the appropriate recommendation. Approval is not limited to the facility administrators, as community support must be sought as well – community association and community members.

#### Step 2

Individual facilities work with staff, communities, nutritionist and vendors to increase healthy purchases based on the recommendation chosen.

*Figure 8-2: Implementation Strategy for Individual Facilities*





## 9 Conclusion and Further Considerations

If Vancouver recreation facilities are committed to “enhancing the well-being of individuals and communities” (Vancouver Park Board, 2005), there is a need to adopt the recommendations set forth in this study. Currently, the facilities are not achieving their mandates.

It can be argued that a recreation facility is not responsible for healthy eating but as dietary guidelines evolve, public nutrition begins to play a larger role in society. Interviews conducted throughout the course of this study all rendered similar findings: recreation centres are in the business of promoting “healthy living”.

The Heart and Stroke Foundation of Canada promotes the “health and well-being of Canadians” through initiatives such as the “Healthy Living” strategies. (Heart and Stroke Foundation, 2005). Healthy living encompasses regular fitness activity, managing stress, being aware of risk factors and healthy eating. Recreation facilities fall short of their mission statements by failing to promote all aspects of “well-being” by ignoring public nutrition.

Findings support the increase in the availability and promotion of healthy products. The recommendations are based on research conducted in the City of Vancouver and similar cities within British Columbia and Alberta.

This issue of snack bars was not properly addressed in this study. Focus was placed on vending machines because in the facilities visited vending machines are the primary mechanism for food sales. The ‘Dunbar community centre nutrition model’ does utilize a snack bar instead of vending machines. The researcher chose to include this model because it is an example of how the recreation facility must work with the community to best serve the community. The snack bar was suggested and is run by the community association. This highlights the relationship and role the community can play. Future studies should include options for snack bars because there is a disparity among snack bars in recreation centres.<sup>10</sup>

In addition, the role of recreation facilities and schools needs further examination. The issue of children accessing the facilities at lunch hour to purchase unhealthy snacks must be

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<sup>10</sup> Dunbar was a very healthy snack bar but Trout Lake’s snack bar was filled with unhealthy foods.

addressed. Schools have worked to resolve the issue of unhealthy foods in schools and have taken responsibility for the well-being of their students, as should any facility located on school property.

If further study is conducted, the researcher also suggests studies comparing affluent neighbourhoods to non-affluent neighbourhoods. The interview conducted with Strathcona Community Centre begins to outline the difference between affluent and non-affluent neighbourhoods. Strathcona is located in East Vancouver and the facility patrons are marginalised - little to no disposable income, recent immigrants, language barriers, etc. The community centre has had to respond to the needs of the community by offering a breakfast program and Cooking Fun for Families.<sup>11</sup> The researcher had hoped to make the neighbourhood comparison but due to unresponsive facilities during the survey and interview process, this outcome could not be achieved.

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<sup>11</sup> Cooking Fun For Families – a program that teaches the parent how to cook nutritious, low-cost meals

# Appendices

## Appendix A – Survey Sample and Codebook

### Survey Sample

I am working for a graduate student at Simon Fraser University who is conducting research as part of her thesis for a Masters degree in Public Policy. The purchasing habits of individuals who frequent recreational facilities and community centres are being investigated.

*If you attend any of these facilities* please complete this survey as best you are able, you may choose **not to** answer any question. If you have any questions regarding this survey you may contact her thesis supervisor, Dr. Nancy Olewiler at 604.291.5289 ([olewiler@sfu.ca](mailto:olewiler@sfu.ca)).

**1) In what year were you born?**

**2) Are you...**

- a) Female                      b) Male

**3) What is the highest level of formal education that you have completed?**

- a) Elementary School
- b) Some High School
- c) High School Diploma
- d) Some University / College
- e) College or Technical Degree
- f) Bachelor's Degree
- g) Master's Degree
- h) Professional Degree or Doctorate

**4) How often do you frequent the facility?**

- a) Once a week or more

- b) Once every two weeks
- c) Once a month
- d) Less than once a month

**5) What is your reason for visiting the facility?**

- a) For fun
- b) Take the kids to lessons / activities
- c) Take/ Teach lessons / activities
- d) Participate in fitness activities (i.e. fitness room, squash, etc)
- e) Other

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**6) Have you purchased food at the facility during your last 3 visits?**

- a) No
- b) Yes

**7) If so, what did you buy?**

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**8) Have you purchased a drink at the facility during your last 3 visits?**

- a) Yes
- b) No

**9) If so, what do you buy to drink?**

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**10) Why did you purchase these items? Circle All that apply**

- a) I like it
- b) I am hungry
- c) Someone offered to buy
- d) The price
- e) Healthiest choice available
- f) Only thing available
- g) Other

**11) Do you bring your own food to the facility?**

- a) No
- b) Yes

**12) What type of food/drink did you bring?**

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**13) If price of all these items was the same which would you purchase? (Circle as many as you wish)**

- Chips
- Fresh Veggies and dip
- Fries
- Milk
- Burger
- Pita triangles and hummus
- Chocolate bar
- Fruit
- Ice Cream
- Smoothies
- Trail Mix
- Juice
- Pop

**14) Why did you circle what you did?**

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**15) Did you notice any advertisement for food in the facility?**

a) No

b) Yes

**16) If so, what food was advertised?**

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**Codebook**

Survey Date- Throughout January, February, March 2005

Location: Recreation Centres – Vancouver BC

- Kerrisdale Community Centre/Pool
- Lord Byng Pool
- Vancouver Aquatics Centre
- Trout Lake Community Centre

Notes –

Questions #7, #9, #13, #16

The code for these is 1 or 2. Patrons indicated the actual product purchased and it was decided by the researcher whether the product was “healthy” or “unhealthy”. The Table 1 identifies the choices made and divides the choices into the “healthy” or “unhealthy” category.

The code book also contains Question #A and #B

Question A contains the name of the facility. Question B was not included on the survey but indicates, from the researcher’s perspective, how many healthy products are available to the

public. High is for facilities with 50% + healthy foods in the vending machine. Moderate is for facilities with 20% - 49%. Low indicates if the facility has 20% or less.

Table 9-1: Codebook

| Question   | Code   | Frequency  |
|--|--|--|
| A. Facility Name   | 1- Kerrisdale Community Centre<br>2- Lord Byng Pool<br>3- Vancouver Aquatic Centre<br>4- Trout Lake Community Centre   | 1- 28%<br>2- 27%<br>3- 23%<br>4- 22%                                     |
| B. Facility Type   | 1- Low<br>2- Moderate<br>3- High   | n/a  |
| 1. In what year were you born?   | Year Born  | n/a  |
| 2. Gender  | 1- Female<br>2- Male   | 1- 52%<br>2- 48%   |
| 3. Age   | 1- 0-18<br>2- 19 – 34<br>3- 35-54<br>4- 55   | 1- 22%<br>2- 23%<br>3- 50%<br>4- 5%                                      |
| 3. What is the highest level of formal education that you have completed?  | 1- Elementary School<br>2- Some High School<br>3- High School Diploma<br>4- Some University / College<br>5- College or Technical Degree<br>6- Bachelor's Degree<br>7- Master's Degree<br>8- Professional Degree or Doctorate | 1- 16%<br>2- 9%<br>3- 6%<br>4- 19%<br>5- 12%<br>6- 23%<br>7- 6%<br>8- 8% |
| 4. How often do you frequent the facility?   | 1- Once a week or more<br>2- Once every two weeks<br>3- Once a month<br>4- Less than once a month  | 1- 68%<br>2- 12%<br>3- 10%<br>4- 10%                                     |
| 5. What is your reason for visiting the facility?  | 1- For fun<br>2- Take the kids to lessons / activities<br>3- Take/ Teach lessons / activities<br>4- Participate in fitness activities (i.e. fitness room, squash, etc)<br>5- Other   | 1- 17%<br>2- 37%<br>3- 10%<br>4- 18%<br>5- 18%                           |
| 6. Have you purchased food at the facility during your last 3 visits?  | 1- yes<br>2- no  | 1- 38%<br>2- 62%   |
| 7. What did you buy?<br>*People indicated the actual product purchased and it was decided by the researcher whether the product was "healthy" or "unhealthy" | 1- Healthy<br>2- Unhealthy   | 1- 13%<br>2- 25%<br>Missing- 62%   |
| 8. Have you purchased a drink at the facility during   | 1- Yes   | 1- 43%   |

| Question  | Code   | Frequency    |
|---|--|--------------|
| your last 3 visits?   | 2- No  | 2- 57%       |
| 9.If so, What do you buy to drink?*   | 1- Healthy   | 1- 23%       |
| *-People indicated the actual product purchased and it was decided by the researcher whether the product was "healthy" or "unhealthy" | 2- Unhealthy   | 2- 20%       |
|   |  | Missing- 57% |
| 10. Why did you purchase these items?   | 1- I like it   | 1- 27%       |
|   | 2- I am hungry   | 2- 49%       |
|   | 3- Someone offered to buy  | 3- 1%        |
|   | 4- The price   | 4- 1%        |
|   | 5- Healthiest choice Available   | 5- 9%        |
|   | 6- Only thing available  | 6- 5%        |
|   | 7- Other   | 7- 8%        |
| 11.Do you bring your own food to the facility?  | 1- Yes   | 1- 47%       |
|   | 2- No  | 2- 53%       |
| 12. What type of food or drink did you bring?   | 1- healthy   | 1- 41%       |
|   | 2- unhealthy   | 2- 6%        |
|   |  | Missing- 53% |
| 13.If price of all these items was the same which would you purchase? (Circle as many as you wish)*                                   | 1- Healthy   | 1- 63%       |
| *- The purpose of this question is investigate whether people will WANT to purchase healthy food options                              | Fresh Veggies and dip, Milk, Pita triangles and hummus, Fruit, Smoothies, Trail Mix, Juice | 2- 22%       |
|   | 2- Unhealthy   | 3- 15%       |
|   | Chips, Fries, Burger, Chocolate bar, Ice Cream, Pop  |              |
|   | 3- Half healthy / Half unhealthy   |              |
| 14. Why did you circle what you did?  | 1- Healthy Option  | 1- 37%       |
|   | 2- I like it   | 2- 60%       |
|   | 3- Other   | 3- 3%        |
| 15. Did you notice any advertisement for food in the facility?  | 1- yes   | 1- 41%       |
|   | 2- no  | 2- 59%       |
| 16. If so, what food was advertised?*   | 1- healthy   | 1- 0%        |
| *People indicated the actual product and it was decided by the researcher whether the product was "healthy" or "unhealthy"            | 2- unhealthy   | 2- 36%       |
|   | 3- None  | 3- 64%       |

Sarah Thomas, 2005

## Appendix B – Survey Statistics

### Socio-economic Statistics

Table 9-2: Socio-Economic Statistics of Survey Respondents

| Socio-economic Statistics |                                  |    |
|---------------------------|----------------------------------|----|
| Gender                    | Male                             | 69 |
|                           | Female                           | 76 |
|                           |                                  |    |
| Age                       | 0-18                             | 32 |
|                           | 19-34                            | 33 |
|                           | 35-54                            | 72 |
|                           | 55+                              | 8  |
|                           |                                  |    |
| Education                 | Elementary School                | 23 |
|                           | Some Highschool                  | 13 |
|                           | Highschool Diploma               | 9  |
|                           | Some University or College       | 27 |
|                           | College or Technical Degree      | 18 |
|                           | Bachelor's                       | 34 |
|                           | Master's                         | 9  |
|                           | Professional Degree or Doctorate | 12 |

### Frequency Tables

#### Age

|              | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Valid 0 - 18 | 32        | 22.1    | 22.1          | 22.1               |
| 19 - 34      | 33        | 22.8    | 22.8          | 44.8               |
| 35 - 54      | 72        | 49.7    | 49.7          | 94.5               |
| 55+          | 8         | 5.5     | 5.5           | 100.0              |
| Total        | 145       | 100.0   | 100.0         |                    |

- Shows the frequency of age



**Gender**

|              | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Valid female | 76        | 52.4    | 52.4          | 52.4               |
| male         | 69        | 47.6    | 47.6          | 100.0              |
| Total        | 145       | 100.0   | 100.0         |                    |

- Shows frequency of gender

**Education level**

|                                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------------------------------|-----------|---------|---------------|--------------------|
| Valid elementary school          | 23        | 15.9    | 15.9          | 15.9               |
| some highschool                  | 13        | 9.0     | 9.0           | 24.8               |
| highschool diploma               | 9         | 6.2     | 6.2           | 31.0               |
| Some University/College          | 27        | 18.6    | 18.6          | 49.7               |
| College or Technical Degree      | 18        | 12.4    | 12.4          | 62.1               |
| Bachelor's Degree                | 34        | 23.4    | 23.4          | 85.5               |
| master's degree                  | 9         | 6.2     | 6.2           | 91.7               |
| Professional Degree or Doctorate | 12        | 8.3     | 8.3           | 100.0              |
| Total                            | 145       | 100.0   | 100.0         |                    |

- Shows frequency of education level

**Frequency of visit**

|                           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------------------|-----------|---------|---------------|--------------------|
| Valid once a week or more | 99        | 68.3    | 68.3          | 68.3               |
| once every two weeks      | 18        | 12.4    | 12.4          | 80.7               |
| once a month              | 13        | 9.0     | 9.0           | 89.7               |
| less than once a month    | 15        | 10.3    | 10.3          | 100.0              |
| Total                     | 145       | 100.0   | 100.0         |                    |

- Shows the frequency of visits to recreation facility

**Reason for visit**

|       |   | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|---|-----------|---------|---------------|--------------------|
| Valid | For fun   | 24        | 16.6    | 16.6          | 16.6               |
|       | Take the kids to lessons / activities                     | 53        | 36.6    | 36.6          | 53.1               |
|       | Take/ Teach lessons / activities                          | 15        | 10.3    | 10.3          | 63.4               |
|       | Participate in fitness activities (i.e. fitness room, squ | 26        | 17.9    | 17.9          | 81.4               |
|       | other   | 27        | 18.6    | 18.6          | 100.0              |
|       | Total   | 145       | 100.0   | 100.0         |                    |

- Shows the frequency of reason for visits to the facility

**Did you purchase food?**

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | yes   | 55        | 37.9    | 37.9          | 37.9               |
|       | no    | 90        | 62.1    | 62.1          | 100.0              |
|       | Total | 145       | 100.0   | 100.0         |                    |

- Shows the frequency of food purchased

**Type of food purchased**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | healthy   | 19        | 13.1    | 34.5          | 34.5               |
|         | unhealthy | 35        | 24.1    | 63.6          | 98.2               |
|         | 3         | 1         | .7      | 1.8           | 100.0              |
|         | Total     | 55        | 37.9    | 100.0         |                    |
| Missing | System    | 90        | 62.1    |               |                    |
| Total   |           | 145       | 100.0   |               |                    |

- Shows the frequency of healthy and unhealthy food purchases

**Did you purchase a drink?**

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | yes   | 63        | 43.4    | 43.4          | 43.4               |
|       | no    | 82        | 56.6    | 56.6          | 100.0              |
|       | Total | 145       | 100.0   | 100.0         |                    |

- Shows the frequency of drinks purchased

**Type of drink purchased**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | healthy   | 33        | 22.8    | 52.4          | 52.4               |
|         | unhealthy | 30        | 20.7    | 47.6          | 100.0              |
|         | Total     | 63        | 43.4    | 100.0         |                    |
| Missing | System    | 82        | 56.6    |               |                    |
| Total   |           | 145       | 100.0   |               |                    |

- Shows the frequency of healthy and unhealthy drink purchases

**Type of food or drink brought**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | healthy   | 59        | 40.7    | 86.8          | 86.8               |
|         | unhealthy | 9         | 6.2     | 13.2          | 100.0              |
|         | Total     | 68        | 46.9    | 100.0         |                    |
| Missing | System    | 77        | 53.1    |               |                    |
| Total   |           | 145       | 100.0   |               |                    |

- Shows frequency of type of food and drink brought to the facility

**Would you buy if price held constant**

|       |                                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----------------------------------|-----------|---------|---------------|--------------------|
| Valid | healthy                          | 91        | 62.8    | 62.8          | 62.8               |
|       | unhealthy                        | 32        | 22.1    | 22.1          | 84.8               |
|       | half healthy /<br>half unhealthy | 22        | 15.2    | 15.2          | 100.0              |
|       | Total                            | 145       | 100.0   | 100.0         |                    |

- Shows frequency of what a respondent would purchase if price was held constant for healthy food and unhealthy food

**Was food or drink purchased?**

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | yes   | 78        | 53.8    | 53.8          | 53.8               |
|       | no    | 67        | 46.2    | 46.2          | 100.0              |
|       | Total | 145       | 100.0   | 100.0         |                    |

- Shows frequency of food or drink purchases

**Type of food or drink purchased**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | healthy   | 31        | 21.4    | 39.7          | 39.7               |
|         | unhealthy | 47        | 32.4    | 60.3          | 100.0              |
|         | Total     | 78        | 53.8    | 100.0         |                    |
| Missing | System    | 67        | 46.2    |               |                    |
| Total   |           | 145       | 100.0   |               |                    |

- Shows the frequency of healthy and unhealthy food or drink purchases

**Crosstabs**

**Type of food or drink purchased \* Age Crosstabulation**

|                                 |         | Age                                      |         |         |        | Total  |        |
|---------------------------------|---------|--|---------|---------|--------|--------|--------|
|                                 |         | 0 - 18                                   | 19 - 34 | 35 - 54 | 55+    |        |        |
| Type of food or drink purchased | healthy | Count                                    | 1       | 9       | 18     | 3      | 31     |
|                                 |         | % within Type of food or drink purchased | 3.2%    | 29.0%   | 58.1%  | 9.7%   | 100.0% |
|                                 |         | % within Age                             | 6.3%    | 42.9%   | 48.6%  | 75.0%  | 39.7%  |
|                                 |         | % of Total                               | 1.3%    | 11.5%   | 23.1%  | 3.8%   | 39.7%  |
| unhealthy                       | Count   | 15                                       | 12      | 19      | 1      | 47     |        |
|                                 |         | % within Type of food or drink purchased | 31.9%   | 25.5%   | 40.4%  | 2.1%   | 100.0% |
|                                 |         | % within Age                             | 93.8%   | 57.1%   | 51.4%  | 25.0%  | 60.3%  |
|                                 |         | % of Total                               | 19.2%   | 15.4%   | 24.4%  | 1.3%   | 60.3%  |
| Total                           | Count   | 16                                       | 21      | 37      | 4      | 78     |        |
|                                 |         | % within Type of food or drink purchased | 20.5%   | 26.9%   | 47.4%  | 5.1%   | 100.0% |
|                                 |         | % within Age                             | 100.0%  | 100.0%  | 100.0% | 100.0% | 100.0% |
|                                 |         | % of Total                               | 20.5%   | 26.9%   | 47.4%  | 5.1%   | 100.0% |

- Shows dependent variable and independent variable – age

**Type of food or drink purchased \* Gender Crosstabulation**

|                                 |           |  | Gender |        | Total  |
|---------------------------------|-----------|--|--------|--------|--------|
|                                 |           |  | female | male   |        |
| Type of food or drink purchased | healthy   | Count                                    | 16     | 15     | 31     |
|                                 |           | % within Type of food or drink purchased | 51.6%  | 48.4%  | 100.0% |
|                                 |           | % within Gender                          | 43.2%  | 36.6%  | 39.7%  |
|                                 |           | % of Total                               | 20.5%  | 19.2%  | 39.7%  |
|                                 | unhealthy | Count                                    | 21     | 26     | 47     |
|                                 |           | % within Type of food or drink purchased | 44.7%  | 55.3%  | 100.0% |
|                                 |           | % within Gender                          | 56.8%  | 63.4%  | 60.3%  |
|                                 |           | % of Total                               | 26.9%  | 33.3%  | 60.3%  |
|                                 | Total     | Count                                    | 37     | 41     | 78     |
|                                 |           | % within Type of food or drink purchased | 47.4%  | 52.6%  | 100.0% |
|                                 |           | % within Gender                          | 100.0% | 100.0% | 100.0% |
|                                 |           | % of Total                               | 47.4%  | 52.6%  | 100.0% |

- Shows dependent variable and independent variable – gender

**Type of food or drink purchased \* Education level Crosstabulation**

|                               |           | Education level                          |                    |                       |                 |                    |                   |                  | Total  |                                     |        |
|-------------------------------|-----------|--|--------------------|-----------------------|-----------------|--------------------|-------------------|------------------|--------|-------------------------------------|--------|
|                               |           | elementar<br>school                      | some<br>highschool | highschool<br>diploma | Some<br>college | technica<br>Degree | achelor<br>Degree | master<br>degree |        | rofession<br>Degree or<br>Doctorate |        |
| Type of food health purchased | healthy   | Count                                    | 2                  | 4                     | 9               | 4                  | 5                 | 3                | 4      | 31                                  |        |
|                               |           | % within Type of food or drink purchased | 6.5%               | 12.9%                 | 29.0%           | 12.9%              | 16.1%             | 9.7%             | 12.9%  | 100.0%                              |        |
|                               |           | % within Education level                 | 25.0%              | 66.7%                 | 56.3%           | 40.0%              | 29.4%             | 60.0%            | 80.0%  | 39.7%                               |        |
|                               |           | % of Total                               | 2.6%               | 5.1%                  | 11.5%           | 5.1%               | 6.4%              | 3.8%             | 5.1%   | 39.7%                               |        |
|                               | unhealthy | Count                                    | 11                 | 6                     | 2               | 7                  | 6                 | 12               | 2      | 1                                   | 47     |
|                               |           | % within Type of food or drink purchased | 23.4%              | 12.8%                 | 4.3%            | 14.9%              | 12.8%             | 25.5%            | 4.3%   | 2.1%                                | 100.0% |
|                               |           | % within Education level                 | 100.0%             | 75.0%                 | 33.3%           | 43.8%              | 60.0%             | 70.6%            | 40.0%  | 20.0%                               | 60.3%  |
|                               |           | % of Total                               | 14.1%              | 7.7%                  | 2.6%            | 9.0%               | 7.7%              | 15.4%            | 2.6%   | 1.3%                                | 60.3%  |
|                               | Total     | Count                                    | 11                 | 8                     | 6               | 16                 | 10                | 17               | 5      | 5                                   | 78     |
|                               |           | % within Type of food or drink purchased | 14.1%              | 10.3%                 | 7.7%            | 20.5%              | 12.8%             | 21.8%            | 6.4%   | 6.4%                                | 100.0% |
|                               |           | % within Education level                 | 100.0%             | 100.0%                | 100.0%          | 100.0%             | 100.0%            | 100.0%           | 100.0% | 100.0%                              | 100.0% |
|                               |           | % of Total                               | 14.1%              | 10.3%                 | 7.7%            | 20.5%              | 12.8%             | 21.8%            | 6.4%   | 6.4%                                | 100.0% |

- Shows dependent variable and independent variable – education

**Type of food or drink purchased \* Frequency of visit Crosstabulation**

|                                 |         | Frequency of visit                       |                      |              |                        | Total  |        |
|---------------------------------|---------|--|----------------------|--------------|------------------------|--------|--------|
|                                 |         | once a week or more                      | once every two weeks | once a month | less than once a month |        |        |
| Type of food or drink purchased | healthy | Count                                    | 19                   | 9            | 2                      | 1      | 31     |
|                                 |         | % within Type of food or drink purchased | 61.3%                | 29.0%        | 6.5%                   | 3.2%   | 100.0% |
|                                 |         | % within Frequency of visit              | 35.8%                | 69.2%        | 33.3%                  | 16.7%  | 39.7%  |
|                                 |         | % of Total                               | 24.4%                | 11.5%        | 2.6%                   | 1.3%   | 39.7%  |
| unhealthy                       | Count   | 34                                       | 4                    | 4            | 5                      | 47     |        |
|                                 |         | % within Type of food or drink purchased | 72.3%                | 8.5%         | 8.5%                   | 10.6%  | 100.0% |
|                                 |         | % within Frequency of visit              | 64.2%                | 30.8%        | 66.7%                  | 83.3%  | 60.3%  |
|                                 |         | % of Total                               | 43.6%                | 5.1%         | 5.1%                   | 6.4%   | 60.3%  |
| Total                           | Count   | 53                                       | 13                   | 6            | 6                      | 78     |        |
|                                 |         | % within Type of food or drink purchased | 67.9%                | 16.7%        | 7.7%                   | 7.7%   | 100.0% |
|                                 |         | % within Frequency of visit              | 100.0%               | 100.0%       | 100.0%                 | 100.0% | 100.0% |
|                                 |         | % of Total                               | 67.9%                | 16.7%        | 7.7%                   | 7.7%   | 100.0% |

- Shows dependent variable (type of food or drink purchased) and independent variable – frequency of visit

**Type of food or drink purchased \* Reason for visit Crosstabulation**

|                                 |         | Reason for visit                         |                                       |                                  |   |        | Total  |        |
|---------------------------------|---------|--|---------------------------------------|----------------------------------|---|--------|--------|--------|
|                                 |         | For fun                                  | Take the kids to lessons / activities | Take/ Teach lessons / activities | Participate in fitness activities (i.e. room, squ | other  |        |        |
| Type of food or drink purchased | healthy | Count                                    | 2                                     | 12                               | 5   | 6      | 6      | 31     |
|                                 |         | % within Type of food or drink purchased | 6.5%                                  | 38.7%                            | 16.1%   | 19.4%  | 19.4%  | 100.0% |
|                                 |         | % within Reason for visit                | 16.7%                                 | 38.7%                            | 55.6%   | 50.0%  | 42.9%  | 39.7%  |
|                                 |         | % of Total                               | 2.6%                                  | 15.4%                            | 6.4%  | 7.7%   | 7.7%   | 39.7%  |
| unhealthy                       | Count   | 10                                       | 19                                    | 4                                | 6   | 8      | 47     |        |
|                                 |         | % within Type of food or drink purchased | 21.3%                                 | 40.4%                            | 8.5%  | 12.8%  | 17.0%  | 100.0% |
|                                 |         | % within Reason for visit                | 83.3%                                 | 61.3%                            | 44.4%   | 50.0%  | 57.1%  | 60.3%  |
|                                 |         | % of Total                               | 12.8%                                 | 24.4%                            | 5.1%  | 7.7%   | 10.3%  | 60.3%  |
| Total                           | Count   | 12                                       | 31                                    | 9                                | 12  | 14     | 78     |        |
|                                 |         | % within Type of food or drink purchased | 15.4%                                 | 39.7%                            | 11.5%   | 15.4%  | 17.9%  | 100.0% |
|                                 |         | % within Reason for visit                | 100.0%                                | 100.0%                           | 100.0%  | 100.0% | 100.0% | 100.0% |
|                                 |         | % of Total                               | 15.4%                                 | 39.7%                            | 11.5%   | 15.4%  | 17.9%  | 100.0% |

- Shows dependent variable (type of food or drink purchased) and independent variable- reason for visit

## Appendix C – Contents of Vending Machines

### Kerrisdale Community Centre and Pool

5851 West Boulevard Vancouver, BC V6M 3W9

Location of Vending Machines: North Entrance of Facility

Number of Machines: 3 – Dasani, Coca-Cola (cans), Snack Vending Machine

Observations:

- Large number of visible minority patrons
- Primarily young males using vending machines
- Many parents commented that they take their children home and feed them or bring food with them – rather than use the vending machines
- Not allowed to solicit patrons – placed table in high traffic area

Table 9-3: Kerrisdale Community Centre Vending Contents

| Coke <sup>12</sup> | Dasani                  | Vending Machine   |
|--------------------|-------------------------|---|
| 1- coke            | 3- water                | 7 Different flavors of Old Dutch chips <sup>13</sup>    |
| 1 – Vanilla Coke   | 2 – lemonade            | 1 Dutch Crunch Kettle Cooked Jalapeño and Cheddar chips |
| 1 – Diet Coke      | 2- Solar Flare Powerade | 1 Thunder Crunch Potato Sticks                          |
| 1 – Sprite         | 2- Berry Blitz Powerade | 1BBQ Corn Chips   |
| 2 – Mystery Pop    |                         | 1BBQ Corn Chips   |
| 2- Iced Tea        |                         | 1 Miss Vickies Sour Cream and Sweet Chili               |
| 1- 5 Alive         |                         | 1 Dutch Crunch Kettle Cooked Jalapeño and Cheddar chips |
|                    |                         | 1 Arriba Nacho Cheese Chips                             |
|                    |                         | 1 skittles sours  |
|                    |                         | 1 Bonkers Candies                                       |
|                    |                         | 1 Omegas Candies  |
|                    |                         | 1 Salted Peanuts  |
|                    |                         | 1 Welchs Fruit Snack Gummy Candies                      |
|                    |                         | 1 Rice Krispie Square                                   |
|                    |                         | 1 Sour Tongue Tingle                                    |
|                    |                         | 1 Neon Wormees  |
|                    |                         | 7 Chocolate Bars <sup>14</sup>                          |

<sup>12</sup> Price <sup>12</sup> Pop and Water - \$1.50, Powerade - \$1.75, Cans \$1.00

<sup>13</sup> Sour Cream and Onion, 2 Dill Pickle, Sour Cream and Cheddar, Roasted Garlic and Cheddar, Regular ketchup

<sup>14</sup> Oh Henry, Mars, Smarties, Hershey Almond, Aero, Coffee Crisp, Kitkat

**Lord Byng Pool**

3990 W 14th Avenue

Location of Vending Machines: Main Entrance – positioned between Men’s and Women’s change rooms

Number of Machines: 3 – Powerade, Coke, Vending machine

Observations:

- People approached us without solicitation - friendly
- Young males purchasing
  - Primary machine use – lunch hour and breaks – because of Highschool and elementary school closeness
  - Re-stock 2-3 times a week
  - Granola bars, etc all that remain
  - Fastest moving product – Hickory Sticks

*Table 9-4: Lord Byng Pool Vending Contents*

| Coke (Cans)   | Powerade (Bottled) <sup>15</sup> | Vending Machine <sup>16</sup>                         |
|---------------|----------------------------------|---|
| 1 coke        | 3 Coke                           | 13 Different flavors of Old Dutch chips <sup>17</sup> |
| 1 Root beer   | 1 Lemonade                       | 1 Lays Regular  |
| 1 Diet Coke   | 2 Vanilla Coke                   | 1 Cheetos   |
| 1 Sprite      | 1 Water                          | 1 Hickory sticks                                      |
| 2 Mystery Pop | 1 Powerade Solar Flare           | 1 Hoops Fritos  |
| 1 Iced Tea    | 2 Berry Blitz Powerade           | 1 Miss Vickies Sour Cream and Sweet Chili             |
| 1 5 Alive     |                                  | 1 Miss Vickies Sea Salt and Vinegar                   |
|               |                                  | 1 Dorito's Nacho Cheese Chips                         |
|               |                                  | 1 Chocolate Chip Cookie                               |
|               |                                  | 2 Mentos – mint and fruit                             |
|               |                                  | 3 Giant Cookies – Chocolate chip (2), Oatmeal Raisin  |
|               |                                  | 1 Ritz Mini Bit Cheese Sandwiches                     |
|               |                                  | 1 Nutrigrain Bar                                      |
|               |                                  | 1 Nature Valley Crunch Bar                            |
|               |                                  | 1 Starburst   |
|               |                                  | 1 Skittles  |
|               |                                  | 9 Chocolate Bars <sup>18</sup>                        |
|               |                                  | 2 York Peppermint Patties                             |

<sup>15</sup> Pop and Water - \$1.50, Powerade - \$1.75, Cans \$1.00

<sup>16</sup> All products in vending machine \$1.00 BUT Nutrigrain Bar and Nature Valley Crunch bar – 80 cents

<sup>17</sup> Smoky Bacon, Salt and Vinegar, Salt and Pepper, All dressed, Sour Cream and Bacon, Dill Pickle

<sup>18</sup> Snickers, Mars, Big Turk, Reese Peanut Butter Cups, Caramilk, M&M’s, Oh Henry, Glossette Almonds, Reeses Pieces



## Vancouver Aquatics Centre

1050 Beach Avenue

Location of Vending Machines: West End of Facility – lower traffic area

Number of Machines: 6 – Nestle Ice Cream, Coffee Dispenser, 2 Coca-Cola (Bottle/cans), Fruitopia, Snack Vending Machine

Observations:

- Primarily Caucasian
- Clientele – some very friendly, others cold and uninterested
- No chocolate bars in VM's

Table 9-5: Vancouver Aquatics Centre Vending Contents

| Fruitopia <sup>19</sup> | Nestle                        | Coke (bottle \$1.50) | Coke (cans \$1.00) | Vending Machine <sup>20</sup>                        |
|-------------------------|-------------------------------|----------------------|--------------------|--|
| 1 Fruitopia             | 1 Super Sandwich - \$2.25     | 4 coke               | 1 Coke             | 4 Different flavors of Old Dutch chips <sup>21</sup> |
| 2 Water                 | 1 Oreo Sandwich - \$2.25      | 2 Root beer          | 1 Root beer        | 2 Lays Salt and Pepper                               |
| 2 Berry blitz Powerade  | 1 Super Ice - \$1.75          | 2 Diet Coke          | 2 Iced Tea         | 1 Crunchies  |
| 1 Solar Flare Powerade  | 1 Turtles Bar - \$2.75        | 2 Sprite             | 1 Diet Coke        | 1Tostitos Quesadilla                                 |
| 1 Orange Juice - can    | 1 Polar Fudge- \$1.75         | 2 Mystery Pop        | 1 Sprite           | 2 Doritos  |
| 1 Apple Juice Cans      | 1 Coffee Crisp Bar - \$2.25   | 2 Iced Tea           | 1 5 Alive          | 2 Kettle-Cooked Chips                                |
| 2 Lemonade              | 1 Drumstick - \$2.25          |                      |                    | 1 Granola Bar  |
|                         | 1 Delmonte Fruit Bar - \$2.25 |                      |                    | 2 licorice Nibs                                      |
|                         |                               |                      |                    | 1 Welch Fruit Gummies                                |
|                         |                               |                      |                    | 1 Mentos – mint                                      |
|                         |                               |                      |                    | 4 Mike and Ike Candies                               |
|                         |                               |                      |                    | 1 Smarties Vanilla                                   |
|                         |                               |                      |                    | 1 Oatmeal 2 Go Bar                                   |
|                         |                               |                      |                    | 1 Chocolate chip cookie                              |
|                         |                               |                      |                    | 1 Starburst  |
|                         |                               |                      |                    | 1 Skittles   |

Sarah Thomas, 2005

<sup>19</sup> Water, juice cans, lemonade, Fruitopia, \$1.50 – Powerade \$1.75

<sup>20</sup> All products in vending machine \$1.00 BUT Nutrigrain Bar and Nature Valley Crunch bar – 80 cents

<sup>21</sup> Smoky Bacon, Salt and Vinegar, Salt and Pepper, All dressed, Sour Cream and Bacon, Dill Pickle

## Trout Lake Community Centre

Location of Vending Machines: Main Entrance to the Ice rink

Number of Machines: 3 – 2 Coke, Vending machine

Observations:

- Community centre dedicated to a 'community legacy'
- Banner advertising upcoming event – Coke sponsored banner

Table 9-6: Trout Lake Community Centre Vending Contents

| Coke (Cans)   | Coke (Bottled) <sup>22</sup> | Vending Machine <sup>23</sup>   |
|---------------|------------------------------|---------------------------------|
| 1 coke        | 1 Coke                       | 1 Old Dutch Ketchup             |
| 1 Sprit       | 1 Diet Coke                  | 1 Lays Regular                  |
| 1 Cream Soda  | 2 Vanilla Coke               | 1 Cheezies                      |
| 1 Lemonade    | 2 Water                      | 2 Ruffles <sup>24</sup>         |
| 3 Mystery Pop | 1C-Plus                      | 1Munchies                       |
| 1 Iced Tea    | 2 Berry Blitz Powerade       | 1 Miss Vickies                  |
| 1 5 Alive     | 1 Fruitopia                  | 1 Tostitos                      |
|               |                              | 1 Dorito's Nacho Cheese Chips   |
|               |                              | 2 Sun Chips                     |
|               |                              | 2 Kettled Cooked Chips          |
|               |                              | 2 Skittles                      |
|               |                              | 1 Cream-filled Cupcake          |
|               |                              | 1 Rice Krispie                  |
|               |                              | 2 Chocolate Chip cookie         |
|               |                              | 1 Starburst                     |
|               |                              | 1 Skittles                      |
|               |                              | 11 Chocolate Bars <sup>25</sup> |
|               |                              | 1Gobstoppers                    |
|               |                              | 1 Mike and Ike Candies          |
|               |                              | 1 Nerds                         |
|               |                              | 1 Excel Gum                     |

Sarah Thomas, 2005

<sup>22</sup> Pop and Water - \$1.50, Powerade - \$1.75, Cans \$1.00

<sup>23</sup> All products in vending machine \$1.00 BUT Chocolate Bars- \$1.25

<sup>24</sup> Sour Cream and Onion, All Dressed

<sup>25</sup> Mint Aero, Mars, Mounds, M&M Peanuts, Kitkat, Oh Henry, Reese Peanut Butter Cups, Caramilk, Hershey Cookies and Cream, Twix, Maltesers

## Appendix D – Interview Transcripts

### Interview with Strathcona Community Centre – Recreation Programmer – Ron Suzuki

\*Done Fall 04 – asked Ron to explain nutrition initiatives. The starting point for research.

#### Nutrition and Food Security

- Unique community centre because it is attached to a school
- Kids all from immediate area
- Collaboration between school and community centre
- Model there is no other like it in the city
  - Afterschool kids come here
  - All planning outlined with school
  - Provide stuff kids want and need until they leave
- Inner-city school
  - Working poor
  - Little to no disposable income
  - No money to register for community centre programs
  - In-kind facility with school
  - Up to 200 kids until 6pm at community centre
- Dinner for kids usually not until 8pm
  - Lunch at noon
  - So started a snack program = 125 snacks/day
  - Snacks provide children with:
    - More energy
    - More enthusiasm
    - Better behaved
    - Lack of food was leading to negative behavior
- 100% ban on junk food
  - Kids only receive healthy snacks
- Implementation of snack program
  - 1<sup>st</sup> kids eat = positive re-enforcement
  - Found bad behavior decreased
  - Social interaction with others
    - Please, thank you, teach general respect
    - Proper line-ups – do not tolerate budging, pushing, etc
  - 1<sup>st</sup> facility to implement afterschool care
- Mandate not reached when kids are hungry
- Overall problem = hungry kids
  
- Breakfast Program (BP)
  - Meryl Lynch (ML) – funder
  - PROBLEM: kids going to school without breakfast
  - Kids sleeping in class, cranky, bad behaviour
  - ML chose 9 schools and provided \$ for a BP
  - Decided community centre would provided BP
    - Meat/cheese
    - Bread/eggs – all good quality

- Open to all kids – no stigma attached
  - Parents are asked to donate time or small amount of money to help but not necessary to receive food
- Advantages of community centre
  - More focused
    - Schools are busy
    - More time, planning, better food – more resources
  - Capacity-building = parents
  - Parent volunteers
    - ESL parents – pride because they are helping their kids, school and community
  - BP – offers families some pride, sense of ownership
- New Immigrants/Working Poor
  - How do they find “good” food?
  - Used to open markets and gardens – unaccustomed to grocery stores
- Eating Preferences / Eating Disorders
  - Gr. 7 girls really like fruit salad – already weight watching
  - Offered once a week
  - Fresh fruit everyday
  - Educational experience – a new immigrant girl saw an apple seed and started crying because she thought it was a bug – had never seen an apple or its seed – teaching kids Western healthy foods
- Cooking Fun For Families – 1993
  - Teach moms to cook
  - Florence Nightingale School started it
  - Community member ran program
  - Barbara Crocker wanted all inner-city schools to have one
  - Program mushroomed
    - Different age classes
    - Partnerships with nutritionists
    - Introducing new education components
    - Culture of food in the house affects kid’s eating habits
    - Uses in season, easy to find foods
    - Menus are planned around the children
    - Confidence for mothers
- Snacks offered
  - Fruit salad, home-made pizza, veggie salad
  - Raw veggies and dip
  - Juice/milk
  - Hard-boiled eggs (left-over from breakfast)
  - Kids involved in preparation
- Breakfast
  - 30 loaves of bread / day
  - Use everything
  - Cut the crust off bread to make pizza
  - Surrounding markets offer food to community centre at lower cost

- Meryl Lynch – Now CIBC – Wood Grundy (last 3 yrs)
  - 1998 – feed 9 schools
  - Provides cash 4:
    - Staffing
    - Food
  - Purchase the food / staff paid in advance
    - Invoice at the end of the month
  - Serving over 200 kids
  - ML made a long-term commitment
  
- 1999 – Royal Bank
  - Identified hunger as a problem they would provide funding for
  - Afterschool funding used for snacks and ‘Cooking Food For Families’
  - Community centre worked to get donations
  - Offered a TRANSPARENCY with funds
  - Last fall CEO of Canada Place
    - 2 page proposal – Food Security Program
    - Came, saw the program and gave a 5 year commitment
      - \$32,000 / yrs
  - Helping snack program
  
- School Breaks
  - Xmas, Spring, summer
  - Hunger has no breaks
  - Royal Bank money
    - Breakfast and lunch
    - Spring Break – Breakfast and Lunch – \$4,000 - \$5,000
    - Summer - \$10,000
    - Run a deficit
    - Canada Place only provides money for food not wages
  
- Pro-Organics
  - Drops off organic produce
  - Veggie, fruit and cheese
- Wanted a salad bar during the summer
  - Pro agreed and gave a truck-load of food
  - But needed staffing – contracted
  - 100 people a day w/o advertisement
  - Donations in-kind
  
- Other community centre
  - Ray Cam
    - Food bank was going to leave
    - Community wasn’t being served
    - Set-up own food bank
  
- Issues
  - Poverty, lack of disposable income

- Children good at sports the facilities offer – no hockey, skating – anything expensive
- Anything with a fee is impossible for these families
- Day Camp
  - Bag lunch for kids without lunch
  - Identify and provide – community centre
- Parent Volunteers
  - Pre-employment program
  - Juice-bar program
  - Food-safe
  - Catering – provides honorarium
  - Get to take home leftovers
- Implementing cooking program for younger siblings
- Evolves quickly – problem on your doorstep and community centre must respond
- Snack Bar -no vending machines
- No decrease with VM removal
- Contract with Coke
  - Pop generates lots of revenue
  - More water and Gatorade in the machine
- Good working relationship with the school
  - Open dialogue and communication

### **Interview - Dunbar Community Centre – Debbie Barber**

**Q1:** Please describe the changes made to Dunbar’s food policy? I.E.- Were there vending machines?

**A1:** There were no changes. No vending machines. The snack bar opened in 1987 and is operated by Association. There has always been a healthy selection of menu items.

**Q2:** Who initiated the changes?

**A2:** Changes to offer food services was initiated by the construction of the new wing by Park Board and Community association.

**Q3:** Why were these changes instituted?

**A3:** New development of new wing.

**Q4:** What type of healthy options are available to the public?

**A4:** Soups, sandwiches, low fat muffins, wraps, juices, daily specials sometimes include chicken, rice, stir-fry, etc

**Q5:** What is the criteria for picking the healthy options?

**A5:** To compliment the healthy lifestyle rec services we provide to the community.

### **Interview with West Vancouver Community Services – Sue Kettler\***

\*Based on notes taken during the interview – not verbatim

**Q1:** I understand that West Vancouver has recently eliminated junk foods and has created a nutrition policy for its recreation centres. Can you tell me about this initiative started?

**A1:** There is no written policy. We decided in Fall 2003 to change the products offered in the vending machines. The product change occurred in June 2004. The change came about working together (Community services) as a team. Felt that we were not 'leading by example' – encouraging a healthy lifestyle but not showing it. It was an internal decision – 'wanted to walk the talk'. Met with the vendor and brought in a nutritionist – worked together to provide the best possible snacks.

**Q2:** What type of food and drink are now provided?

**A2:** Removed pop and replaced it with juice, sport drinks, water. Trying to bring in milk. Food includes – candies made with real fruit juice, oatmeal raisin cookies, pretzels, sun chips, baked potato chips (Lays), granola bars (Special K), licorice

**Q3:** What has been the public's reaction?

**A3:** Parents have noticed and have been impressed. Positive feedback

**Q4:** Have revenues decreased since the change?

**A4:** Too early to really tell but appears that revenues have not decreased. At the new facility the change occurred mid-way thru last year and that facility is maintaining its revenue

**Q5:** Can you tell me more about how this change occurred?

**A5:** The idea came from the manager of community services. Saw it as an opportunity to 'lead by example'. Senior staff agreed.

**Q6:** What key elements led to the change?

**A6:** Proactive manager, big push because the North Shore is very active, wanted to create healthy options and offer a healthy lifestyle.

**Q7:** Anything else you would like to add?

**A7:** This initiative has expanded to Day Camp. There is 'munch day' on Fridays and the kids only get healthy options now. Hoping to send a healthy message to the children. Educate them.

### **Interview with City of Richmond – David McBride - Manger of Aquatic Services\***

\*Based on notes taken during the interview – not verbatim

**Q1:** I recently visited an ice-rink in Richmond and noticed heart stickers beside some foods in your vending machines. What sparked this initiative and can you explain it?

**A1:** The stickers were provided by our vending company – Crown Vending.

**Q2:** Why did the vending company provide you with the stickers?

**A2:** We put a new vending contract out to bid – pools and arenas. The manager included stipulations in the contract that healthier choices be included. The stickers identify the healthier choices.

**Q3:** What were the motives behind asking for healthier choices?

**A3:** Increasing media coverage:

- Vending machines in schools
- Unhealthy foods coverage
- Obesity in children and youth

But we also recognize that recreation facilities are for family fun. Not opposed to less healthier choices but wanted to provide options for families committed to nutrition.

**Q4:** How has the public responded?

**A4:** Response has been limited. Nothing negative. School trustees commented positively

**Q5:** How were the healthy foods chosen?

**A5:** The vending company provided a list of what they deemed healthier snacks. Some of the foods are questionable – i.e. baked chips. We requested Milk 2 Go. In addition, all healthy foods are value-priced.

**Q6:** When did the changes take place?

**A6:** November 1, 2004

**Q7:** Have revenues decreased?

**A7:** Do not know. The contract was negotiated so that the facilities receive a set amount of money not based on the volume of sales. It was negotiated when the bid was signed. Receive a certain amount of money. If sales exceed the amount then we are reimbursed that amount and if sales are below the given amount it is a loss to the vending company.

#### **City of Coquitlam - General Manager Leisure & Parks Services\* Barry Elliot**

**\*Based on notes taken during the interview – not verbatim**

**Q1:** I am researching nutrition policies and recreation facilities and came across a memo you wrote to the city manager. Can you comment on whether the recommendations you have suggested are being pursued?

**A1:** The recommendation was a mistake – made too quickly. We need to assign a staff person to investigate to write a report to the advisory council – explore the scope of the problem. Staffing shortage and no one is available to work on the problem

In the mean time there has been discussion and interest expressed in increasing healthy options at the concessions by 20%.

#### **Interview with City of Grande Prairie – Recreation, Culture and Services – Kirsten Maher**

**Q1:** Can you tell me about the nutrition policy in Grande Prairie recreation facilities?

**A1:** No huge change – just vending machines

**Q2:** What type of change occurred with the vending machines?

**A2:** Inventory of choices offered. Worked with a nutritionist to provide different options with safer choices – i.e. dried fruits, unsalted pretzels, veggie bars

**Q3:** Who started this initiative?

**A3:** I did for the Community Choosewell Challenge

**Q4:** How has the public reacted?

**A4:** Some grumbling. Adults haven't been too happy. Hard to get the message across. Upset that they weren't told – feel like nutrition is being forced on them

But has affected the City. City lunch menu now consists of water and juice – no pop. Low-fat.



At Safety BBQ's – low-fat healthy foods now offered

**Q5:** How have the vendors reacted to the change?

**A5:** They are okay with it. They do have healthy options available. Have had to push them to have healthier choices made available – chips are a big money maker

We jumped in fast but things are starting to slow down

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