

BARRIERS AND/OR FACILITATING FACTORS AFFECTING BREAST  
SCREENING MAMMOGRAMS IN WOMEN  
50 TO 69 YEARS OF AGE IN A NORTHERN MANITOBA TOWN

BY

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A Practicum Project  
Submitted to the Faculty of Graduate Studies  
in Partial Fulfillment of the Requirements  
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Faculty of Nursing  
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**FACULTY OF GRADUATE STUDIES**  
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**Barriers and/or Facilitating Factors Affecting Breast Screening Mammograms  
in Women 50 to 69 Years of Age in a Northern Manitoba Town**

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## Abstract

Breast cancer is the most common cause of cancer in women over 30 years of age in Canada. Increasing age is the greatest risk factor for developing cancer. The early detection of breast cancer through the secondary preventive method of mammography can reduce breast cancer mortality by 30% in women aged 50 to 69 years of age if there is a 70% rate of participation of these women. The Manitoba Breast Screening Program provides a mobile screening mammogram service for women living in rural areas of Manitoba. For 2000/2001, the town of Churchill's participation was approximately 48% of eligible women.

The overall goal of this practicum project was to discover factors that act as barriers and/or facilitators of women's participation in the mobile breast screening program in the town of Churchill. The methodology included a chart audit and interviews of health care professionals and community women. From the information obtained, recommendations and interventions were suggested to enhance women's access to participating in the breast screening program.

Findings of the project suggested the type of primary care visit had a positive or negative effect on preventive breast screening referrals. In addition, barriers and/or facilitators to accessing breast screening exist within the health care system as well as the social/cultural environment of women.

Addressing social, ethnic and cultural needs and beliefs are important if women's participation in the breast screening program is to be enhanced. Primary care

practitioners' referrals for preventive screening may influence women's health practices.

Collaboration amongst health care professionals and systems is necessary to improve access to screening mammograms.

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## Chapter One: Introduction

This practicum project explored the barriers and facilitating factors that may affect the rate of participation in the mobile breast screening mammogram program for women 50 to 69 years of age in the town of Churchill, Manitoba. Based on the information obtained in the project, community and primary care recommendations and/or interventions were suggested to attempt to enhance participation in this screening program.

The Canadian Task Force on Preventive Health Care (CTFPHC, 1998) cites level A evidence to recommend women 50 to 69 years of age have a clinical breast examination (CBE) and mammography every one to two years. Level A evidence is based on randomized controlled trials or a meta-analysis of such trials (Boulet, Becker, Berube, Beveridge & Ernst, 1999). The National Workshop on the Early Detection of Breast Cancer recommends a mammogram with or without a CBE every two years for women aged 50 to 69 years. These procedures are thought to be underused in some groups of Canadian women in this age group (Maxwell, Bancej & Snider, 2001).

Mass mammography screening of women greater than 50 years of age is an example of secondary prevention. Dunphy & Winland-Brown (2001) define secondary prevention as “early identification of illness and prevention of unnecessary sequelae and complications” (p.65) of the disease with early treatment. The value of screening and early detection of cancer in older adults includes a reduction in mortality and morbidity due to cancer (Fitch, Greenberg, Levanstein, Muir, Plante & King, 1997; Health Canada, 1999). It is proposed early diagnosis of breast cancer leads to more effective and less aggressive treatments (Bonhill, Marzo, Pladevall, Marti & Emparanza, 2003). According

to Fitch et al (1997) “older adults exhibit decreasing prevention and early detection behavior” (p. 1744) including breast screening.

Barriers to preventative screening and care can be raised by patients, health care practitioners and/or the health care delivery system (Finkelstein, 2002). These barriers can have a socioeconomic, cultural, geographic, psychosocial, political, health status and/or a health delivery basis (Bonhill et al., 2003; Finkelstein, 2002; Fitch et al., 1997; Williams, 1997). Problem solving, symptom management, screening, health promotion, disease and injury prevention are all a part of primary care practice. Focused, episodic care is less likely to lead to preventive screening compared to periodic health examinations of patients (Dunphy & Winland-Brown, 2001; Finkelstein, 2002). This practicum project attempted to describe and identify these barriers as well as facilitating factors in order to enhance preventive breast screening in women 50 to 69 years of age in the town of Churchill.

The overall objectives of the practicum project were:

1. To identify some of the barriers that prevent Churchill women 50 to 69 years of age from participating in the mobile breast screening program in Churchill.
2. To identify factors that act as facilitators for women in the target group to access screening mammograms.
3. To identify interventions that may facilitate women in the target group accessing screening mammograms.
4. To describe the opinions of health care providers regarding practices and interventions affecting access to screening mammograms in the target group.

5. To describe the characteristics, practices and opinions of community women in the target group regarding breast screening practices.

### *Significance of the Project*

Breast cancer is the third most common cause of death in women in Canada (Canadian Task Force on Preventive Health Care, 1994). It is the most common cancer diagnosed among Canadian women over 30 years of age. One in nine Canadian women will develop breast cancer and one in 25 will die from the disease (Health Canada, 2002). In Manitoba 800 women per year will be diagnosed with breast cancer and 200 will die (CancerCare Manitoba, 2002). Manitoba had the second highest incidence of breast cancer in Canada at 100 women per 100,000 population but a lower mortality rate compared to the Canadian average (Health Canada, 1999).

The greatest risk factor for developing cancer is increasing age. In Canada, the elderly population is increasing at twice the rate of the total population (Fitch et al., 1997). Approximately 50% of all cancers occur in the elderly. These cancers tend to be diagnosed at a more advanced stage compared to younger age groups (Fitch et al., 1997). The probability of developing breast cancer in the next five years for a woman 30 years old is 1.5% compared to 9.2% and 14.3% for 50 and 65 year old women respectively making age the most significant risk factor for breast cancer (Health Canada, 1999).

Known risk factors for breast cancer include gender (99% occur in women), increasing age, early menstruation, late menopause, having the first baby after age 30 or no children, a history of a first degree relative having breast cancer, physical inactivity, obesity, hormone replacement therapy, a history of benign breast disease and high levels of radiation exposure to the chest. Possible risk factors are diets high in fat and lacking

in fruits and vegetables, increased alcohol intake, never breast feeding, smoking cigarettes or exposure to second hand smoke. There is controversy over whether oral contraceptive use is a risk factor for breast cancer (Health Canada, 2002; Stowe, 1999).

Some of these risks are modifiable through lifestyle changes, but many are not modifiable and there is insufficient evidence to support primary preventive actions.

Early detection of breast cancer through the secondary prevention method of mammography can reduce breast cancer mortality by approximately 30% in women aged 50 to 69 years (Health Canada, 1999). The goal of screening mammography is not to prevent breast cancer but detect it early while it is potentially curable and thus prevent metastatic disease (Smith-Bindman, 2000). The five-year relative survival rate for localized breast cancer is 97%. With spread to regional lymph nodes this five-year survival rate drops to 76% and to 20% with metastasis to distant sites (Stowe, 1999).

In order to have effective screening programs for targeted populations, organization is an important factor (Miller, 2000). In Canada there are eleven systematized breast screening programs offering an organized approach to breast screening (Health Canada, 1999). The efficiency of breast cancer screening can be affected by outside factors such as nonreferral by health care practitioners. Other requirements for effective screening programs are a high participation rate and good compliance of the at-risk population (Bonhill et al., 2003; Miller, 2000). In order to decrease breast cancer mortality rates by 30%, a 70% participation rate is required (Miller, 2000; Katie Watters, 2003).

CancerCare Manitoba established the Manitoba Breast Screening Program (MBSP) in 1995 to provide free breast screening to women 50 to 69 years of age. Their

mobile services for rural and northern communities were made available in 1998 with a goal of reaching 70% of women in this age group. The program consists of a screening mammogram, clinical breast exam (CBE) and a video demonstrating breast self examination. A physician referral is not required. Women may make their own appointment by phoning a toll-free number. Women 50 to 60 years of age are mailed a letter of invitation to attend the screening program. The program is only for women without signs and symptoms of possible breast cancer. Diagnostic mammograms are provided through the Breast Health Centre in Winnipeg (CancerCare Manitoba, 1998).

During 2000/2001 in Manitoba, 27,886 women 50 to 69 years old were screened which was 51% of the eligible population. Of the women screened in the prior two years, 73% returned. Between 1995 and 2002, 866 cases of invasive and ductal carcinoma in situ were detected with 711 women diagnosed with invasive breast cancer. Of 465 cases of invasive breast cancer, 66% were the early stage I category (MBSP, 2002). According to Snider, Beavais, Levy, Villeneuve & Pennock (1997) mammographic utilization is increasing in all age groups and provinces of Canada.

Of the 91 women 50 to 69 years of age in Churchill in 2001, 59% have participated at least once since July 1999 in the MBSP. Twenty-five percent of women have never participated in the program. It is possible they could have had a diagnostic mammogram or screening in another region (MBSP, 2003). For 2000/2001, Churchill participation was approximately 48% of eligible women; this percentage was tenth out of the thirteen Manitoba regional health authorities (MBSP, 2002). There were no statistics available of breast cancer detection for Churchill women.

The total population of Churchill in 2001 was 955 people. Of this total 50.8% were of aboriginal descent with 25.1% classified as North American Indian, 19.4% as Metis, 3.7% as Inuit and 2.6% were not accounted for in the statistics. It is assumed the rest of the population is non-aboriginal. A total of 75 women were between the ages of 50 and 69 years. There is no breakdown available of aboriginal and non-aboriginal in this age group. Income for women in the targeted age group ranges from \$9,988.00 to \$20,752.00. Educationally, of women 55 to greater than 65 years, 50 women had some type of certificate or diploma. Thirty-five women had no certificate or diploma. Twenty women in the 45 to 54 year group had a trades diploma or bachelor degree which was the highest level of education obtained (Statistics Canada, 2001).

The town of Churchill is located on the coast of Hudson Bay between the Churchill River and Hudson Bay. It is 966 kilometers north of Winnipeg and is linked to southern Manitoba by rail and air transportation. Health care services are provided by the Churchill Regional Health Authority (CHRA) for the town of Churchill as well as 7000 residents from the Kivalliq region of Nunavut. Acute care services are provided by the 28 bed Churchill hospital. Women in the targeted age group from the Kivalliq region do not receive screening mammograms in Churchill. Ambulatory and medical services are provided by three physicians through the J.A. Hildes Northern Medical Unit, Department of Community Medicine, University of Manitoba. The Northern Medical Unit also provides visiting specialist/consultant services that travel to Churchill. As well there are dental programs, public health services, a pharmacy, social services, personal care home, and a variety of other services available (Town of Churchill and CHRA websites, 2003).

It is hoped this project was able to identify factors that may inhibit or encourage participation in the mobile screening program for women aged 50 to 69 years in the town of Churchill. Awareness of these factors could assist in developing interventions and/or recommendations in order to enhance uptake for breast screening of this at-risk population. Enhanced uptake should promote detection of breast cancer at an early stage thereby allowing increased options for treatment and prevention of advanced disease (MBSP, 2002).

## Chapter Two: Literature Review

The literature discussing breast screening is broad and varied. Topics include reasons for breast screening, recommendations, its cost effectiveness, evidence disputes, factors and interventions inhibiting or enhancing women's participation, risks and benefits as well as community and primary care involvement. This literature review attempted to describe and comment on some of these breast screening themes.

### *Breast Screening*

According to Smith-Bindman et al., (2000) the effectiveness of a breast screening program is evaluated by how much metastatic disease can be prevented. The purpose of screening is to detect breast cancer early while it is still treatable (Bonfill et al., 2003; Smith-Bindman et al., 2000). Health Canada (1999) asserts that at present mammography is the only proven strategy to reduce breast cancer deaths.

Other maneuvers used to detect breast cancer are the clinical breast examination (CBE) and breast self examination (BSE). The Manitoba Mobile Breast Screening Program includes all three maneuvers in their service. CBE is performed by a health care provider trained in the procedure. Results of studies of the maneuvers for detecting breast cancer vary from a significant mortality reduction to non-significant benefit with combining CBE and mammography (CTFPHC, 1994). CancerCare Manitoba (2002) statistics show a positive predictive value of 24.6% with both CBE and mammogram compared to 6.6% with mammogram alone and 1.3% with CBE alone. They conclude there is a greater chance of detecting cancer by using both methods. Approximately 10% of palpable breast lumps are not visualized on mammograms (Stowe, 1999). The United States Preventive Services (USPS) (2002) could not find any screening trial to



demonstrate benefits or harms of CBE either alone or in combination with mammograms. Harris and Leinginger (1995) found using CBE detected 10% more cancers but it was unclear if it extended lives.

The Manitoba Mobile Program also shows women a video demonstrating how to perform BSE. Katie Watters (2003), the education coordinator for the program, is aware of recent controversial research findings regarding BSE but stated the program wants women to be aware of what is normal for their own breasts and have the ability to recognize any change and anomalies. Stowe (1999) agreed with this viewpoint. She felt it was important for women to become familiar with the contours and appearance of their breasts plus any normal lumpy breast tissue they may have.

In the past some studies have shown a relationship between BSE and improved survival while other studies showed no benefit with BSE (CTFPHC, 1994). The more recent Shanghai study concludes BSE efficiency is unproven and without accompanying mammography is unlikely to reduce mortality from breast cancer plus increases the chances of having a benign breast biopsy (Thomas, Gao, Ray, Wang, Allison, Chen, et al., 2002). This study was a large (266,064 participants) randomized controlled trial. It did state breast cancers detected while practicing BSE tend to be diagnosed at an earlier stage than cancers diagnosed in the absence of any screening. It inferred if women were able to practice BSE competently & frequently (which is difficult), there was the possibility of decreasing breast cancer mortality. The USPS (2002) concluded there is insufficient evidence to recommend teaching BSE and found fair evidence that BSE is associated with increased risk of false positive findings and biopsies. The CTFPHC

(2001) recommends exclusion of teaching BSE because of good evidence of harm and no increased survival from breast cancer.

The Canadian Cancer Society (2002) recommends regular BSE in combination with CBE and mammography every two years for women aged 50 to 69 years. The society recognizes the evidence does not support routine teaching BSE but cited observations that many breast tumors are discovered by women themselves. The society justifies advocating BSE by attributing the decline in breast cancer to early detection and improved treatments. Women should learn what is normal for them and report any changes to their physicians (Canadian Cancer Society, 2002). The results of research are ambiguous for many women as well as health care providers. It would seem to be sensible for women to be aware of the breast changes that may occur with breast cancer so that they will recognize any changes in their own breasts.

Guidelines for breast screening vary for age group and organization. The CTFPHC (1998) cites level A evidence from RCTs to recommend CBE and mammography for women aged 50 to 69 years every one to two years. It states this screening reduces mortality from breast cancer but that the optimum frequency of screening has not yet been determined. The American Cancer Society (1997) recommends annual CBE and mammography for women aged 40 and over. Expert consensus was used to assess the quality and strength of evidence from a meta-analysis of RCTs of women aged 40 to 49 years. The CTFPHC (2001) reports conflicting evidence of decreased mortality from breast cancer with mammography for women aged 40 to 49 years (level C). Level C evidence is based on nonrandomized controlled or cohort studies, case studies, case-control studies or cross-sectional studies (Boulet et al., 1999).

It concludes that current evidence does not support recommendations to include or exclude screening in this age group. The CTFPHC (2001) recommends at age 40 Canadian women should be presented with the potential benefits and risks of the procedures and helped to decide when to start screening. This recommendation is supported by a systematic review of RCTs and meta-analyses conducted by Ringash and CTFPHC (2001). It cited conflicting results, methodological differences and uncertainty about the risk/benefit ratio of screening mammography. One meta-analyses suggest a relative risk reduction of 18%. A current British trial of women aged 40 years assigned to annual mammograms over a ten year period is expected to publish its results in 2003. It has been designed to detect a 20% reduction in mortality and is expected to settle the question of regular mammography for women 40 to 49 years (Ringash & CTFPHC, (2001).

The United States Preventative Services Task Force (USPSTF) (2002) recommends screening mammogram with or without CBE every one to two years for women aged 40 and older (B recommendation) and found fair evidence this will reduce mortality. Level B evidence is based on randomized controlled trials that are too small to provide level A evidence (Boulet et al., 1999). It states evidence is strongest for women aged 50 to 69 years. It is the only organization that addresses screening for women 70 years and older. There are few studies of these women but because of the increasing risk of breast cancer with age the value of screening can be dependent on the presence of other comorbid conditions. The probability of developing breast cancer in 5 years for a 70 year old woman is 15.4/1000 women as compared to 14.3/1000 women for a 65 year old woman (Health Canada, 1999).

### *Evidence*

Sussman (2000) who reviewed the most up to date evidence in 1999 concluded “the benefit of screening mammogram for women older than 50 is incontrovertible” (p.274). Sussman (2000) also deduced breast cancer mortality can also be reduced significantly for women in their 40’s through screening mammography. He encouraged physicians to use scientific evidence and population-based epidemiology to guide patients in making informed decisions for screening. In order to do this, a health care provider must be proficient in understanding and analyzing the data and evidence presented. Even authorities in the field do not always agree about the inferences of study findings which can often be contradictory (Harris & Leinginger, 1995; Paterson, 2003). The stronger evidence qualifier of grade A recommendations are related to direct randomized trials whereas D recommendations (expert consensus) are related to indirect randomized trials that seem to imply a weaker recommendation (Mahon, 2000). But because a recommendation is a grade D does not mean it is not justified if proven benefits outweigh negative effects (Mahon, 2000). Level D evidence is based on the opinion, experience and knowledge of experts in the particular field (Boulet et al., 1999).

A controversial meta-analysis by Olson and Gotzsche (2001) inferred there was no reliable evidence that screening for breast cancer reduces mortality. This opinion upset the medical world (Hoey, 2002). A reanalysis of this study by Miettinen, Henschel, Pasnantin, Smith, Libby and Yankelwitz (2002) stated Olson and Gotzsche did not account for the appropriate mortality-related measure of screening usefulness, i.e. the reduction in case-fatality rate. The authors of both studies argued about methodological quality and timing intervals for screening. To add to the confusion, Miller, To, Baines &

Wall (2000) concluded for women aged 50 to 69 years the addition of annual mammography to physical examination had no effect on breast cancer mortality. But they also taught women BSE and stated their findings did not negate the benefit from mammogram screening compared with no type of screening. In another study, Miller (2000) stated it was treatment not screening that has reduced breast cancer mortality. Patterson (2003) suggested that it is in the patients' best interest for nurses and physicians to trust the experts in their national organizations for best practice guidelines especially if nurses or physicians feel they lack expertise in interpreting data results.

#### *Organized Screening*

For improved quality control, it is important for screening to take place within an organized program. A participation rate of 70% of at-risk subjects over an interval of time is necessary for screening effectiveness (Bonfill et al., 2003; Harris & Leinginger, 1995; Miller 2000). Screening outside the organized system (opportunistic screening) can affect the efficiency of the screening procedures. Because of this, Miller (2000) encourages family physicians to ensure their patients attend organized breast screening clinics. Snider et al., (1997) agreed with the use of dedicated centres for breast cancer screening to ensure quality control, appropriate follow up and being more cost-effective.

#### *Benefits and Risks of Breast Screening*

For primary care providers to assist women in the decision-making process, providers need to understand the potential benefits and harms of screening mammography. The risk factors for breast cancer have been previously discussed and should be reviewed with the patient. The benefits of regular mammography increase with age while harms such as false positives, anxiety and biopsy decrease from 40 to 70 years

(USPSTF, 2002). Radiation received during a low dose mammogram is minimal. The discomfort of breast compression is comparable to having blood pressure measured (MBSP, 2002). Screening does not reduce the risk of being diagnosed with breast cancer but of discovering cancer early while potentially treatable. Some cancers are untreatable no matter when they are detected (Harris & Leinginger, 1995).

Early screening can detect ductal carcinoma in situ lesions of which only 15 to 25% may progress to invasive cancer. But all these lesions will require biopsy investigation even though this may not have any effect on overall mortality (Smith-Bindman et al., 2000). There is also the chance of false-positives results, which require additional diagnostic evaluations with associated morbidity and anxiety. Conversely, there is the risk that mammography may miss some cancers (Kerlkowski & Ernster, 2000).

#### *Barriers and Facilitators of Breast Screening*

Several studies discussed and agreed upon the issues of barriers and predictors for women accessing screening mammography. Personal resources such as knowledge, awareness, beliefs, time, money and personal priorities affect one's health choices (Butterfield, 1997). In older adults there is a lack of knowledge exists about cancer risk reduction and screening services, the signs and symptoms of cancer, and the increasing cancer incidence with age. Beliefs and attitudes about illness, fears of death, isolation, impotency and a fatalistic attitude also influence screening practices (Fitch et al., 1997). Fears about having cancer or pain due to breast compression during the procedure, cultural beliefs and attitudes about cancer risks and prevention were identified as barriers (Harris & Leinginger, 1995; Maxwell et al., 2001). In one study, fifty percent of women

who had not had a recent mammogram thought it was not necessary while some believed cancer would not happen to them while others just lacked motivation (Stamler, Thomas, Lafrenier & Charbonneau-Smith, 2001).

Societal factors such as socioeconomic status, income, education and place of residence also affect women's health choices (Butterfield, 1997; Finkelstein, 2002). One Canadian study that found women participating in screening were more likely to be married, have fewer children, to have more education, be working in professional occupations, to smoke less and to have been born in North America (Miller et al., 1992). Patient request was associated with receiving increased services (Finkelstein, 2002). Predictors of under-use of mammograms included age greater than 69 years, low education and income levels, few social supports, poor preventative health behaviors, smoking, decreased physical activity, ethnic background and living in a rural area (Maxwell et al., 2001). Living in a rural area could infer a lack of available services, differences in preventive practices by rural doctors or differences in women's attitudes about screening (Van Harrison, Janz, Wolfe, Tedeschi, Huang & McMahan, 2003). Poverty is associated with a higher prevalence of individual factors that impede cancer screening behaviors. Some of these behaviors are substance abuse, low literacy, apathy, low self-esteem and mistrust of agencies (Brant, Fallsdown & Iverson, 1999).

One of the strongest predictors of breast screening was recommendation or referral by a physician (Harris & Leinginger, 1995; Taylor, Thompson, Lessler, Yasui, Montano, Johnson et al., 1999; VanHarrison et al., 2003). Having no regular physician was also a negative predictor for preventative screening practices (Finkelstein, 2002; Maxwell et al., 2001). Episodic versus periodic health examinations also affected

referrals for breast screening (Finkelstein, 2002; Murata & Li, 1992). One article stated women mentioned physicians as the only health care providers to recommend mammograms (Taylor et al., 1999). Lack of a physician recommendation occurred even when 80% of older women visited their physician on a regular basis (Taylor et al., 1999).

Physician forgetfulness and logistics such as time constraints, office practice structure and organizational priorities are other reasons for not incorporating cancer prevention activities into patient visits (McPhee & Detmer, 1993). Time constraints and other medical priorities also affected nurses lack of promotion of general health topics (Stamler et al., 2001). Women with many or serious medical problems may require the time that would have been used for health maintenance activities (Murata & Li, 1992). There are many screening and preventative guidelines to remember especially for the aging population. Fox, Murata & Stein (1991) queried if physicians in primary care thought women greater than 65 years of age have a limited life expectancy and therefore screening was not as necessary as for women 50 to 64 years old. Murata & Li (1992) found the completion of one screening test led to another test. Specifically, performing a Pap smear very strongly predicted the ordering of a mammogram. Obstetricians and gynecologists had a higher rate of ordering mammograms than primary care physicians perhaps because this is their focus of care.

Increasing age was a risk factor for not receiving screening mammograms in 1988. Only 20% of women older than 50 years had had a mammogram (Hayword, Shapiro, Freeman & Corey, 1988). In Canada in 2001 Maxwell estimated 79.1% of women aged 50 to 69 years reported ever having had a mammogram. In the United States, Van Harrison et al. (2003) stated 60% of women over 65 years old had had only



one mammogram or none at all. This is at a time when women are at a greater risk of developing breast cancer (Hayward et al., 1988).

*Ethnicity* Ethnicity and cultural beliefs and attitudes about cancer risk and prevention were identified as important barriers to screening (Maxwell et al., 2001). The ethnic mix of women aged 50 to 69 years in Churchill includes aboriginal, non-aboriginal and Metis women. There were more articles in the literature pertaining to American native women than Canadian aboriginal women. Cancer was quoted as being the third leading cause of death among American Indians. Cancer survival rates are poorer for American Indians possibly due to more advanced disease at diagnosis (Gordon, Campos-Outcalt, Steele & Gonzales, 1994). The same was true for minority women (Ansell et al., 1994). In their literature review, Brant et al. (1999) found that the incidence of breast cancer in native American women is low compared to white women (21.7/100,00 vs 93.3/100,000 respectively) but native women have the lowest five year survival rate. Again this is thought to be due to advanced disease and late detection. In a study of the Pascua-Yaqui tribe in Arizona, Gordon et al., (1994) found that even though aboriginal women accessed primary care services, there was a lower rate of preventive health screening. Common aboriginal cultural beliefs reported were thinking cancer is a “white man’s disease” and not a threat to themselves. Others believed cancer is too sensitive a subject for discussion or that if one talked about it they might catch it. Cancer is also equated with death. Conversely some question how a painless lump could be equated with cancer (Brant et al., 1999; Williams, 1997). However caution is important in applying findings from studies on different cultural groups to the Manitoba situation.

Another reoccurring theme in the literature is the lack of culturally appropriate health services. The lack of peer educators and aboriginal health care providers has been reported as a concern, as well as the need for these services in their own remote communities. Aboriginal women preferred to see female health personnel. There are indications that Native American women may place a relatively lower priority on preventive medical interventions (Brant et al., 1999; Staut & Kipling, 2001; Williams, 1997).

An interesting report of some Northwest Territories women with an ethnic mix similar to Churchill, described their experiences with breast cancer and screening. Most did not practice BSE and discovered breast problems via routine self-care. Several had problems persuading the physician to refer them for a mammogram. A lack of knowledge about breast cancer was a concern for some women even though information was available at the local health centre. Many of these women had to travel long distances to access mammography. A result of the study was a call for improved breast screening programs in the NWT (NWT Breast Cancer Working Group, 1997).

Most articles concerned with aboriginal health and different ethnic groups agreed screening intervention should be culturally sensitive and educationally appropriate, developed in consultation with the women themselves. Written material should be in simple English and/or aboriginal languages (Ansell et al., 1994; Brant et al., 1999; NWT, 1997; Staut & Kipling, 2001). Women were more willing to accept information from peer educators who understood their culture (Williams, 1997).

### *Interventions to Enhance Participation*

Many interventions to increase participation in breast screening were discussed and tested in the literature. Some methods were found to be more effective than others. They ranged from being primary care and individual centred to increasing public awareness of breast care and screening services for specific groups of women. Low-tech techniques as well as high-tech methods were trialed to improve compliance. Personnel involved included physicians, nurses, peer educators, community health representatives and clerical staff. These interventions were all subject to the barriers and facilitating factors discussed earlier.

Motivation was identified as an important factor in the effectiveness of interventions. If motivation was present, barriers could be overcome (Stamler et al., 2001). Champion, Maraj, Hui, Perkins, Tierney, Menon & Skinner (2003) found all interventions studied (telephone counseling, in-person counseling, physician letter, and combinations of telephone with letter and in-person with letter) increased mammogram adherence in usual care patients. Also women thinking about having a mammogram or previously had a mammogram responded more positively to interventions. Champion et al., (2003) also found women contemplating screening had a 50% adherence rate without intervention. However, for women not thinking about having a mammogram, interventions became important in moving women towards adherence.

White women attending a breast screening clinic in a Canadian study said they relied on reminders such as phone calls or letters (Stamler et al., 2001). A systematic review by Bonfill et al., (2003) found the five interventions of invitation letters, invitation letters plus a phone call, individual phone calls and training activities plus reminders

were all equally effective interventions. Home visits were not effective. Individual counseling, either per telephone or in-person, increased adherence twice as much as no counseling (Champion, Faan, Skinner & Foster, 2000). Interestingly a study by Taylor et al. (1999) found direct mail intervention had no reinforcing effect. This is in contrast to findings by Ansell et al. (1994) that computer generated letter prompts were quite effective as return appointment reminders. A meta-analysis of the effectiveness of interventions to promote mammography found a combination of access enhancing and individual directed interventions had the most impressive effects (Legler, Meissner, Cogne, Breen, Challette & Rimer, 2002).

Some articles described clinic or office-based interventions to improve breast screening. Most included several processes. For older women a physician recommendation and/or discussion of screening mammograms has a major impact on screening behaviors (Fox et al., 1991; Van Harrison et al., 2003;). Office interventions included physician education, provider prompts or chart tagging, and nursing interventions such as providing educational material, video viewing, and providing transportation to screening e.g. bus tickets. Nursing interventions produced the best mammogram completion rates (Finkelstein, 2002; McPhee & Detmer, 1993; Taylor et al., 1999). Having a Pap smear was strongly associated with receiving other preventive screening interventions (Hueston & Stiles, 1994).

Legler et al. (2002) differentiated between individual and system-directed interventions. System-directed interventions could include the use of media advertising, videos, culturally appropriate literature or internet sites for information (Stamler et al., 2001; Champion et al., 2003). These interventions require individual competencies such

as literacy, access to the internet and computer and language skills. Not all options may be affordable to all patients or health care facilities.

Even though less affluent women appear to benefit the most from intervention, their overall adherence is lower than for affluent women (Champion et al., 2003). Legler et al. (2002) suggests interventions to promote health behaviors should be an interplay of individual women's health behaviors, health care providers' actions, the health care system and the larger environment. Individual behavior is shaped by social, structural and economic factors. Milio proposed people "make the easiest choices available to them at the time" and therefore health promoting choices must be more available to society (Butterfield, 1997, p. 78). Therefore interventions must not only target individual characteristics but structural aspects as well. Mobile breast screening programs attempt to reduce the barrier of access due to geographic location. Since the barrier of access has been addressed for Churchill women, this practicum attempted to identify other barriers that may inhibit these women from taking advantage of this preventive service and make recommendations to help overcome these barriers.

### *Summary of Literature Review*

Several authors have concluded that even with well-intended interventions and information from the health care community, social, structural and economic factors have a greater effect on women's health care practices. Barriers and facilitating factors exist for both health care providers in promoting breast screening measures, and for women in accessing breast screening measures.

## Chapter Three: Methodology

### *Focus of the Practicum Project*

This practicum project attempted to discover factors that are barriers and/or facilitators of women's participation in the mobile breast screening program in the town of Churchill. The information obtained was used to make recommendations to assist in enhancing participation of women aged 50 to 69 years in the program.

### *Methodological Approach*

*Project Design* This assessment used a multi-method approach of descriptive and qualitative assessment tools. This approach provided complex and insightful information as well as community and organizational members' perceptions and priorities (Ensign & Gittelsohn, 1998; Hancock & Minkler, 1997). It was hoped the descriptive data provided information that is useful to organizational (clinic) and community members for planning actions. Qualitative data provides information to community members empowering them to take action for change (Hancock & Minkler, 1997). Method triangulation by the use of multiple assessment methods assists in the verification of obtained data so that more accurate information can be identified or be verified with the literature (Polit & Hungler, 1997).

*Theoretical Framework* Two theoretical models were used to guide the practicum project. The Health Belief Model focuses on individual preventive health behaviors by promoting behavior change through alteration of patients' perspectives. The model focuses on patient compliance and their perceived susceptibility to a particular disease. It also attempts to persuade patients of the benefits of compliance to their health. This is considered "downstream" which could describe the episodic

individual-based interventions encountered in primary care and is one focus of this study. The limitation of this theory consists of putting the burden of change on the patient by the health care provider persuading the patient of the seriousness of the disease entity. It does not address their barriers to accessing health care (Butterfield, 1997). This model directed the project to examine how sharing of health information or recommendations used in primary care effects women's choices regarding breast screening.

The Population Health Approach (Health Canada, 1999) is a conceptual framework for thinking about health and its determinants plus a framework for taking collaborative actions targeted at societal, community, structural or system levels. Its goal is to improve and maintain health of the entire population and reduce inequalities between groups by directing strategies at the whole community or subgroups of the population as needed. Its focus is an upstream approach that envelopes the continuum of care from promotion, prevention, protection through to treatment and care. It recognizes health is affected by socioeconomic, cultural, biologic and personal factors. The determinants of health are complex and inter-related (Health Canada, 1999). This concept directed the project to consider how these factors may effect women in the target group in deciding to access screening mammography. It also guides the project in examining how social, community and health care systems affect women's choices. A combination of the health belief model and the population health approach provided the theoretical framework for this project.

### *Site*

The site of the project was the Churchill Health Centre in the town of Churchill, Manitoba. The health care providers involved in the project practise in the outpatient medical clinic of the health centre. The community women of the target group were 50 to 69 years of age and resided in the town of Churchill.

### *Sample*

There were three sources of data.

1. The sample was 25 charts of women 50 to 69 years of age who access services at the outpatient medical clinic of the health centre.
2. The health care providers involved in providing primary care to these women were interviewed.
3. A convenience or volunteer sample (Polit & Hungler, 1997) of five women 50 to 69 years from the town were interviewed.

Details about the samples are provided in the Data Collection Strategies section.

### *Researcher Role Management*

Access to the project site was with the permission of the Chief Executive Officer of the Churchill Health Centre with the stipulation written in a letter from the Chief Executive Officer that the project follow the appropriate organizational policies (See Appendix A, CEO letter, 2003). The director of medical records was asked to select a random sample of charts of women 50 to 59 years to be audited. A letter of invitation was given to the health professionals working in the medical clinic inviting them to participate in a verbal interview about screening programs. The public health nurse volunteered to approach some community women about participating in a verbal



interview about screening mammograms. The public health nurse had resided in Churchill for many years and it was assumed that local women would trust her support of the interview over that of an unfamiliar researcher. The interview questions were in simple language and read to the women in order to overcome any literacy difficulties.

Reciprocity was maintained during the project by providing women with information on how to self-refer or access appointments for breast screening. The researcher also participated in a public health presentation for aboriginal health days. This included a video, *Sisters of the Nation*, discussing breast cancer from an aboriginal point of view, plus a verbal and poster demonstration about breast cancer and screening in older women. Shower cards showing breast self examination and pamphlets describing the Manitoba Breast Screening Program were also distributed to women.

### *Ethics*

The right to full disclosure describing the nature of the project, and the right to refuse participation (voluntary) are ethical principles. These principle form the basis of informed consent (which may involve signing a consent form) or implied consent, which assumes that by participating in the interviews the participant has given their consent (Polit & Hungler, 1997). The principle of informed consent was maintained in this project by providing a thorough description of the project and having participants sign a consent form. Anonymity was maintained by ensuring that no names appeared on any sources of data and the designation of the participant was not cited in the written report or on the interview forms. Maintaining confidentiality could be difficult given the small number of health care professionals employed at the health centre.

Professional designation was not used in the project report. No identifying criteria was recorded during chart audits. For interviews of community members, no names or identifying criteria were recorded on the interview forms or written report.

An ethics protocol submission was made to the Research Ethics Board at the University of Manitoba for this practicum project. Human ethics approval was granted by the Education/Nursing Research Ethics Board (Appendix B).

Dunphy & Winland-Brown (2001) queried the ethics of screening procedures and raised a number of questions. Can the disease be prevented or improved with treatment? Does treatment in the symptomatic period reduce morbidity and mortality? Does early diagnosis reduce economic, social and emotional costs? Screening mammograms can produce false-positives results with ensuing diagnostic tests and associated morbidity and anxiety. The discovery of ductus in situ lesions does not always lead to invasive cancer but will require surgical interventions. Kerlikowski & Ernster (2000) believe both the benefits and harms of mammograms should be provided to women. This could be an ethical consideration when promoting screening mammograms. Through the review of literature and CTFPHC/Manitoba guidelines, the benefits of promoting mammography for women ages 50 to 69, such as early diagnosis and reduced mortality from breast cancer, were considered to outweigh possible harms, such as anxiety and unnecessary biopsies for false positive results. Although the investigator considered these questions, she followed the guidelines of the CTFPHC (2001) and the Cancercare Manitoba (2002).

### *Data Collection Strategies*

*Chart Review* A chart review was conducted, using a sample of women 50 to 69 years of age who are patients in the outpatient clinic in the past twelve months..

Parameters examined included pattern of clinic use, and reasons for visits, and methods of referral for screening mammograms. The charts were not filed or recorded by age or sex but by chart number. The medical records director selected every third chart of women in the targeted age group for auditing. According to the 2001 Canadian statistics report there are 75 women in this age group in Churchill. Twenty-five charts were selected. The charts were taken to the hospital library for auditing. A list of parameters that were audited are found in the Appendix C. The parameters were selected based on issues identifies through the literature review, and relate to

a) primary care practices by health care providers, and b) the usage of primary care facilities by women aged 50 to 69 as discussed previously in the literature review.

*Health Care Provider Interviews* An individual interview of all three medical clinic physicians, the clinic nurse and one of the two public health nurses was conducted (N=5). The development of the interview questions was guided by the literature. The purpose of the interview was to uncover the clinicians' views of how to improve referral of women in the age group of 50 to 69 years for screening mammograms during clinic visits. A letter of introduction and explanation was offered to the participants inviting them to participate in the interview (See Appendix D). Informed written consent was obtained from the participants prior to beginning the interview (Appendix E). The interview took place in the library of the health centre or the interviewee's office, which ever place was convenient for them. The length of the

interview was approximately 20 minutes. The replies were hand written by the investigator. The interview questions are in the Appendix F. The development of the interview questions was guided by the literature.

*Community Women Interview* An interview of five of the 75 community women in the age group of 50 to 69 years was conducted also. The interview questions were developed from parameters reviewed in the literature. A letter of invitation and explanation of the project was offered to the women by the public health nurse (see Appendix G). If the women agreed to the interview they gave their phone number to the public nurse and the investigator contacted them to arrange an interview time. Informed written consent was obtained from the participating women prior to beginning the interview (Appendix H). The interview was approximately 20 minutes in length. It took place at a site that was convenient for the participants such as their home or the medical clinic. The idea of confidentiality was reinforced thus attempting to put the interviewee at ease. The interviewee could stop the interview at any time. Information was sought regarding the participants' perceptions of breast screening, and specifically their opinion about barriers and facilitators to screening mammogram participation. It added a depth to the information obtained and either verified or refuted or added to the literature review findings. The interview also promoted community participation in the project (Chalmers & Kristajanson, 1989) and promoted public awareness. The interview questions for community women are found in Appendix I.

*Clinical Experience of the Investigator* In addition, the investigator made observations from her clinical practical experience with women in the studied age group in the outpatient clinic. This included patient inquiries or requests about or for

mammograms and breast health and during what type of clinic visit (episodic or preventive care) these occurred.

### *Report Back to the Community*

A copy of the finished practicum project will be given to the Churchill Health Centre as a report back to the community. It can be placed in the hospital library for reference by the health centre practitioners or the public. Findings of the project will also be communicated to Katie Watters, education consultant, at the Manitoba Breast Screening Program. A summary report of the projects will be given to participants who request it.

### *Management of Data*

The data from the chart audit summarized and compared to information in the literature review. This data includes parameters such as the number of clinic visits in the past year for each patient, if the same physician was seen for each visit and if any referral or suggestion for screening mammograms was noted in the chart. The interview replies of the health care providers and community women were recorded by hand notes. Themes were identified, summarized and compared to those identified in the literature review as well as the clinic observations of the investigator. Factors identified as possibly having an impact on mammography utilization were further grouped into categories of "barriers" and "facilitating factors." Using these results, recommendations were suggested for interventions to enhance participation in the breast screening program.

## Chapter Four: Findings of the Data Collection

The findings of the chart audit, interviews of health care providers and community women plus this investigator's observations during the clinical practicum are summarized and presented in this chapter. The findings are related to the previously stated objectives of the project.

### *Chart Audit Findings*

Twenty-five charts (N=25) were audited for the parameters outlined in Appendix

A. All charts reviewed were of women in the appropriate age range of 50 to 69 years.

The number of clinic visits for these women in the past twelve months is summarized in Table 1. Most women (N=21, i.e. 84%) had visited the clinic from three to nine times.

**Table 1 Clinic Visits for Past 12 Months**

<u>Number of Visits</u>	<u>Number of Women</u>
0 - 2	2
3 - 5	11
6 - 9	10
10 & more	<u>2</u>
	25 = Total

In the past 12 months, seven women visited the clinic for acute illness reasons, five women visited for chronic illness follow up and twelve visits indicated both acute and chronic reasons. One woman had no clinic visits in the past twelve months. Eight of these women had one visit in the past year that was for wellness/prevention reasons such as Pap smear collection or a physical examination. Only 6 of the 25 women

(24%) had seen the same physician for their visits in the past year. The other 19 women (76%) were seen by two or more different physicians in the clinic.

Table 2 outlines the relationship between the type of clinic visit and screening mammograms. Five of eight women (62.5%) who had a wellness/preventive visit at clinic had had screening mammograms. Only six of the remaining 16 women (37.5%) who had episodic visits for acute or chronic reasons had had screening mammograms in Churchill. The one woman who had no clinic visits had had two screening mammograms. The relationship between the type of visit and number of screening mammograms was not statistically significant (Chi square =1.34, df=1, p=0.247). A Fishers Exact Test for numbers less than five (2x2 is p=0.39) was not statistically significant as well.

**Table 2: Relationship of Type of Clinic Visit and Screening Mammograms**

		Mammogram		Total
		Yes	No	
<u>Visit</u>	Wellness	5	3	8
	Episodic/ Chronic	6	10	16
<u>Total</u>		11	13	24

The small sample size may not have provided sufficient statistical power to detect significant differences between the two groups.

Twelve of the 25 women (48%) in the chart audit had had screening mammograms performed in Churchill with the Manitoba Breast Screening Program as described in Table 3.

**Table 3: Number of Women Who Have Had Screening Mammograms In Churchill.**

<u>Number of Screening Mammograms</u>	<u>Number of Women</u>
0	12
1	7
2	5
unknown	<u>1</u>
	Total=25

Nine of the 25 charts indicated these women had been referred for diagnostic mammograms in Winnipeg. Reasons for the referrals included discovery of breast lumps, a previous history of breast cancer and abnormal findings found on a screening mammogram. Three of the twenty-five women had had screening mammograms performed in Thompson prior to the mobile program coming to Churchill.

It was assumed nine referrals for diagnostic mammograms were made by a doctor as these require a physician referral unless the patient is referred as a result of an abnormal finding when screened by the mobile program. During the audit it was found that the nurse practitioner student (the project investigator) had referred two patients for screening mammograms to be done in August 2003. If a report of a screening mammogram was found on a chart with no corresponding referral recorded in the clinic notes, it was assumed the patient had self-referred. Patient self-referrals were identified in 12 of the 25 charts audited.



Actual written notation for referral for either a screening or diagnostic mammogram in the clinic notes was only found in nine of the 25 charts (36%). Two of these notations were made by the nurse practitioner student. Sixteen of the charts had no written notation regarding mammograms in the clinic notes (64%).

There may be a possible relationship between the type and number of clinic visits, written notations, and practitioner referrals for screening mammograms.

#### *Findings of the Health Care Providers Interviews*

A total of five health care providers were interviewed. These professionals consisted of physicians and public health and medical clinic nurses. All respondents stated they worked with women in the age group of 50 to 69 years of age. All respondents stated they were involved in promoting screening mammograms to some degree. These measures included:

- recommending annual breast screening to clinic patients.
- placing a reminder from the Manitoba Breast Screening Program on the patients' charts.
- recommending mammograms during general assessments of women.

Four of the five respondents stated they discuss breast screening with women in their practice. The fifth respondent said he/she did not routinely discuss breast screening because these women were not routinely a part of his/her client base.

Factors that health care providers thought may hamper or prevent them from referring these women for screening mammograms included factors related to the nature of women's presenting issues, the logistics of office routines and communication issues.

The specific factors identified included:

- a lack of information regarding when the screening program is scheduled for Churchill.
- due to the need to concentrate on the complexity of some women's illnesses and treatment, preventive measures and advisories are sometimes forgotten.
- preventive clinic visits helped practitioners remember to refer patients for mammograms whereas episodic visits did not aid in remembering screening tests
- screening mammograms are not thought of routinely as they are not an every day test or examination done in Churchill.
- lack of a consistent physician
- high turnover of clinic staff
- they did not routinely deal with women in the target group and therefore did not deal with this type of screening

One respondent stated he/she always advises women in the target age group about screening mammograms.

Replies to the question regarding factors that would help the practitioner to refer women for mammograms included:

- knowing when the screening mammograms are scheduled for Churchill.
- lower turnover rate of clinic staff
- some type of note or reminder placed on the chart
- being aware of risk factors for breast cancer

One respondent had no suggestions.

All respondents were aware that the mobile breast screening program came to Churchill but one provider did not know how often the program was scheduled (i.e. every two years). Also the remark was made they were unaware of who was responsible for coordinating the visit and patient list.

Recommendations to increase the rate of women's participation in the mobile screening program included changes in the clinic and screening programs, public health initiatives and again, communication issues. Specific recommendations included:

- frequent communication between physicians and public health personnel in regards to scheduling of the breast screening program
- education for both health care providers and the public
- increased publication prior to the program
- flagging of patient charts with reminders about mammograms
- public health campaigns to increase public awareness
- a month prior to the scheduled visit, advertise on the radio and TV cable station to increase public awareness.
- remind people of their appointments by following up the letters sent to the women by the mobile program with a phone call
- follow up people who do not respond to the letter

All respondents believed some type of flagging placed on the charts would help them to refer women for breast screening. Also it was suggested that the date of the last mammogram should be recorded on the health profile portion of the chart to assist health care providers with referral practices.

Other information and comments shared by the health care providers pertaining to screening mammograms addressed a variety of issues and concerns. Shared information included thoughts about these subjects:

- Possibly if mammograms were scheduled every year it would be easier to remember to refer women for the procedure. The transient population of Churchill lends to the difficulty of making regular referrals.
- Women may not participate due to fear of the procedure. Lower income women may be less likely to seek health care as they have other priorities in their personal lives. Public health campaigns generate a greater response from middle class women than older aboriginal women. The public in Churchill is uninformed about preventive health in general
- Women need more information regarding mammograms and breast cancer. The public needs to see more advertisements to encourage women to participate. Family members seeing advertisements may encourage their female relatives to obtain mammograms. Culturally, there may be a lack of knowledge and education of community women especially for those of aboriginal descent. These women are more likely to respond to culturally appropriate education.

#### *Findings from the Interview with Community Women*

A total of five women residing in the town of Churchill were interviewed. Three women were interviewed in their homes and two women were interviewed in a private office at the Churchill Health Centre medical clinic. All five women were in the age

range of 50 to 69 years of age. This sample consisted of two aboriginal and three non-aboriginal women.

Four women said they were aware that a mobile breast screening program came to Churchill every two years. Three of these women had participated in the breast screening program in Churchill. Comments about why they participated included beliefs in the value of early detection of cancer, easy access to the screening and it is not necessary to travel to Winnipeg, the ease of making an appointment, and the opinion that it is a privilege to have the program available in Churchill.

Two women had not participated in the Churchill program. They had originally had screening done in Thompson and then been referred to Winnipeg for diagnostic mammograms for "breast problems".

Three of the women had received a letter of invitation to have a mammogram. They all thought it was a good reminder. One stated she was given an appointment time and the program was well managed. The other two women had not received a letter because they had had diagnostic mammograms before the mobile screening program had started coming to Churchill. They did not fulfill the MBSP requirements. One of these two women stated she thought a letter would be a helpful reminder.

Comments regarding what would help improve women's attendance at the breast screening clinic in Churchill included a number of recommendations. Changes in the advertisement process, community outreach initiatives and physician endorsement were some suggestions. Specific suggestions included the following:

- more advertising was needed
- more public education was needed

- a doctor's recommendation would be helpful
- need a reminder closer to the date, such as a phone call
- the letter should be in simple English
- a community health worker could verbally inform women about the program
- provide a ride to the clinic
- the outreach program from the health centre should verbally tell women it is important to have the screening
- people need to know more

When asked what keeps women from having a mammogram in Churchill the women offered some interesting thoughts encompassing personal and cultural concerns.

These thoughts were voiced as:

- don't know why women don't go to the mobile clinic
- women may be afraid they have the disease- "out of sight, out of mind"
- they don't realize what a privilege it is
- people just don't think about it
- A lack of information
- language barriers - need interpreters and/or posters in the Dene and Cree languages
- no transportation to clinic and some people cannot afford a taxi

Other information shared by the five community women was the idea that the mobile program is convenient especially for elders, eliminating the need to travel to Winnipeg. Also mentioned was the program provides a good service but advertisements should include the fact that female health care providers do the examinations although

one woman said she had never seen any ads for the mobile screening program. They thought the procedure was uncomfortable but worth it to prevent the disease and that someone needs to explain to women the higher risk for cancer in older women. One woman commented that some women may be threatened by an official looking letter and may not read it but a recent reminder closed to the appointment time, such as a phone call would be helpful. One woman thought that people do what they want to do in spite of efforts to promote breast screening.

#### *Findings of the Clinical Experience of the Investigator*

While working in the medical clinic during the clinical portion of this practicum, the project investigator made observations regarding her own practice. It was easier to remember to advise and refer women in the 50 to 69 age range for screening mammograms during visits for complete physical examinations, or preventive health visits (e.g. Pap smear). Most women were receptive to the advice for a referral. Some were willing to make their own appointment by calling the 800 number for the breast screening program while others preferred the health care provider to make the referral. Two women told the investigator they relied on the invitation letter to remind them it was time for their mammogram. Advising the patient about having a mammogram also helped remind the investigator to ask the patient about the date of their last Pap smear. Flagging of the chart with a mammogram reminder was helpful in reminding the investigator to ask the patient about breast screening.

The investigator found that when busy with acute illnesses or complex chronic problems she forgot about screening that was not pertinent to the present problem was a barrier to inquiring and advising about mammograms. Time constraints (15 minute visits)

were also a barrier. Sometimes office staff forgot to flag the chart with the mammogram reminder. There are many preventive screening issues to remember for differing groups of patients. After two months in clinic when mammograms were no longer my main focus, the investigator found herself forgetting to advise women in the target group about breast screening measures.

As well, the investigator participated in the Aboriginal Health Day Fair presented by the Churchill Health Centre (CHC) for aboriginal days. It was held in the community health services area of the health centre. The writer was responsible for a display about breast health. A video featuring aboriginal women discussing their personal experiences with breast cancer and breast screening measures was shown. Although there was good interest in the display by the people who attended, there was generally poor attendance at the health fair. Attendees included CHC employees, teachers, and a few community people. One inhibiting factor to attendance could have been a heavy rainfall that evening.

#### *Summary of the Four Data Collection Strategies*

The combined findings of the four collection strategies have produced a “triangulation” of findings. This triangulation confirms the information obtained may be reliable (Polit & Hungler, 1997). Most of the findings were affirmed by the findings in the empirical literature. Table 4 presents some of the identified issues from the literature that were also identified during the project and which collection strategies verified or refuted these findings.



**Table 4: Verification of Identified Issues by the Four Data Collection Strategies**

<u>Identified Issue</u>	<u>Supportive Collection Strategies</u>
Physician Recommendation	Women (1) Chart Audit Clinical Practice
Relationship of preventive vs episodic visits & mammography	HC Provider Clinical Practice Chart Audit
Lack of consistent Physician	Chart audit HC provider
Flagging charts	HC provider Clinical Practice
Breast screening referral efforts	HC provider Clinical Practice
Logistics-time, disease complexity, etc.	HC provider Chart Audit Clinical Practice
Cultural/social concerns	HC provider Women
Need for public education & advertising	HC provider Women
Benefits/risks	Women
Letter & phone call follow up	HC provider Women
Fear	HC provider Women

Key: HC provider = health care provider interviews

Clinical Practice = investigator's clinical practicum experience

## Chapter Five: Discussion

In this chapter the findings of the data collection strategies are discussed in relation to the objectives of the project, the current literature and the two theoretical models used to guide the project. The strengths and limitations of the data collection strategies and the interpretation of the findings are presented. From these findings recommendations are suggested to help overcome some of the barriers to breast screening in women aged 50 to 69 years living in the town of Churchill. As well facilitating factors and interventions that may enhance usage are identified and recommendations suggested. The ultimate goal of the project is to enhance participation in the breast screening program in Churchill in order to promote early detection of breast cancer thereby decreasing the morbidity and mortality of the disease for these women.

The investigator was able to implement the planned data collection procedure without significant difficulties or obstacles. Respondents who were approached were willing to participate. The director of the medical record department was very helpful and willing to select charts for the audit. A public health nurse agreed to select and approach the community women for the interview. The community women were agreeable and made time to be interviewed.

### *Strengths of the Data Collection Strategies*

Triangulation of data sources and the data collection methods were used in this project in the hope that valid information would be obtained. Also two theories (theory triangulation) were used to assist in interpreting the data. Triangulation “improves the likelihood that findings will be credible” (Polit & Hungler, 1997, p.305).

The selection of every third chart of women in the age range of 50 to 69 years for the chart audit was done in an attempt to provide an equal chance for inclusion in this group. This selection helps increase the comparability of the findings (Polit & Hungler, 1997). Health care professionals and community women indicate many areas of congruence in their discussion of the barriers and facilitating factors.

The interview of the health care providers and community women consisted of both open-ended questions and closed-ended questions. Closed-ended questions ensures comparability of responses while open-ended questions allows participants to respond in their own words (Polit & Hungler, 1997). The closed-ended question regarding the awareness of the breast screening program's occurrence in Churchill every two years allowed the investigator to compare the two groups' knowledge of the subject. The open-ended questions encouraged participants to share additional information about breast screening not covering in the interview questions.

Face to face interviews tend to have higher response rates. The interviewer can explain a question when it is misunderstood and read and write the answers for interviewees who may have weak literacy skills (Polit & Hungler, 1997). During this project, the investigator read the questions to all participants. Explanations were necessary more frequently during the interviews of community women.

The investigator's clinical practice permitted insight into the patients' thoughts and beliefs about breast screening. This clinical practice reaffirmed many of the findings in the literature review and data collection (Polit & Hungler, 1997).

### *Limitations of the Data Collection Strategies*

*Chart audit* There were some factors that may have affected the validity of the findings of the chart audit data collection. Some of the larger charts were divided in to several parts. Only the most recent portion was given to the investigator. Some of the relevant information needed for the audit may have been missing. Some patients seen at the CHC are transient workers in Churchill. It is possible they have another physician and had a mammogram in another location and the record would not be filed in their CHC chart. Some local residents obtain their medical care in Winnipeg. Their records are not filed at CHC. These factors can affect the validity of the data collected in the chart audit. Also, it was not known if there was a proportional mix of aboriginal and non-aboriginal women's charts per the 2001 Canadian population statistics.

*Health care providers interviews* There were some limiting circumstances that affected this data collection strategy. Because of time constraints for both parties, the investigator was unable to interview one health care provider who was involved in breast screening promotion. Maintaining confidentiality is difficult due to the small number of professionals working in the clinic. Respondents were interviewed individually and privately in an effort to maintain anonymity. Performance bias or the Hawthorne effect is defined as a change in behavior due to the participant's knowledge of being included in a study (Davies & Logan, 1999; Polit & Hungler, 1997). Respondents could have inadvertently given the answers they felt would be expected of them as health care professionals although this did not seem to be the case during these interviews.

Some important responses may have been missed with the use of close-ended questions. Although the open-ended questions provide more in-depth information, they

are more difficult to interpret (Polit & Hungler, 1997). This issue is addressed later in the data interpretation section.

*Community women interviews* The five community women were selected by a public health nurse because it was felt the women would be more comfortable and feel less obligated to participate than if approached by the investigator. But the opposite could also be true. Just by the fact of being approached by a health care professional, the women may have felt obligated to participate. Participation bias are influences that effects peoples' participation or non-participation in a project (Davies & Logan, 1999). Selection bias (how or who were selected) could have also been a factor in this project. The public health nurse may have selected women she knew would be more willing to be interviewed or who had better communication skills This could mean the loss of valuable insights of women who for various reasons may be more reluctant to participate in an interview.

In addition, the sample size was small and not randomly selected making it is difficult to make generalizations to the larger group of women in the target age group (Davies & Logan, 1999). Two of the five women had not had a screening mammogram performed in Churchill and thus had no experience with MBSP. The interview questions did not address or describe the women according to demographic, socioeconomic, ethnicity or health care practices as discussed in the literature review (Maxwell et al., 2001). Only age and rural location are known. These descriptions were not included in order to maintain confidentiality. These factors are thought to influence personal health care practices.

*Clinical experience of investigator* The observations of the investigator during her clinical experience can be distorted by personal interest in the subject and her own attitudes and values about breast screening. This can lead to incorrect conclusions (Polit & Hungler, 1997). Sometimes patients may feel intimidated by a health care provider and obligated to reply in a certain manner. The investigator may have been more enthusiastic in promoting screening mammograms due to her project than in normal clinic circumstances.

#### *Interpretation of the Findings*

*Chart audit* The finding that 48% of women in the chart audit who had had at least one screening mammogram in Churchill is congruent with the MBSP statistics for 2000/2001 participation rate for Churchill which was also 48% (MBSP, 2002). This finding helps affirm the reliability of the chart audit results. Bonfill et al.(2003), Harris & Leinginger (1995) and Miller (2000) estimated that screening coverage of at least 70% of at-risk subjects over an interval of time is necessary for screening effectiveness. Thus the percentage of women in Churchill participating in breast screening is below the stated standard.

The other findings of the chart audit, that is the higher number of episodic clinic visits compared to preventive visits, no consistent physician and lack of a physician recommendation for breast screening, are congruent with the literature. These factors have been found to affect referrals for breast screening (Finkelstein, 2002; Maxwell et al., 2001; Murata & Li, 1992). Ninety-two percent of the 25 women in the audit had visited the physician at least three times in the past twelve months. However, only 36% of these charts had a written notation for mammogram. Taylor et al., (2001) found lack

of a physician recommendation occurred even when 80% of older women visited their physician on a regular basis. Even though in the health care provider interviews, all respondents stated that they referred or advised their patients regarding breast screening, this is not being noted in the clinic notes. This could be important for medical-legal issues and quality control. These findings demonstrate how using different data collection strategies (triangulation) can elucidate contradictory or supportive information.

The chart audit found that 62.5% of women who had a wellness/physical exam visit had had a screening mammogram, while only 37.5% of those with acute/chronic visits had had a mammogram. These findings are congruent with the literature statements. Wellness/physical exam visits appear to be a facilitating factor for women obtaining screening mammograms. These findings also seem to affirm the population health approach's (Health Canada, 1999) assertion that the health care system can affect women's health choices, through professionals advocating or not advocating prevention and health promotion.

*Health care provider interviews* As stated earlier, the health care providers all stated they were involved in measures to promote breast screening and discussed screening with women aged 50 to 69 years old in their practices. But according to the chart audit findings, these practices are not being recorded in the clinic notes. Possible explanations for these incongruent results are contained in the literature. Time constraints, focusing on more pressing problems and physician forgetfulness may account for a lack of written referrals for mammograms (Finkelstein, 2002; McPhee & Detmer, 1993; Murata & Li, 1992). These same explanations can be applied to the factors that act as barriers to health care providers referring patients for mammograms.

Office interventions such as chart flagging or provider prompts (Finkelstein, 2002; McPhee & Detmer, 1993) were confirmed as a good idea by the health care providers interviewed and the investigator's clinical experience. Primary care practices are often based on the premise of persuading women of the need for screening mammograms in order to avoid the potentially fatal effects of breast cancer. The health belief model describes this practice. Even though the primary care provider offers information regarding prevention, it is the patient's decision to comply with the advice. However this approach does not address the barriers the patient may face (Butterfield, 1997).

Health care providers' responses with respect to a) factors that may facilitate referrals, b) recommendations to increase women's participation in the MBSP c) health care providers knowledge of the program are consistent with the principles of the population health approach (Health Canada, 1999). The respondents realized that there are deficiencies in the health care and community health systems that effect women's choices and their access to screening mammograms. There appeared to be communication problems amongst the professionals in the medical clinic and the community health services pertaining to scheduling information of the MSBP.

Health care provider responses made reference to a variety of factors affecting breast screening access, including socioeconomic status, ethnicity, lack of knowledge and information, and health care structural and system factors; these corresponded to factors identified in the literature review. The suggestions that a combination of strategies of community-directed education, individual patient reminders, increased advertising efforts, culturally appropriate teaching and improving access through providing transportation to improve and facilitate access to breast screening is supported in the



literature (King, Rimer, Benincasan, Harrop, Amfoh & Bonney, 1998; Legler et al., 2002). Because confidentiality must be maintained, it is not possible to assess if these remarks originated from the primary care professionals or the public health professionals. In primary care one's focus can be narrowed to a specific problem and the broader picture that affects that the patient's problem can often be overlooked.

Interestingly, the benefits and risks of mammography screening (Bonfill et al., 2003; Smith-Bindman et al., 2000), the controversies of the efficacy of BSE (Thomas et al., 2002) and whether mammography actually reduces breast cancer mortality (Miller et al., 2000) were not mentioned by any of the health care providers. The interview questions could have been too close-ended to encourage the sharing of these thoughts. Although the last question invited them to share any other thoughts about the topic.

*Community women interviews* The responses of the community women tended to address more of the social, cultural, ethnic and information needs of women in accessing screening mammograms. There were conflicting views. Some of the women could not understand why other women would not access the mammograms when they were available locally. One women thought there was enough advertising while the others thought there should be more public education and advertisement of the program. One had a fatalistic view that people do what they what to do. All these responses show the varied backgrounds of these women. Possibly their different social and educational histories and situations influenced their opinions.

Ethnic and cultural issues were expressed by some women. The need for advertisements and teaching to be in the Dene and Cree languages, for interpreters and female examiners in the program, fears of having breast cancer and lack of transportation

to the clinic were concerns of the community women. These same concerns were discussed as issues that either act as barriers or facilitators to preventive care practices in the literature (Ansell et al., 1994; Brant et al., 1999; Kipling, 2001; NWT, 1997; Williams 1997).

Some women felt the discomfort of having mammograms was more uncomfortable rather than equally uncomfortable to a blood pressure reading as suggested by the MBSP (2002). But they all thought the benefits of mammography outweighed the momentary pain. No one commented on any possible risks of mammography.

The letters of invitation to have a mammogram was thought to be a good idea by all the women. Some thought a follow up phone call closer to the appointment date would improve attendance. Champion et al. (2000) found individual counseling such as a phone call increased adherence by two-fold. Only one woman mentioned a physician recommendation as helpful although this is widely supported in the literature (Harris & Leinginger, 1995; Taylor et al., 1999). Women may have agreed with this concept if it had been presented in the interview.

The interview of community women provided an in-depth, rich descriptions of their concerns and insights regarding barriers to screening mammography. They offered recommendations for interventions to facilitate access for women in their age group. A larger randomized sample size may have provided more varied viewpoints that could be generalized to the whole group of women aged 50 to 69 years in Churchill.

*Clinical experience of the investigator* The experience of the investigator during her clinical practicum was congruent with the findings of the literature review.

Referring women for breast screening was facilitated by the completion of another screening test, usually a Pap smear (Murata & Li, 1992; Huesten & Stiles, 1994) or a prevention visit. Flagging the chart definitely was a good reminder for this practitioner. Barriers to referral such as time constraints, complexity of disease, practitioner forgetfulness and episodic visits (McPhee & Detmer, 1993; Murati & Li, 1992; Stamler et al., 2001) certainly applied to my experience as well.

This practitioner's experience supports the literature that described women over 50 years old as aware, accepting and enthusiastic about mammography. They often just need a recommendation from their primary care provider to participate in screening (Fox et al., 1991). Recommending a yearly general physical examination to women when various screening and preventive measures could be incorporated would be beneficial for the patient and practitioner.

#### *Implications of the Findings*

The following conclusions regarding access to screening mammograms can be extrapolated from the findings:

- episodic visits may be more of a barrier to breast screening referrals than preventive visits
- logistical factors such as time constraints, high turnover of clinic staff, complexity of disease are barriers
- poor communication amongst health centre staff regarding scheduling is a barrier
- lack of transportation to clinic is a barrier

- the presence or absence of ethnic and cultural considerations such as language, female health care providers, culturally appropriate education can be barriers or facilitators
- wellness/prevention or physical examination visits are facilitators
- a consistent physician is a facilitating factor
- flagging of charts with reminders is a facilitating factor
- improved public education and information sessions could be facilitators
- letters of invitation plus personal contact (e.g. a phone call) are facilitating factors
- social issues plus health care structures and systems may interact in either a positive or negative manner to affect the accessibility of mammograms

The findings of the data collection met the objectives of the project by identifying barriers and facilitating factors to accessing screening mammograms for women aged 50 to 69 years of age. The opinions of health care providers and community women pertaining to breast screening practices and interventions affecting access to mammography were described. The objectives are completed by suggesting recommendations and interventions that may facilitate women in the target group accessing screening mammograms in the town of Churchill.

#### *Recommendations*

- Flagging of clinic charts of women 50 to 69 years with colourful reminders for breast screening. The date of the next scheduled mobile program visit to Churchill could be stamped on the reminder.

- Presentation of a summary report of this project to health care practitioners in order to make them aware of the relationship of primary care practices and screening mammography referrals.
- Presentation of a summary report of the project to Manitoba Breast Screening Program to help them be aware of findings affecting access to the program in Churchill.
- Collaboration of Manitoba Breast Screening Program and Churchill Health Centre community services to improve and plan public awareness, education, advertising strategies for the program and arrange the follow up of letters of invitation to participate in the program.
- Meeting of medical clinic and community health staff to discuss screening mammogram scheduling, goals and interventions in order to improve women's participation and the medical clinic staffs' awareness of the program. This meeting should occur at least two months prior to the scheduled visit to Churchill.
- Use of an aboriginal community health representative to help plan interventions that may overcome cultural and language barriers. e.g. prepare posters in the local aboriginal languages, act as an interpreter at the mammogram clinic, plan culturally appropriate education.
- Include in advertisements or letters the information that only female health providers examine women during the breast screening mammograms.
- Follow up letters of invitation with a phone call from the outreach program of community health services as a reminder to women of their appointments or

to encourage them to make an appointment. The community health representative or a person who is able to speak the local aboriginal language should make the calls.

- Future projects could evaluate the effectiveness of the recommended interventions and assess if participation of women in the breast screening program improves with implementation of these recommendations.

#### *Limitations of the Recommendations*

Even though these recommendations and interventions are made with the best intentions to enhance women's participation in breast screening, some factors are beyond the control of health care providers. The high turnover of staff, staff shortages, financial restrictions, some social and political situations and people's attitudes and values cannot always be altered or influenced. Health care providers must do their best to provide current information and services with the available resources. The barrier of geographic access to mammograms has been removed and if other barriers are minimized as much as possible then it is the woman's choice whether to participate in the local breast screening program. However, the writer recognizes there may be situations affecting individual woman's decisions which are beyond her control. As well some people may doubt the benefits of preventive screening practices.

#### *Conclusion*

The objectives of the practicum project were met. There may be other barriers and/or facilitating factors affecting access to screening mammograms for Churchill women aged 50 to 69 years of age that were not identified during the project.

This study identified under-participation of Churchill women in screening mammography programming. Discussions with health care providers and local women provided insights into possible reasons for this situation, as well as many ideas for improving the current system. This report made several recommendations to improve mammography participation in Churchill. A multifaceted approach is recommended, including a) suggestions for medical chart reminders, b) education of health care providers, c) improved communication amongst local health care providers and with the MBSP, and d) community outreach and health promotion initiatives with representation from local Aboriginal women.

Breast cancer is the most common cause of cancer diagnosed in women over 30 years of age (Health Canada, 2002). Increasing age is the greatest risk factor for developing cancer (Fitch et al., 1997). Mammography is still the approved secondary prevention method recommended to reduce breast cancer mortality in women aged 50 to 69 years (Health Canada, 1999). To paraphrase Fox et al (1991) primary care practitioners often cannot change or influence many social, economic and political aspects that affect women. But practitioners can choose to advise and recommend screening mammograms to their older female patients. Nurse practitioners practicing in primary care should be aware of how preventive/wellness patient visits may positively effect their referral of preventive screening procedures including breast screening. Collaboration amongst health care professionals and systems may help reduce some barriers while enhancing some facilitating factors to improve access to screening mammograms for these women.

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*Appendix A CEO Letter*

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April 22, 2003

Ms. Catherine Brasier  
626 - 77 University Crescent  
Winnipeg, MB  
R3T 3N8

Dear Ms. Brasier

On behalf of the Churchill Regional Health Authority, I welcome you to the organization for your practicum experience in the Advanced Practice Nursing program.

With respect to the practicum project, we will expect that the appropriate organizational policies will be followed when accessing information or working with clients.

We look forward to having you in Churchill and trust that your experience and project will be most successful.

Yours truly,

—  
B. Langevin  
Chief Executive Officer  
Churchill RHA Inc.

cc: N.L. Deslauriers, Chief Operation Officer  
Dr. M. Patterson, Chief of Staff  
R. Ermann, Nursing Supervisor





*Appendix B Ethics Approval*

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### APPROVAL CERTIFICATE

24 June 2003

**TO:** Catherine Brasier  
Principal Investigator

**FROM:** Stan Straw, Chair  
Education/Nursing Research Ethics Board (ENREB)

**Re:** Protocol #E2003:057  
"Barriers and/or Facilitating Factors affecting Breast Screening  
Mammograms in Women 50 to 60 Years of Age in a Northern  
Manitoba Town"

Please be advised that your above-referenced protocol has received human ethics approval by the **Education/Nursing Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

Please note that, if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.

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*Appendix C**Chart Audit Parameters*

Subject Number - 1, 2 , etc.

Subject's Age

Previous number of screening mammograms performed in Churchill

Number of mammograms at another location and reason - screening or diagnostic

Clinician or patient referral

Any chart notation of referral - Yes or No

Same Physician each clinic visit - Yes or No

Number of clinic visits per year for the past year

Acute or follow up of a chronic illness visits in the past year

Wellness or Prevention Visits in the past year

*Appendix D**Letter of Invitation to Participate for Health Care Providers*

My name is Cathy Brasier. I am a nursing student at the University of Manitoba in the Master of Nursing Nurse Practitioner program. As a part of my practicum experience I am conducting a project about breast screening mammograms for women aged 50 to 69 years of age in the town of Churchill. The purpose of the project is to uncover factors that are facilitators or barriers to women participating in the mobile breast screening program in Churchill. Would you participate in this project by answering some question about this subject? Participation is strictly voluntary. The interview will take approximately 20 minutes to conduct. I will be handwriting your replies. Your name will not be recorded and your identity will be anonymous. The information obtained will be used in the project to make suggestions to improve women's access to screening mammograms. A copy of the finished project will be sent to the Churchill Health Centre.

If you would like to participate or receive more information about the project, please contact me in the medical clinic. Thank you.

Members of the practicum committee are:

Chairperson: Karen Chalmers, BScN, Msc (A), PhD. Tel: 204-474-7452

Internal Member: Debbie Askin, BN, MN

External Member: Dr. A. Macauley, MD, MSc, CCFP

*Appendix E*

## Consent Form for Health Care Professionals

Practicum Project Title: Barriers and /or Facilitating Factors Affecting Breast Screening

Mammograms in Women 50 to 69 Years of Age in a Northern Manitoba Town

Project Researcher: Catherine Brasier

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the practicum project is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The purpose of the practicum project is to uncover factors that are facilitators or barriers to women participating in the mobile breast screening program in Churchill. The project is being carried out by Cathy Brasier, a Registered Nurse and student in a Master of Nursing program at the University of Manitoba. The project is being carried out as a part of the requirements of the Master of Nursing program.

Your participation will consist of one verbal interview that will last approximately 20 minutes. I will be handwriting your replies. Your replies will be kept confidential. Your name will not be recorded on the interview form. No identifying factors pertaining to yourself will be used on the interview form or in the written project. The information collected will be used in the project to help identify factors that could enhance or prevent women 50 to 69 years old from accessing screening mammograms. A copy of the finished project will be sent to the Churchill Health Centre. You will be offered a summary of the project report.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the practicum project and agree to participate. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Project Researcher: Catherine Brasier RN BN Tel: 204-275-7146

Project Supervisor: Karen Chalmers, BScN, Msc (A), PhD. Tel: 204-474-9317

This project has been approved by the Education/Nursing Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Participant's Signature \_\_\_\_\_ Date \_\_\_\_\_

Researcher's Signature \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_  
I would like a summary of the project    Yes \_\_\_\_\_ No \_\_\_\_\_

Mailing Address \_\_\_\_\_

\_\_\_\_\_

*Appendix F**Interview Questions for Health Care Providers*

Thank you for participating in this interview. The length of the interview will be approximately 20 minutes. Do you have any questions about the interview before we start?

Do you work with women in this age group of 50 to 69 years of age?

Are you involved in measures to promote screening mammograms for women in this age group?

If so, please describe.

Do you discuss breast screening with women in your practice?

What factors do you think prevent or hamper you from referring these women for screening mammograms?

What factors would help you refer women for mammograms?

Are you aware there is a mobile breast screening program that flies into Churchill every two years to screen women aged 50 to 69 years?

Do you have any recommendations that would may increase the rate of women's participation in the mobile screening program?

Do you think a reminder or some type of flagging placed on the chart would help you to refer women for breast screening?

Is there any other information you would like to share?

*Appendix G**Letter of Invitation to Participate for Women in the Community*

My name is Cathy Brasier. I am a nursing student at the University of Manitoba in the Master of Nursing Nurse Practitioner program. As a part of my practical experience working the medical clinic at the Churchill Health Centre, I am doing a project about women taking part in the mobile breast screening program. I would like to ask you a few question about women having mammograms in Churchill. Your name would not be used or made known in any way. Participation in the interview is voluntary and you may stop the interview at any time. The interview will take approximately take 20 minutes. I will be hand writing your replies to the questions. The information obtained will be used to find out what prevents or helps women to have breast screening mammograms in Churchill. This information will be presented in a written report that will be sent to the Churchill Health Centre. These are the names of my committee members if you would like to ask them any questions.

Committee Chairperson: Karen Chalmers, BScN, Msc (A), Phd. Tel: 204-474-7452

Internal Member: Debbie Askin, BN, MN

External Member: Dr. A Macauley, MD, MSc, CCFP

Thank you for considering participating in this interview. If you would like to participate, please let Vicki McEwan know and she will pass on your name and telephone number to me. I will then get in touch with you and set up a time for the interview.

*Appendix H*

## Consent Form for Community Women

Practicum Project Title: Barriers and/or Facilitating Factors Affecting Breast Screening

Mammograms in Women 50 to 69 Years of Age in a Northern Manitoba Town

Project Researcher: Catherine Brasier

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give the basic idea of what the practicum project is about and what your participation will involve. If you would like more detail about something mentioned here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The purpose of this practicum project is to find out what factors either help or prevent women aged 50 to 69 years old in taking part in the mobile breast screening program that takes place in Churchill. The project is being carried out by Cathy Brasier, a Registered Nurse and a student in a Master of Nursing program at the University of Manitoba. The project is being carried out as a part of the requirements for the Master of Nursing program.

Your participation in this project would involve one interview in which I will ask you a few questions about this matter. The interview will be about approximately 20 minutes. I will be handwriting your replies. The information you provide will be kept confidential. Your name will not be written or recorded on the interview form or identified in any manner anywhere in the project. The information you provide will be used in the project to help identify factors that may improve women's participation in the breast screening program. A copy of the project will be sent to the Churchill Health Centre. You will be offered a summary of the project report.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation



Project Researcher: Catherine Brasier RN BN

Project Supervisor: Karen Chalmers, BScN, MSc. (A), PhD.

This research has been approved by the Education/Nursing Research Ethics Board.

If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Participant's Signature \_\_\_\_\_ Date \_\_\_\_\_

Researcher's Signature \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_

I would like a summary of the project report Yes \_\_\_\_\_ No \_\_\_\_\_

Mailing Address \_\_\_\_\_

\_\_\_\_\_

*Appendix I**Interview Questions for Women in the Community*

Thank you for agreeing to participate in this interview. The approximate length of the interview will be 20 minutes. Do you have any questions about the interview before we start?

Do you know there is a mobile breast screening program that comes to Churchill every two years?

Have you ever participated in the mobile breast screening clinic in Churchill?

Why or why not?

Did you receive a letter of invitation to have a mammogram?

Did you find the letter helpful?

What do you think would help improve women's attendance at the breast screening clinic?

What do you think keeps women from having mammograms in Churchill?

Is there any other information you would like to share?