



The Division of
Continuing Professional Development
Faculty of Medicine



BC Cancer Agency

CARE + RESEARCH

An agency of the Provincial Health Services Authority

Primary Care Physician Education and Engagement in the Promotion of Recommended Cancer Screening in BC

REPORT ON PROVINCE-WIDE CANCER SCREENING NEEDS ASSESSMENT

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2009/2010

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ACKNOWLEDGEMENTS

The UBC Division of Continuing Professional Development (UBC CPD) would like to acknowledge the major financial support from the BC Cancer Agency's Cancer Screening Programs in funding this needs assessment study.

We would like to acknowledge the Family Practice Oncology Network of the BC Cancer Agency, the British Columbia Medical Association, the BC College of Family Physicians, the Society of General Practitioners of BC, as well as the UBC Department of Family Practice for their valued support in endorsing and promoting this needs assessment to primary care physicians in the province.

Finally, we would like to thank the numerous physicians who gave their time to participate in the survey and/or focus group components of the needs assessment study.

ADVISORY COMMITTEE MEMBERSHIP

Presented below (*in alphabetical order*) are the Advisory Committee members for the needs assessment study. Details on the involvement of the Advisory Committee are described in the 'Methods' section.

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GLOSSARY

BC	British Columbia
BCCA	British Columbia Cancer Agency
BCCFP	British Columbia College of Family Physicians
BCMA	British Columbia Medical Association
CCSP	Cervical Cancer Screening Program
CPSBC	College of Physicians and Surgeons of BC
CME/CPD	Continuing Medical Education/Continuing Professional Development
CPSBC	College of Physicians and Surgeons of BC
CT Colonography	Computed Tomography Colonography or Virtual Colonoscopy
DRE	Digital Rectal Examination
EMR	Electronic Medical Record
FHA	Fraser Health Authority
FOBT	Fecal Occult Blood Test
FPON	Family Practice Oncology Network
HCP	Hereditary Cancer Program
HPV	Human Papillomavirus
IHA	Interior Health Authority
LBC	Liquid Based Cytology
MRI	Magnetic Resonance Imaging
NHA	Northern Health Authority
PSA	Prostate Specific Antigen
SGP BC	Society of General Practitioners of British Columbia
SMP BC	Screening Mammography Program of British Columbia
UBC CPD	UBC Division of Continuing Professional Development
VCHA	Vancouver Coastal Health Authority
VIHA	Vancouver Island Health Authority

EXECUTIVE SUMMARY

INTRODUCTION

Studies show that screening for certain cancers leads to earlier detection and reduced morbidity and mortality, and that physician recommendations have the greatest influence on patient behaviour. However, most research on screening practices has been conducted on primary care physicians practicing in the United States where social, demographic, ethnic, and economic circumstances differ from Canadian health care models. Limited published data is available about the cancer screening practices, attitudes, and barriers of British Columbia (BC) primary care physicians.

In order to address the potential gap in recommended cancer screening practices in BC, the BC Cancer Agency engaged the University of British Columbia Division of Continuing Professional Development (UBC CPD) to conduct a comprehensive, province wide, needs assessment with the goals of:

- (i) Understanding BC general practitioners' and family physicians' attitudes and practices related to screening for the cancers that were the focus of the study (breast, cervical, colorectal, prostate cancers, as well as hereditary predisposition to cancer);
- (ii) Identifying physicians' suggestions for improving cancer screening in BC;
- (iii) Understanding the barriers to the engagement of physicians and well patients in discussions about cancer screening; and
- (iv) Developing a strategy to improve doctor/patient communication and best practices pertaining to cancer screening.

METHODS

The needs assessment study employed a mixed methods approach consisting of a comprehensive survey of primary care physicians registered with the College of Physicians and Surgeons of BC as of January 2009, followed by focus groups drawn from a sample of survey respondents. All data was collected in 2009. The online version of the survey was sent to 4,457 BC primary care physicians by email followed by a hardcopy of the survey mailed to 5,216. The quantitative data was analyzed using SPSS 17.0, with an α level set at 0.05, and descriptive analysis performed. Content analysis was performed on the qualitative data obtained from the open-ended survey questions. Salient thematic areas were identified and coded.

Focus groups and interviews were conducted involving a total of 25 participants. The focus groups and interviews were recorded and data were tabulated, triangulated, summarized, and analyzed for patterns or emergent themes. NVivo (version 8), a qualitative analysis software, was used for organizing and grouping data and applying codes and units of analysis.

DEMOGRAPHICS

In total, 887 primary care physicians completed the survey yielding a response rate of 17% with an even distribution of male and female physicians. A noticeable higher percent of physicians completed the hardcopy version (74%) compared to the online version (26%) of the survey. The average age of respondents was 49 years, suggesting substantial practice experience, as slightly more than half had been in practice for 20 years or more. A large percent were in full-time fee for service practice and reported seeing more than 100 patients per week in small family practice settings. There was physician representation across the five BC health authorities, with both urban and rural practitioners participating in the study. These demographics were similar between survey and focus group participants, confirming the study sample was representative of BC physicians.

HIGHLIGHTS OF SURVEY FINDINGS

CURRENT PRACTICE

The majority of physicians start recommending cancer screening within an age range that is consistent with current recommendations. However, results showed variation in physician practice with respect to the age range they stop recommending cancer screening, which was often much older than recommended by cancer screening guidelines. These differences in physician practice may be explained either by their perception that the potential benefits of screening older patients outweighs the potential harms of not screening or by their misunderstanding of recommended screening guidelines.

The majority of physicians informed well patients about the need for cancer screening during check-ups or routine visits. One-third of physicians were less comfortable with their knowledge to help patients decide the pros and cons of cancer screening. In particular, physicians reported higher comfort with explaining the pros and cons and interpreting results for breast, cervical, and colorectal cancer screening, but lesser comfort in doing this for hereditary predisposition to cancer and prostate cancer screening.

For well patients, a large percentage of physicians recommended colonoscopy, a Digital Rectal Exam (DRE) with a home Fecal Occult Blood Test (FOBT), or simply a FOBT completed at home for colorectal cancer screening. Almost all physicians recommended DRE and a Prostate Specific Antigen (PSA) test for prostate cancer screening. This is particularly interesting when considering the fact that PSA testing and colonoscopy are not part of the routine BC cancer screening program.

The majority of physician respondents believed that the BC Cancer Agency, primary care physicians, and public health agencies have a role in sending screening notifications to patients, whereas few perceived the Ministry of Health and regional health authorities as having a role in this.

Participants commented on their satisfaction with the existing reminder system in place for the screening mammography program and suggested that similar models could be expanded to other screening practices. Approximately half of physicians indicated they needed access to better reminder systems to notify their patients of recommended cancer screening for cervical, colorectal, and prostate cancers. The physicians believed EMR systems should be integrated for patient reminders in practice settings. Data revealed that paper based reminders were perceived to be a more effective mechanism for reminding patients about cancer screening procedures compared to phone calls. These paper-based reminders could be sent to the public by the BCCA.

ATTITUDES / KNOWLEDGE

The physician respondents reported an overall strong belief in the advantages of cancer screening for well patients. Although still considered favourable, agreement was lower for prostate cancer screening and hereditary predisposition to cancer. Findings showed a high percent of physician respondents were comfortable with their skills in performing clinical breast exams, Pap tests, and DREs for cancer screening.

Physicians recognized their central role in the cancer screening process. The majority believed they effectively communicated cancer screening strategies to their well patients and that patients tend to follow their recommendations for cancer screening. Most physicians believed that patients should be able to continue to self-refer for breast cancer screening and self-referral should be made available for colorectal cancer screening.

FACILITATORS/BARRIERS TO CANCER SCREENING

Physicians indicated barriers to discussing and encouraging cancer screening for well patients included several competing issues such as: patients with multiple health issues; language and cultural barriers; level of comfort with knowledge about cancer screening and the time it takes to explain the pros and cons of cancer screening; inadequate physician financial compensation; patient discomfort with screening procedures; patient inability to afford the cost of screening procedure; and patient anxiety about the results; accessibility of screening services (*especially rural areas*). Some of these barriers related to the limited time a physician could spend with a patient to deal with cancer screening, and several strategies were suggested by physicians to maximize the time a physician could spend with their patients for this. These included changes to the current physician financial compensation structure; processes to facilitate physicians spending dedicated time with patients for cancer screening; cancer screening discussions during scheduled group visits; the use of brochures as decision aids to inform patients about cancer screening; and the availability of point of care tools for use in a medical practice context.

The data showed a need for physicians to have better available cancer screening educational materials for patients especially related to colorectal and prostate cancer, as well as the hereditary predisposition to cancer.

The physicians believed the current pace and scope of their practices made it difficult for them to be the “primary driver” for population based screening. It was also suggested that better public education to increase patient awareness of cancer screening would be an important strategy to encourage more meaningful physician-patient discussions about cancer screening.

Both electronic and paper-based resources were preferred by physicians for keeping up to date on cancer screening information and accessing screening guidelines.

The physicians predominately reported the need for more education to improve their current cancer screening practices. In particular, information about new screening programs, referral criteria, and clearer follow-up processes and screening guidelines were requested. A significant percentage of physicians reported needing clearer cancer screening guidelines and follow-up recommendations for patients with positive screening results for colorectal and prostate cancers as well as the hereditary predisposition to cancer.

Physician respondents demonstrated a higher preference for a traditional educational format for learning about cancer screening – conferences – in comparison to other, less preferred educational formats such as self directed study, small group workshops, hospital rounds, and online CME/CPD.

Physicians also indicated individual report cards on Screening Mammography and Pap Test Sampling Quality to be a useful feedback mechanism, particularly in reference to the quality of screening that they performed and the summary of the number of patients screened. It was suggested that the report cards might also be a valuable source of ongoing education for physicians.

Data showed that periodic concise emails from the BC Cancer Agency was an appropriate method for informing physicians about updates to cancer screening guidelines and changes to screening programs. These notifications might be sent in partnership with other BC physician organizations.

DEMOGRAPHIC VARIATIONS IN SURVEY RESPONSES

Rural physicians agreed less with the advantages of screening and found geography more of a barrier and language less of a barrier in recommending cancer screening for their well patients compared to urban based physicians.

Interestingly, gender played a role in discussing and performing certain cancer screening recommendations. In comparison to female physicians, male physicians had more patients requesting PSA testing and greater comfort performing DREs, but less often asked new patients about their Pap history or explained to them the pros and cons of cervical cancer screening, had fewer patients requesting Pap tests, and were less comfortable performing Pap tests.

Compared to the physicians who had been in practice for a longer period of time (*at least 30 years*), knowledge base was more often a barrier for the physicians newer to practice (*10 years or less*) in specifically discussing the pros and cons of cancer screening with well patients. The findings also showed the cohort of newer physicians were less confident in performing certain cancer screening procedures. Physicians newer to practice had a higher preference for online CME and accessing cancer screening information electronically.

SYNTHESIZED FINDINGS AND RECOMMENDATIONS

The synthesized findings and recommendations are directed towards the BC Cancer Agency (BCCA) and other stakeholder organizations involved in cancer screening in BC. They are grouped into the following eight categories, addressing key findings from the survey and focus groups of the province-wide BC cancer screening needs assessment study:

1. Addressing Practice Based Challenges*
2. Public/Patient Engagement*
3. BCCA Website*
4. Breast Cancer Screening
5. Cervical Cancer Screening
6. Colorectal Cancer Screening
7. Hereditary Predisposition to Cancer
8. Prostate Cancer Screening

* Categories 1 – 3 are general recommendations related to the screening topic areas that were the focus of this needs assessment study.

In interpreting these recommendations, considerations should be made to the associations between demographic variables - geographic region physicians practice in (i.e. urban vs. rural), gender, and years physicians have been in practice - on survey responses that are presented in section 3.5 of the report.

1. ADDRESSING PRACTICE BASED CHALLENGES

- 1.1. British Columbia Medical Association (BCMA) and Society of General Practitioners (SGP) should **advocate** for the creation of specific billing codes to compensate *fee-for-service* primary care physicians for dedicated time to discuss cancer screening with well patients.

For example:

- 1.1.1. A billing code for a cancer screening visit to discuss cancer screening procedures that are appropriate for the patient.
 - 1.1.2. A billing code for a group visit, where physicians educate patients in groups on appropriate cancer screening in a practice support model.
- 1.2. **Need** an expanded reminder and follow up system for all established cancer screening programs, potentially using the model of the Screening Mammography Program of BC.
 - 1.2.1. Prior to implementing changes, ensure physicians are: (i) supportive of expanded reminder or follow up systems; and (ii) kept involved with all aspects of engaging their patients.
 - 1.3. **Support** the integration of cancer screening practices into Electronic Medical Record (EMR) systems used by physicians:
 - 1.3.1. Send individualized patient screening results and recommendations directly through electronic methods to physicians' EMR.
 - 1.3.2. Advocate for the Physician Information Technology Office (PITO) to support integration of clinical practice alerts and audits for cancer screening in EMR systems.
 - 1.4. BCMA and SGP should **support** the BCCA in the development of a cancer screening system that helps to link all patients to specific primary care physicians or alternate health care providers for screening and follow up.
 - 1.5. **Improve** educational materials provided to physicians:
 - 1.5.1. Integrate physician educational materials into the BCCA website and allow physicians to request (via online and paper form) specific brochures for their practice.
 - 1.5.2. Expand the current BCCA branding scheme (*e.g. use of purple & white*) used on colorectal and hereditary cancer educational materials/brochures to other screening programs. Ensure BCCA logo and type of cancer are prominently displayed (*e.g. at the top of the materials*) on each piece of educational material/brochure.
 - 1.5.3. Need clear flow charts for each cancer program, similar to the "Participant Flow Chart" used in the pilot Colon Check program, which illustrates the process of screening by outlining the pathways from screening criteria, to appropriate screening procedures, to frequency for repeating screening, to follow-up recommendations for abnormal screening results.
 - 1.6. **Coordinate** development of resources and education for primary care physicians on:
 - 1.6.1. How to address situations whereby at-risk patients refuse screening due to cultural sensitivities or a prior traumatic experience (*e.g. patient has history of abuse*).
 - 1.6.2. Appropriate screening procedures to use for well patients (*including accuracy, benefits, and limitations of screening procedures*).
 - 1.6.3. Appropriate age groups to begin screening, frequency of screening, and time frame for repeating/stopping screening.
 - 1.6.4. Follow-up procedures for patients with abnormal screening results.

- 1.7. **Disseminate** cancer screening guidelines, follow-up recommendations, changes/updates to existing screening programs, and **educate** primary care physicians about current recommendations and resources available to assist them in their cancer screening practices through:
 - 1.7.1. Accredited CME/CPD approaches such as: conferences, local small group workshops, hospital rounds, online webinar sessions and/or self-directed learning projects.
 - 1.7.2. Use of multiple mediums such as: the physician section of the BCCA website, BCCA feedback report cards, email, courier services, and postage mail.
 - 1.7.3. Development of a case-based cancer screening related educational road show, which incorporates best practices in cancer screening.
 - 1.7.3.1. Utilize existing professional development networks such as the Family Practice Oncology Network (FPON) and the University of British Columbia's Division of Continuing Professional Development (UBC CPD) to deliver road shows provincially.
 - 1.7.4. Development of a mechanism to outline BC-based cancer screening guidelines and processes to physicians new to practice or moving to BC from elsewhere.
 - 1.7.5. BCCA partnering with other professional health organizations such as the BCMA, BC College of Family Physicians (BCCFP), UBC CPD, as well as the College of Physicians and Surgeons of BC to address the above areas.
- 1.8. **Encourage** physicians, particularly those in urban areas serving a patient population with diverse languages, to utilize the BCCA website, 811 nurse line, Healthlink BC (www.healthlinkbc.ca), as well as the Public Health Agency of Canada (www.phac-aspc.gc.ca) as resources for multilingual cancer related information.

2. PUBLIC/PATIENT ENGAGEMENT

- 2.1. **Develop** multi-media public education campaigns (*e.g. web-based video clips, TV, radio, brochures within physician offices*) for cancer screening with support from BC Ministry of Health Services, Health Authorities, other professional health organizations, and non governmental organizations, in order to:
 - 2.1.1. Dispel myths and uncertainties about cancer screening (*e.g. breast, prostate*).
 - 2.1.2. Illustrate benefits and potential harms of screening.
 - 2.1.3. Reduce anxiety and uncertainty about screening procedures.
 - 2.1.4. Encourage appropriate participation in screening procedures.
 - 2.1.5. Engage high-risk groups and those with low screening participation.
 - 2.1.6. Provide clarity on follow up procedures when there is an abnormal screening result.
- 2.2. **Improve** the readability of text in patient brochures by using shorter sentences, additional figures and diagrams, and expand provision of multilingual materials reflective of the diverse BC population.
- 2.3. **Develop** a patient group or public forum educational toolkit on cancer screening that might be delivered by a physician or another trained health care provider.

3. BCCA WEBSITE

- 3.1. **Create** an entry portal for users of the website to select information "For Physicians" or "For Patients". Subsequent web pages should be tailored accordingly.

For physicians

- 3.2. **Promote** the BCCA website as a resource for primary care physicians to:
 - 3.2.1. Clarify guidelines for cancer screening.
 - 3.2.2. Clarify follow-up recommendations for patients with positive screening results.
 - 3.2.3. Download and/or order relevant educational materials such as brochures or newsletters on cancer screening both for patients and for themselves.
- 3.3. **Enhance** the user interface of the website by reducing the 'branches' physicians have to navigate through to obtain desired information.
- 3.4. **Highlight** the latest updates on cancer such as clinical trials, or changes in clinical guidelines on the main entry page.

For public/patients

- 3.5. **Promote** the website as a resource for the public/patients to:
 - 3.5.1. Read and/or download cancer related information and materials such as on prevention strategies and screening procedures.
 - 3.5.2. Be more actively involved in self-education and self management, by developing an interactive tool through which a user can input their demographic information (*e.g. age, gender, lifestyle, family history, etc*), to generate results that highlight potential cancer risks and suggest screening procedures/prevention strategies to discuss with their physician.
- 3.6. **Offer** the public/patient content of the website in languages reflective of the diverse BC population and improve the readability level of text content on the website.
- 3.7. **Imbed** educational videos that explain screening procedures in a more dynamic manner than solely providing information through written content.

4. BREAST CANCER SCREENING

- 4.1. **Develop** educational activities for primary care physicians on enhanced screening practices/recommendations/procedures for high risk patients.
- 4.2. **Improve** accessibility and reduce wait time to the screening mammography program (SMP).
 - 4.2.1. Increase the frequency that the Screening Mammography mobile van visits rural/remote communities.
 - 4.2.2. Expand the number of SMP clinics accepting patients.
- 4.3. **Investigate** the feasibility of alternative evidence-based breast cancer screening procedures that yield less false positives and less discomfort for patients.

5. CERVICAL CANCER SCREENING

- 5.1. **Facilitate** linkages between male primary care physicians and female physicians or allied health care providers, particularly in rural areas, for carrying out a Pap test by a female health care provider when requested by a patient.
- 5.2. **Improve** access to colposcopic examination for follow up of abnormal results.

- 5.3. **Investigate** feasibility and reliability of alternative screening procedures such as:
 - 5.3.1. Procedures that can be performed by patients.
 - 5.3.2. Wider adoption or change over to HPV testing for cervical screening.
 - 5.3.3. Usage of Liquid Based Cytology (LBC).
6. **COLORECTAL CANCER SCREENING**
 - 6.1. **Increase** accessibility and reduce wait time for appropriate colorectal cancer screening (e.g. colonoscopy).
7. **HEREDITARY PREDISPOSITION TO CANCER**
 - 7.1. **Support** accredited CME/CPD sessions (e.g. through regional conferences, local workshops, hospital rounds, webinar sessions, etc) for primary care physicians that:
 - 7.1.1. Raise physician awareness and familiarity with the Hereditary Cancer Program (HCP), particularly in rural areas (e.g. criteria for referrals, appointment locations, etc).
 - 7.1.2. Clarify the genetic counselling and testing process for patients and physicians.
 - 7.1.3. Highlight the evidence and benefits and/or limitations of genetic testing for hereditary predisposition to cancer.
 - 7.2. **Provide** primary care physicians with hardcopy samples of patient related educational materials about hereditary predisposition as well as genetic counselling and testing.
 - 7.3. **Improve** the communication between the HCP and referring physicians to better clarify the results of genetic testing for both patients and primary care physicians.
 - 7.3.1. Promote physician awareness of the dedicated phone line at the BCCA where primary care physicians can call in to present questions about the referral criteria to HCP or the results of genetic testing.
 - 7.3.2. Identify strategies to more effectively communicate to the primary care physician the implications of genetic testing results for individual patients.
 - 7.4. **Solicit** provincial and federal funding to support the expansion of the number of HCP sites.
8. **PROSTATE CANCER SCREENING**
 - 8.1. **Develop** accredited CME/CPD educational programming for primary care physicians to clarify uncertainties surrounding prostate screening.
 - 8.1.1. Provide clear information about the controversies, benefits, and potential harms of prostate cancer screening, in particular on Prostate Specific Antigen (PSA) testing.
 - 8.1.2. Provide primary care physicians with prostate cancer screening guidelines.
 - 8.1.3. Engage the CMPA (Canadian Medical Protective Association) in leading educational programming specifically around any potential medical/legal aspects of not ordering PSA tests.
 - 8.2. **Establish** a committee to engage appropriate stakeholders in discussions around Medical Services Plan (MSP) coverage of PSA testing.
 - 8.3. **Provide** primary care physicians with decision support aids to give to their patients that:
 - 8.3.1. Create awareness and understanding of prostate cancer.
 - 8.3.2. Educate on available prostate cancer screening procedures such as Digital Rectal Exams and PSA testing, as well as the benefits (e.g. early detection) and limitations (e.g. false positive) of each.

1 INTRODUCTION

Background

It is generally accepted that screening for certain cancers leads to early detection and lowers the incidence and morbidity from these cancers ^{1,2,3,4,5}. Patient visit to primary care physicians (*family physicians/general practitioners*) can therefore be viewed as an opportunity to educate patients about appropriate cancer screening practices. However, data from the United States (US) suggests that primary care physicians often do not discuss the risks and benefits of cancer screening with their patients due to variety of issues such as medical training, competing practice priorities, beliefs about the ineffectiveness of screening, as well as reimbursement concerns. These factors may inappropriately deny patients the opportunity to be adequately screened for certain cancers ^{5,6,7}. Targeted efforts should be made to identify, address, and eliminate the barriers or challenges primary care physicians' face in recommending cancer screening in order to promote this important diagnostic tool to the general population, particularly for at risk patients.

The challenge within Canada and specifically in British Columbia (BC) is that most of the existing researches on primary care physicians' cancer screening practices had been conducted in US health care settings, where different social, demographic, ethnic, and economic considerations exist as compared to the Canadian health care model. As such, little Canadian data existed about the attitudes and beliefs of primary care physicians on the issues related to cancer screening. This suggested that a comprehensive needs assessment would ensure full understanding of cancer screening practices, and would help determine the extent of any care gap that existed between cancer screening practices and the recommendations for the at risk population in BC.

Purpose

In order to address the possible gap in care between actual and recommended cancer screening practices for the at risk population in BC, the BC Cancer Agency (BCCA) engaged the UBC Division of Continuing Professional Development (UBC CPD) to conduct a province-wide needs assessment in order to understand the attitudes, beliefs, and behaviours of primary care physicians' in BC towards cancer screening. In particular, the needs assessment was intended to determine the specific barriers for cancer screening, promotion, and education in primary care settings, as was designed in the context of BC Cancer Agency's current initiatives and programs.

¹ Blanks RG, Moss SM, McGahan CE, Quinn MJ, and Babb PJ. Effect of NHS breast screening programme on mortality from breast cancer in England and Wales, 1990-8: comparison of observed with predicted mortality. *BMJ* 321: 665-669, 2000.

² Quinn M, Babb P, Jones J, and Allen E. Effect of screening on incidence of and mortality from cancer of cervix in England: evaluation based on routinely collected statistics. *BMJ* 318: 904-908, 1999.

³ Sasieni P and Adams J. Effect of screening on cervical cancer mortality in England and Wales: analysis of trends with an age period cohort model. *BMJ* 318: 1244-1245, 1999.

⁴ Scholefield JH, Moss S, Sufi F, Mangham CM, and Hardcastle JD. Effect of faecal occult blood screening on mortality from colorectal cancer: results from a randomised controlled trial. *Gut* 50: 840-844, 2002.

⁵ Wee CC, McCarthy EP, and Phillips RS. Factors associated with colon cancer screening: the role of patient factors and physician counseling. *Prev Med* 41: 23-29, 2005.

⁶ Womeodu RJ and Bailey JE. Barriers to cancer screening. *Med Clin North Am* 80: 115-133, 1996.

⁷ Dunn AS, Shridharani KV, Lou W, Bernstein J, and Horowitz CR. Physician-patient discussions of controversial cancer screening tests. *Am J Prev Med* 20: 130-134, 2001.

Specifically, this needs assessment identified barriers and challenges in the screening for five specific cancers in order to identify alternative approaches for primary care physicians to better engage patients in recommended cancer screening practices.⁸ The cancers were:

- i. Breast Cancer;
- ii. Cervical Cancer;
- iii. Colorectal Cancer;
- iv. Hereditary Predisposition to Cancer; and
- v. Prostate Cancer

The multifaceted goals of this project were to: (i) understand BC general practitioner and family physicians' attitudes towards cancer screening, (ii) listen to their ideas for improving cancer screening in BC; (iii) understand what communication barriers exist between physicians and patients when discussing screening for breast, cervical, colorectal, prostate cancers, and identifying patients with hereditary predisposition to cancer; as well as (iv) develop a strategy to improve doctor/patient communication pertaining to cancer screening.

It is anticipated that achieving these goals will help in the design of educational programs, clinical support strategies, physician and patient information materials, and other engagement strategies that will improve cancer screening practices and result in increased patient uptake in recommended screening for the above mentioned screenable cancers, leading to better health care outcomes for patients in BC in the context of cancer care.

Key Research Questions

The following core research questions were used to guide the development of all research instruments, and focus the data collection processes.

- i. What are current attitudes of BC primary care physicians towards cancer screening?
- ii. What is the current level of knowledge amongst BC primary care physicians surrounding the effectiveness of cancer screening in reducing cancer incidence and mortality?
- iii. What are the key barriers and incentives to increased effective doctor/patient communication about cancer screening?
- iv. What do BC primary care physicians perceive their role in ensuring that eligible patients are screened?
- v. What beliefs and level of knowledge do BC primary care physicians currently possess with respect to the application of guidelines or 'best practices' for the management of patients deemed to be 'at risk' for colorectal, cervical, breast, prostate, or hereditary cancers?
- vi. What, if any, impact do patient demographic variables (i.e. race, gender, language, culture) have on doctor/patient communication?
- vii. What strategies aimed at improving doctor/patient communication and cancer screening do BC primary care physicians see as being viable or desirable? How do BC primary care physicians want to be engaged in cancer screening initiatives and practice?
- viii. What types of educational strategies/interventions are likely to have an impact on physician performance and patient uptake for cancer screening?

⁸ Screening programs currently exist for breast, cervical, and colorectal (*in pilot phase*) cancer, as well as hereditary predisposition to cancer.

2 METHODS

Participants

The study population was comprised of primary care physicians registered with the College of Physicians and Surgeons of BC as of January 2009. Survey and focus groups were used as methods to collect rich data from the physicians for the scope of the needs assessment.

2.1 SURVEY

Advisory Committee

An advisory committee was formed in the initial stages of the development of the needs assessment. Membership within the advisory committee included the UBC CPD Assistant Dean, Director and Project Manager, the BCCA, and other BC primary care physicians interested in the area of cancer screening. Additional key stakeholder organizations such as the BC Medical Association (BCMA), Family Practice Oncology Network (FPON), BC College of Family Physicians (BCCFP), BC Ministry of Healthy Living and Sport, Society of General Practitioners of BC (SGP), and the Guidelines and Protocols Advisory Committee (GPAC) were represented. Membership on the advisory committee was designed to ensure that multiple perspectives from both clinical practitioners and key organizations on the issues related to cancer screening were included in the advisement, engagement, and overall direction of the project.

Design

In March 2009, the advisory committee met with the project's working group (*UBC CPD, BCCA and a co-physician lead*) to contribute their expertise and insight towards the design of the survey instrument used for the first component of data collection for the needs assessment.

The survey questionnaire was designed as a self-report tool, comprised of 52 questions and covered the following areas:

- i. Knowledge and attitudes towards cancer screening;
- ii. Attitudes towards educational approaches aimed at increasing the overall prevalence of cancer screening;
- iii. Barriers towards engaging in cancer screening discussions with well patients;
- iv. Self-reported practices on screening for breast, cervical, colorectal, prostate cancers and identifying patients at risk for hereditary cancer; and
- v. Physician participant demographic profile

Deployment

Primary care physicians in BC were provided with two options for responding to the survey component of the needs assessment - an online version and a paper version, which was emailed and mailed to primary care physicians.

The online version of the survey was launched on May 5th 2009, with the assistance of the BCMA in sending an invitation email from the president to 4,457 BC primary care physicians in the BCMA contact database.

Subsequently, on May 21st 2009, the paper version of the survey was mailed to 5,216 primary physicians registered with the College of Physicians and Surgeons of BC as of January 2009.

Note: 1,116 primary care physicians that either did not have a mailing address, or whose mailing address was outside of BC (i.e. another province or country) were excluded from the mail-out to 5,216 physicians.

The paper version included a letter encouraging primary care physicians in the province to complete the needs assessment. This study was supported and endorsed by BC physician organizations and an invitation letter was signed by the president's of the BCMA, BCCFP, and the SGP encouraging their respective membership to participate in the province wide needs assessment. A reminder email to complete the survey was sent from the BCMA president in late May, and a reminder message was included in the June issue of the SGP president's letter. In order to facilitate the analysis and interpretation of survey results, the online version of the survey was closed on June 25th and completed paper versions returned to UBC CPD were accepted until July 13th 2009.

Response

In total, 964 surveys were received, of which 292 were completed online and 672 completed on paper. To ensure the survey feedback analyses were targeted to primary care physicians in practice, 77 of 964 surveys were excluded, as 57 respondents did not indicate they were a primary care physician, 8 said they were a specialist, and 12 were in other practice types such as residents, and full time administrators.

The response rate to the survey component of the needs assessment was 17%, based on the adjusted count of 887 completed surveys (887 of 5,216).

Quantitative Analysis

The quantitative data were analyzed using SPSS 17.0, with significance set at α 0.05. Descriptive analysis was performed. For the Likert scale responses (scales 1 to 5), weighted means instead of arithmetic means were reported as the data is ordinal rather than continuous (*see Appendix 1 for a sample weighted mean calculation*). Aggregates of Likert scale responses were reported as well, for example, the aggregate of agreement, frequency or preference. Cross tabulations and Chi-square test were used to determine if there were significant differences among the responses in terms of different region (*rural vs. urban*), gender, and graduation years (1979 and earlier, 1980-1989, 1990-1999, 2000-2009).

In terms of presenting the data of *agreement levels*, the percent of response count for each rating scale and the aggregate percent of agreement (scales 4 & 5) are reported. Scale 3 is understood as "Neutral". For the data of *frequency levels*, Never=1, Seldom=2, Sometimes=3, Often=4, Always=5. The percent of response count for each rating scale and the aggregate percent of scales 3, 4 & 5 are reported. In terms of presenting the data of *preference levels*, the percent of response count for each rating scale and the aggregate percent of preference (scales 4 & 5) are reported. Scale 3 is understood as "Neutral".

Qualitative Analysis

Content analysis was performed on the qualitative data obtained from the open-ended survey questions. Salient thematic areas were identified through coding the content and grouping similar comments and themes together.

2.2 FOCUS GROUPS

Subject recruitment and data collection

Invitations for the focus group phase of the cancer screening needs assessment were sent to 242 survey participants (family physicians only), who indicated (upon completion of the survey) that they would be willing to participate in further focus group discussion. These individuals provided their contact information through which the research team could contact them. Five focus groups options between November 10th and 26th, 2009 were provided to potential physician participants. These options were either in the morning (7:30 - 9:00 am) or in the evening (6:30 - 8:30 pm).

An advantages of the focus groups was that qualitative data could be collected, which would provide more depth of responses than could be answered in the survey. It also allowed for the researchers to probe the feedback received for clarification. In addition, focus groups offered participants the opportunity to engage in discussions with their colleagues, and this interaction generated additional feedback that may not have been obtained through one-on-one interviews.

A series of five focus groups and two individual interviews were conducted with this group of interested BC primary care physicians. Telephone interviews were conducted on an individual basis to accommodate two physicians who were interested in participating in a focus group but had scheduling conflicts. The focus groups were 90 minutes in length while the interviews were 60 minutes in length. Each focus group had three to six physician participants. There were a total of 23 physicians that participated in the five focus groups, two of which were held in person in the Boardroom at the UBC Division of Continuing Professional Development (UBC CPD) office in Vancouver (*for physicians in the lower mainland*), with the other three conducted by teleconference (*primarily for physicians in other areas of the province*). All physicians signed and returned an informed consent form to the researchers before participating in the focus group or interview.

The focus groups and interviews were moderated by a research coordinator with experience in conducting the protocols and qualitative research methodology. In addition, two to three observers were present at each focus group and during the post session debriefing. Both focus groups and interviews utilized a semi-structured framework which allowed feedback on the sequence of questions, while allowing the discussions to flow freely among the participants. There were 20 questions in each focus group/interview (*see appendix 4 on page 92 for the protocol*). The questions focused on the physicians' perceptions on the cancer screening practices and BC Cancer Agency's (BCCA) support in cancer screening. Prior to the focus group, physicians were mailed examples of BCCA materials (*see appendix 5 on page 95 for the content of the sample materials*), and were asked to share their perspectives on these materials during the discussions.

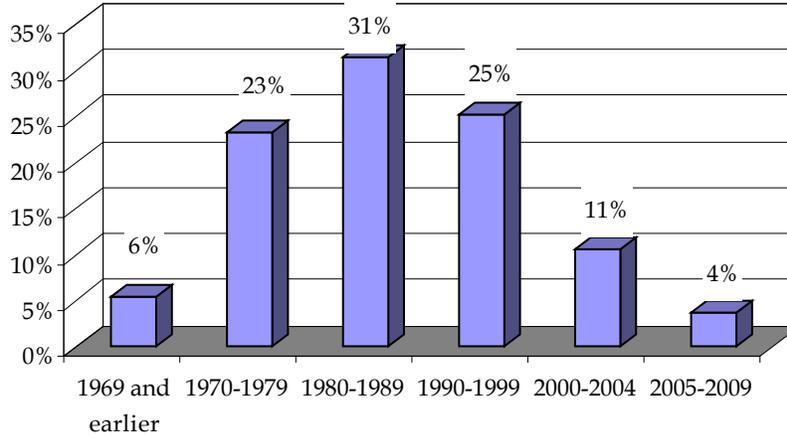
Data analysis

The focus groups and interviews were recorded and transcribed by a professional transcriptionist. The data were tabulated, triangulated, summarized, and analyzed for patterns or emergent themes. Notes were by the focus group observers, and these and the transcripts were circulated among the research team to familiarize them with the data. The transcripts were reviewed to identify salient coding categories capturing important ideas, including similarities and differences across the physician participants. Twenty-five codes were identified, and the transcripts were coded independently by the research team members and then discussed and condensed into categories. Five themes were refined and used to report focus group findings. NVivo (version 8), a qualitative analysis software, was used for organizing and grouping data and applying units of analysis.

3 SURVEY FINDINGS⁹

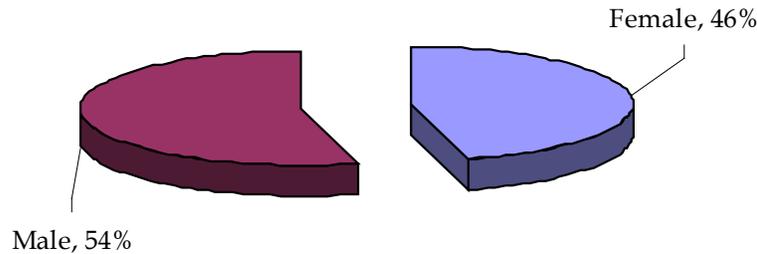
3.1 DEMOGRAPHICS

Figure 3-1: Year of Graduation from Medical School (n=786)



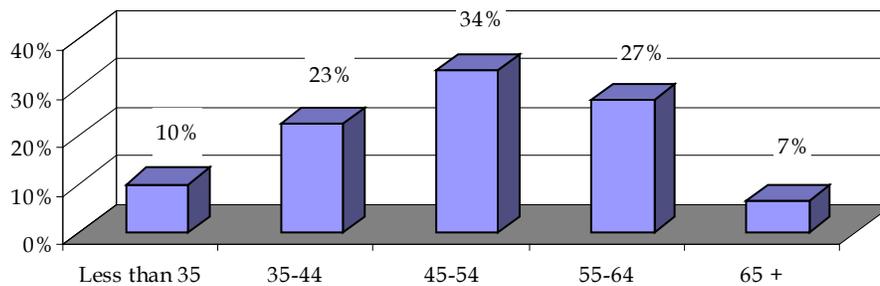
Over one-third (40%) of physician respondents have been in practice since 1990 (i.e. ~ 19 years). Fifteen percent (15%) graduated from 2000 onward, while only 5% graduated prior to 1970.

Figure 3-2: Gender (n=879)



There were slightly more male (54%) than female (46%) respondents. Accordingly to a recent search of the College of Physicians and Surgeons of BC's website, 37% of family physicians in BC are female whereas 63% are male family physicians, correlating with the higher number of males who completed the survey.

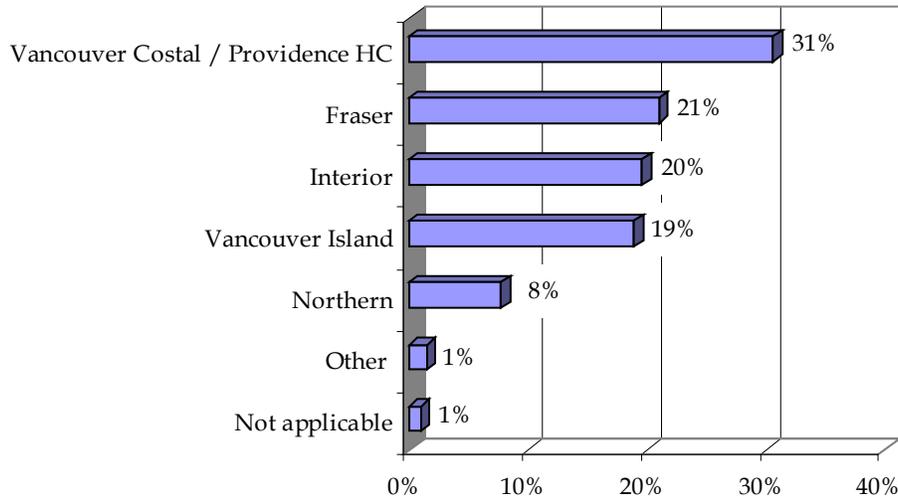
Figure 3-3: Age (n=860)



⁹ Percent totals in tables and charts may not add to 100% due to rounding.
UBC CPD, BCCA

More (34%) of the physicians who completed the survey were between the ages of 45 and 54. Physicians within the 35 - 44 and 55 - 64 age ranges made up the next highest cohorts of all respondents (23% and 27% respectively). Few (10%) physicians were younger than 35, and even fewer (7%) were 65 or older. The average age of the participants was 49 years of age which reflects the observation that the large majority of physician respondents were not new to practice. The average age of respondent is interesting considering the high uptake of the paper-based survey tool (~70%) compared to the online option (~30%).

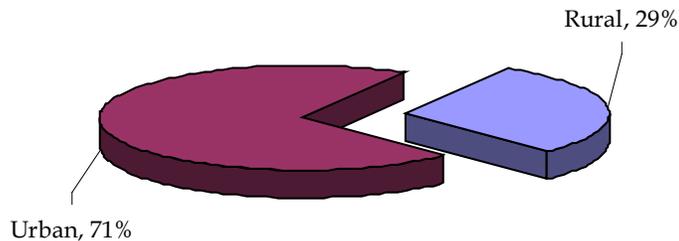
Figure 3-4: Primary Practice Location - BC Health Authorities (n=884)



With the exception of physician respondents that said they practice in *Vancouver Coastal/Providence Health Care* (31%) and those that practice in *Northern Health Authority* (8%), the needs assessment survey generated almost an equal proportion of respondents that primarily practice in *Fraser* (21%), *Interior* (20%), and *Vancouver Island* (19%) Health Authorities.

In particular, the *other* practice locations mentioned included: *Alberta, Canadian Forces, locum program, Nisga'a Valley HA, rural Manitoba, and PHSA*.¹⁰

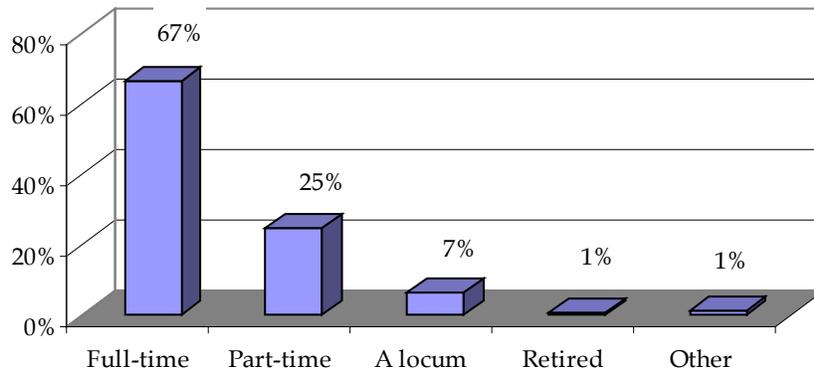
Figure 3-5: Primary Region of Practice - Rural/Urban (n=878)



The majority (71%) of physician respondents reported that they primarily practice in *urban* areas. Conversely, 29% said they practice in *rural* areas. The data is representative of provincial data as there are higher numbers of physicians practicing in urban regions in comparison to rural regions.

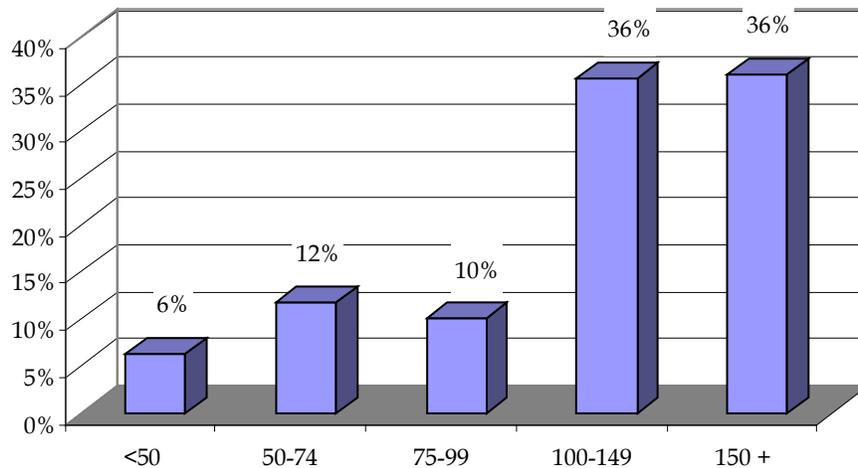
¹⁰ These physicians all had mailing addresses in BC as their primary contact with the CPSBC.
UBC CPD, BCCA

Figure 3-6: Practice Type (n=878)



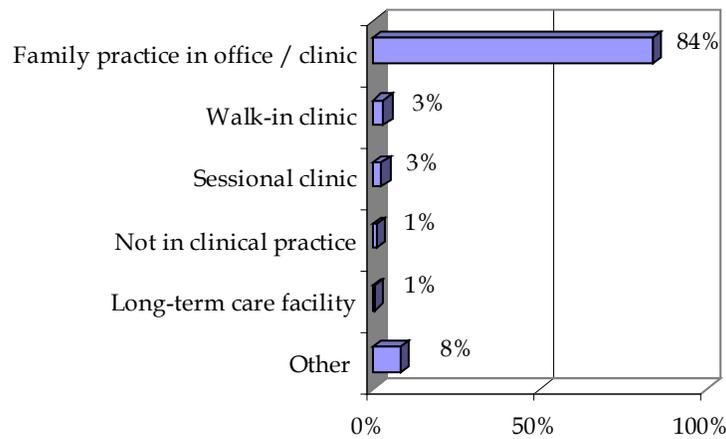
The majority (67%) of physician respondents said they are in *full-time* practice. One-quarter (25%) of the physicians were in *part-time* practice, while seven percent are *locums* and one percent are *retired*.

Figure 3-7: Number of Patients per Week (n=838)



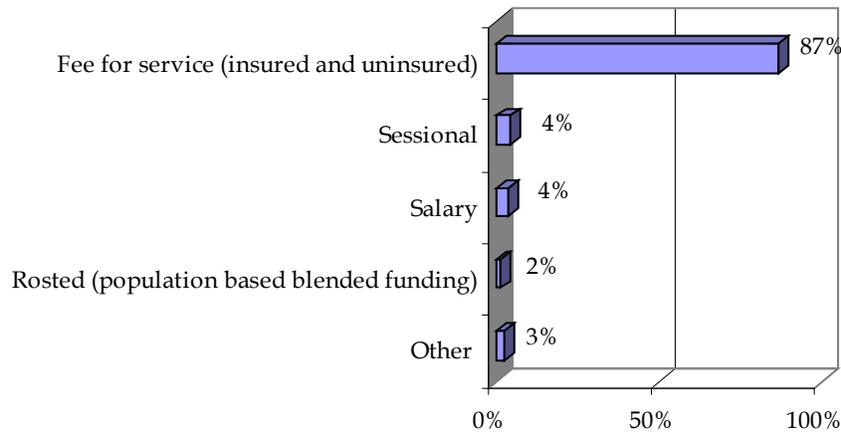
The two highest cohorts of physician respondents saw between 100 and 149 or 150 and more patients per week. Twenty-two percent saw between 50 and 99 patients per week, while six percent saw less than 50 patients per week.

Figure 3-8: Clinical Practice Setting (n=847)



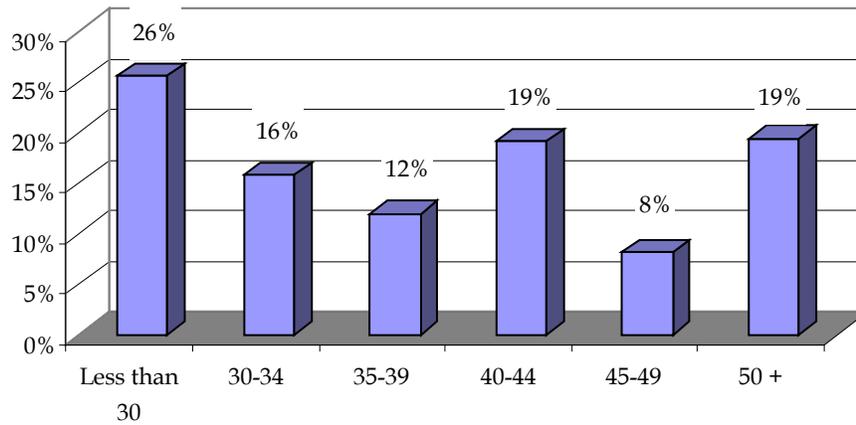
In terms of clinical practice setting, the large majority (84%) of physician respondents indicated they work in a *family practice in an office or clinic*. Physicians who practice in *walk-in clinics*, *sessional clinics*, and *long-term care facilities* made up nine percent of physician respondents.

Figure 3-9: Primary (>50%) Source of Professional Income - Sources (n=873)



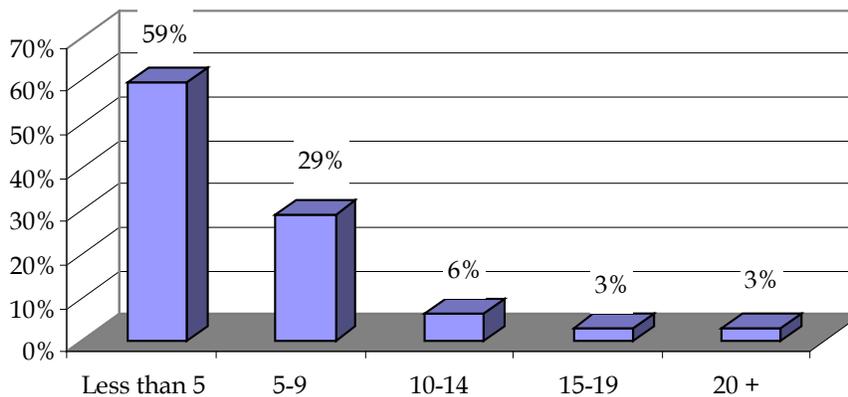
Most (87%) physicians who responded to the survey reported that their primary source of professional income comes on a '*fee for service (insured and uninsured)*' basis. Physicians who reportedly receive their primary source of income from a '*sessional*' or '*salary-based*' contract make up eight percent of respondents.

Figure 3-10: Number of Hours per Week Spent in Direct Patient Care (n=862)



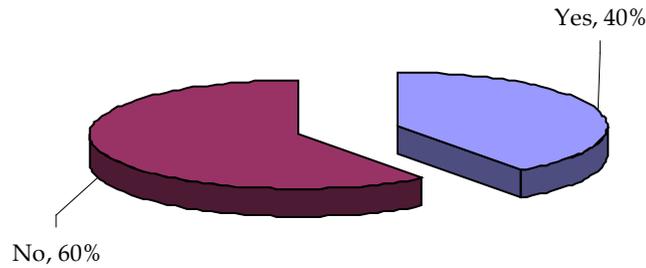
The largest cohort (26%) of physician respondents spent *less than 30 hours per week* in direct patient care. Fifty-four percent spend *less than 40 hours per week* in direct patient care, while 46% spend *40 hours or more* per week.

Figure 3-11: Number of Other Physicians in My Practice (n=643)



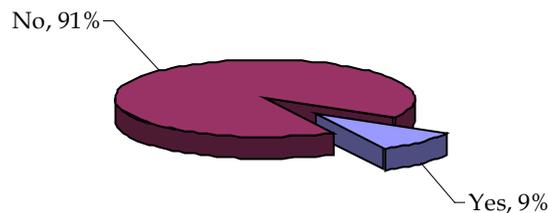
There were 157 (18%) physician respondents who indicated they have a solo practice. Of the 643 who reported having other physicians in their practice, the majority (59%) share their practice with less than 5 physicians. The next largest cohort (29%) represents physicians who share their practice with 5 to 9 physicians. The remainder (12%) of physician respondents share their practice with 10 or more physicians. This data shows that a majority of physicians are in small group practices.

Figure 3-12: I use an EMR in my practice (n=874)



Over half (60%) of physicians who responded to the survey do not use an EMR in their clinical practice. Conversely, 40% do use an EMR in their clinical practice.

Figure 3-13: I use an EMR to do clinical practice audits in cancer screening (n=871)



Further, 91% of physicians who responded to the survey do not use an EMR to do clinical practice audits in cancer screening. The remainder (9%) do use an EMR to do clinical practice audits in cancer screening.

SUMMARY OF PARTICIPANT DEMOGRAPHICS

Participant demographics demonstrated a representative sample of BC physicians based on gender and practice location. The respondent demographics reflected a sample with substantial practice experience. Sixty-seven percent were in full-time practice and 72% saw 100 or more patients per week, 84% worked in smaller family practice clinical settings and 87% worked in a fee for service payment structure. These demographics need to be kept in mind when interpreting the results based on physician attitudes, barriers and facilitators to cancer screening and communication strategies for informing well patients about cancer screening.

3.2 CURRENT PRACTICE

Table 3-1: Agreement with the advantages of cancer screening for well patients

Cancers	<i>n</i>	Strongly Disagree 1	2	3	4	Strongly Agree 5	Agreement [4+5]	Weighted Means
a) Cervical	881	2%	0%	1%	4%	93%	98%	4.87
b) Breast	880	2%	1%	3%	14%	81%	95%	4.71
c) Colorectal	875	2%	1%	4%	15%	79%	94%	4.69
d) Hereditary predisposition to cancer	876	2%	5%	22%	25%	46%	71%	4.07
d) Prostate	876	2%	8%	23%	24%	42%	66%	3.96

Table 3-2: Status of communication with patients on cancer screening

	<i>n</i>	Strongly Disagree 1	2	3	4	Strongly Agree 5	Agreement [4+5]	Weighted Means
a) I effectively communicate cancer screening strategies to my patients	882	1%	2%	12%	55%	30%	85%	4.10
b) My patients tend to follow my recommendations for cancer screening	879	1%	3%	18%	58%	21%	79%	3.95

Table 3-3: Patients' requests for cancer screening procedures

Screening Procedures	<i>n</i>	Never	Seldom	Sometimes	Often	Always	Combination of Sometimes, Often & Always	Weighted Means
a) Mammograms	883	1%	3%	20%	69%	8%	97%	3.81
b) Pap tests	881	1%	5%	18%	64%	12%	95%	3.82
c) PSA testing	880	1%	7%	34%	53%	5%	92%	3.54
d) Colonoscopy	882	3%	25%	51%	19%	1%	72%	2.91
e) Hereditary risk assessment	881	14%	51%	27%	8%	1%	35%	2.31
f) Fecal Occult Blood test	881	15%	48%	31%	5%	1%	37%	2.30

Table 3-4: Availability of cancer screening educational materials for patients

	<i>n</i>	Yes	No
a) Breast	878	74%	26%
b) Cervical	879	65%	36%
c) Prostate	872	58%	43%
d) Colorectal	874	35%	65%
e) Hereditary predisposition to cancer	872	16%	85%

Figure 3-14: Usual approaches to informing well patients about the need for cancer screening (n=887)

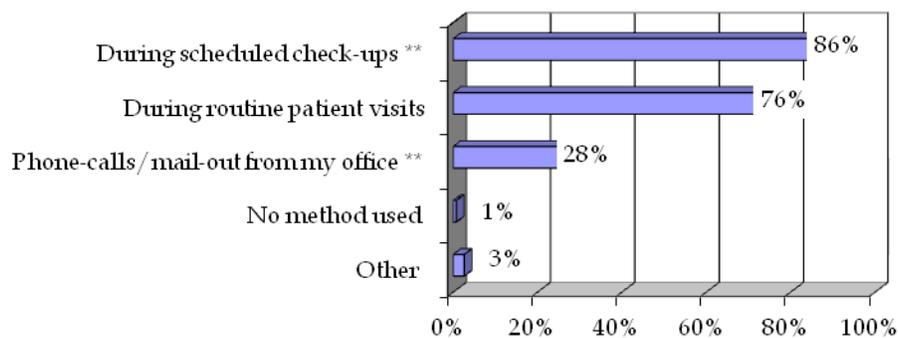
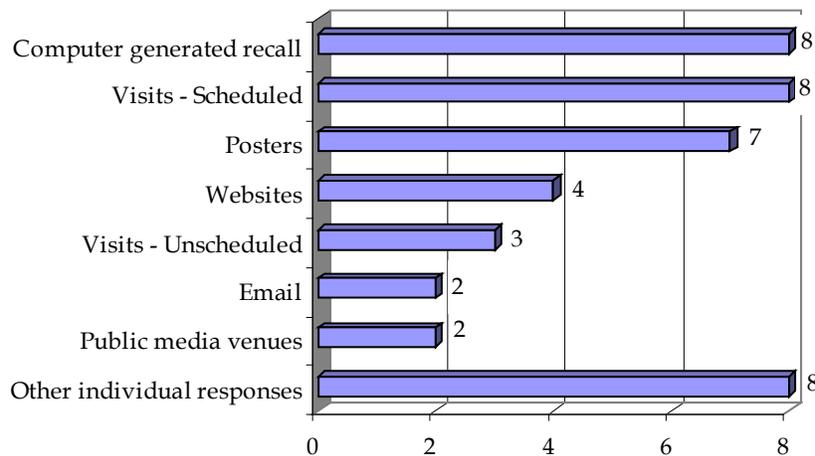


Figure 3-15: Response count of the usual approach to informing well patients about the need for cancer screening - Other (n=42)



Other individual responses included: ER visits, mail if phone fails, as well as prior to discharge from hospital.

Table 3-5: Sending cancer screening notifications to patients

Groups	N	Yes	No	Unsure /don't know
a) BC Cancer Agency	856	73%	14%	13%
b) Primary care physicians	839	55%	29%	17%
c) Public health agencies	824	52%	26%	22%
d) Ministry of Health	829	35%	41%	24%
e) Regional Health Authorities	814	27%	44%	29%

SUMMARY OF TABLES AND FIGURES – CURRENT PRACTICES

Over 90% of physician respondents agreed that screening for *cervical, breast and colorectal cancers* can be advantageous for well patients, whereas agreement levels for *hereditary predisposition to cancer* (71%) and *prostate cancer* (66%) were still significantly high, but were noticeably lower than the other three cancers. The lower agreement for the advantages of prostate cancer screening for well patients may reflect physician attitudes to recent large clinical trials in which results showed conflicting data regarding the benefit of prostate cancer screening. A majority of physicians believe they communicate effectively cancer screening strategies to their patients (85%) and that their patients follow their cancer screening recommendations (79%). A significant majority of patients request PSA testing (92%) and colonoscopy (72%) even though these are not a routine part of the BCCA cancer screening program. Of note, a low percentage of physicians have educational materials on the hereditary predisposition to cancer (16%) and colorectal cancer screening (35%). It is interesting to note that these tests are reported as less requested by patients. The majority of physicians informed well patients about the need for cancer screening either during scheduled check-ups or routine patient visits. The majority believed that the *BC Cancer Agency, primary care physicians, and public health agencies* have a role in sending screening notifications to patients, whereas there is much less agreement on this role for governmental entities such as the *BC Ministry of Health and Regional Health Authorities*.

3.3 FACILITATORS AND BARRIERS TO CANCER SCREENING

Table 3-6: Preferred educational formats for learning about cancer screening

Educational Formats	n	Low preference 1	2	3	4	High Preference 5	Higher Preference [4+5]	Weighted Means
a) Conferences	862	6%	4%	17%	38%	35%	73%	3.91
b) Self-directed study (e.g. personal learning project)	847	11%	16%	27%	31%	15%	46%	3.22
c) Small group workshops	847	18%	16%	24%	30%	12%	42%	3.01
d) Hospital rounds	849	27%	12%	20%	26%	15%	41%	2.89
e) Online CME/CPD	852	19%	18%	24%	25%	13%	39%	2.96
f) Journal clubs	843	36%	19%	19%	16%	10%	26%	2.45
g) Peer Network (e.g. Family Practice Oncology Network)	837	25%	24%	30%	16%	5%	21%	2.51
h) Videoconferencing	845	42%	24%	22%	10%	3%	13%	2.10

Table 3-7: Preferred sources for accessing cancer screening guidelines

Sources	<i>n</i>	Low preference 1	2	3	4	High Preference 5	Higher Preference [4+5]	Weighted Means
a) Web-based resources (e.g. UpToDate, or MD Consult)	840	16%	9%	17%	30%	28%	58%	3.46
b) Paper-based resources	844	11%	13%	26%	31%	19%	49%	3.32
c) BC Cancer Agency Website	846	16%	14%	19%	24%	26%	50%	3.30
d) EMR decision support tools	818	43%	19%	16%	13%	9%	23%	2.28
e) PDA/Palm hand held devices	830	47%	15%	17%	13%	8%	21%	2.20

Other 'Online' sources preferred for accessing cancer screening guidelines included:

- *BC Guidelines* (12 responses)
- *Canadian Task Force for Preventive Health Care* (6);
- *Online Point of Care Tools* (e.g. Pub Med, Cochrane, Medscape, e-medicine) (6);
- *CMA InfoPOEMS* (5); and
- *Knowledge from previous educational sessions* (2).

Other 'Paper-based' sources for accessing cancer screening guidelines included:

- *Canadian public health agency or government affiliated mail-outs, and Other mail-outs* (e.g. BCCA mailings, BCMA guidelines, Canadian Task Force, pamphlets from government/public health agencies) (12); and
- *Journals* (e.g. BCMJ, CMAJ, Medical Post, NEJM, SOGC) (7).

Table 3-8: Barriers in discussing cancer screening with well patients

Factors	<i>n</i>	Never	Seldom	Sometimes	Often	Always	Combination of Sometimes, Often & Always	Weighted Means
a) Patients with multiple health issues	864	8%	12%	38%	35%	6%	80%	3.19
b) Time it takes to explain the pros/cons of the cancer screening options	858	12%	18%	34%	28%	8%	70%	3.02
c) Patients with language barriers	862	15%	36%	36%	12%	2%	50%	2.51
d) Physician financial compensation	862	31%	22%	24%	16%	7%	47%	2.45
e) Level of comfort with my knowledge to help patients decide pros/cons of cancer screening options	859	18%	46%	30%	5%	1%	36%	2.24
f) Patients have cultural sensitivities to cancer screening procedures	861	19%	47%	27%	6%	1%	34%	2.23
g) Ability to address my patient's fear about the screening procedure (e.g. radiation exposure, pain, embarrassment, etc)	863	22%	47%	26%	5%	1%	31%	2.16

Other barriers physician respondents' provided on other barriers to discussing cancer screening with their well patients included:

- Time constraints (11 responses)
- Accessibility to screening resources (10)
- Cost (10);
- Unwilling patients (10);
- Conflicting guidelines (4);
- Forgetting (3); and
- Other Single responses (14).

SUMMARY OF TABLES AND FIGURES – FACILITATORS AND BARRIERS TO CANCER SCREENING

Physician respondents had a fairly high preference for traditional educational formats in learning about cancer screening – *Conferences* – in comparison to other educational formats. The next preferred formats were self directed study, small group workshops, hospital rounds and online CME/CPD. In addition, respondents had a higher preference for accessing cancer screening guidelines through *Web-based resources such as UpToDate or MD Consult, the BCCA website or paper based resources*. This data may highlight the need for point of care information in the context of practice. Both electronic and paper-based resources are reported as sources for keeping up to date with guidelines.

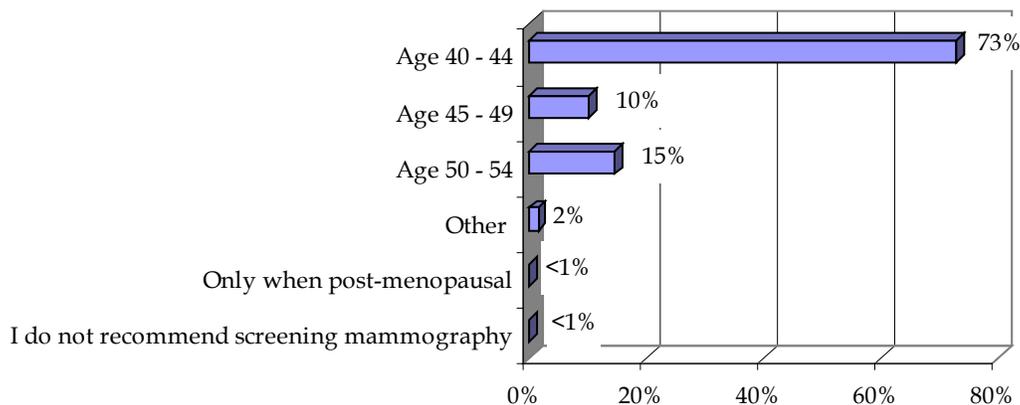
At least 64% of physicians' respondents reported seldom or never having a barrier with their *level of comfort with their knowledge to help patients decide the pros/cons of cancer screening options, dealing with patient cultural sensitivities to screening procedures or their ability to address patient fears about a screening procedure.*

The data also revealed that issues around direct patient care were barriers to discussing cancer screening with well patients as 50% or more of physicians indicated that *patients with multiple health issues, time to explain the pros/cons of screening options, and patients with language barriers* are at least sometimes a barrier.

3.4 SCREENING PROFILE

3.4.1 BREAST CANCER SCREENING

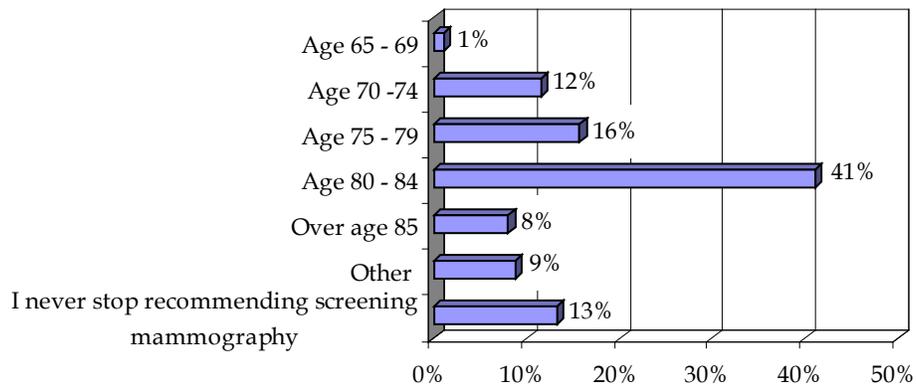
Figure 3-16: Women's age range at which physicians start recommending screening mammography (n=862)¹¹



Within the two-percent of physicians who described *other* criteria they use to start recommending screening mammography, the more frequently mentioned criteria included: *Age 35-39 if family history of cancer* (6 responses), *Dependent on family history* (4), and *10 years earlier than age of 1st degree family member with cancer* (3). One of the two physician respondents who said they do not recommend screening mammography suggested it is because "*there is no proven benefit to mammography screening*".

¹¹ Results shown in Figures 3-17 and 3-18 exclude physicians that indicated they do not recommend screening mammography in Figure 3-16.

Figure 3-17: Women’s age range at which physicians stop recommending screening mammography (n=856)



Of the nine percent (or 75 physicians) that described they use other criteria to stop recommending screening mammography, the more frequently mentioned criteria were: *dependent on patient health factors* (29 responses), *when the patient is over 80 years* (15), followed by *life expectancy of less than 10 years* (11), *age 70 – 79* (10), as well as *dependent on patient life expectancy (general)* (9).

Figure 3-18: Other criteria physicians use to stop recommending screening mammography

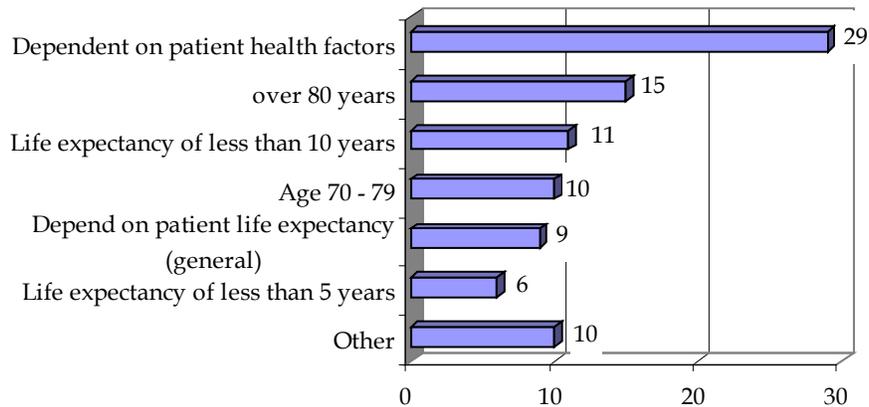


Table 3-9: Barriers in encouraging breast cancer screening for well patients

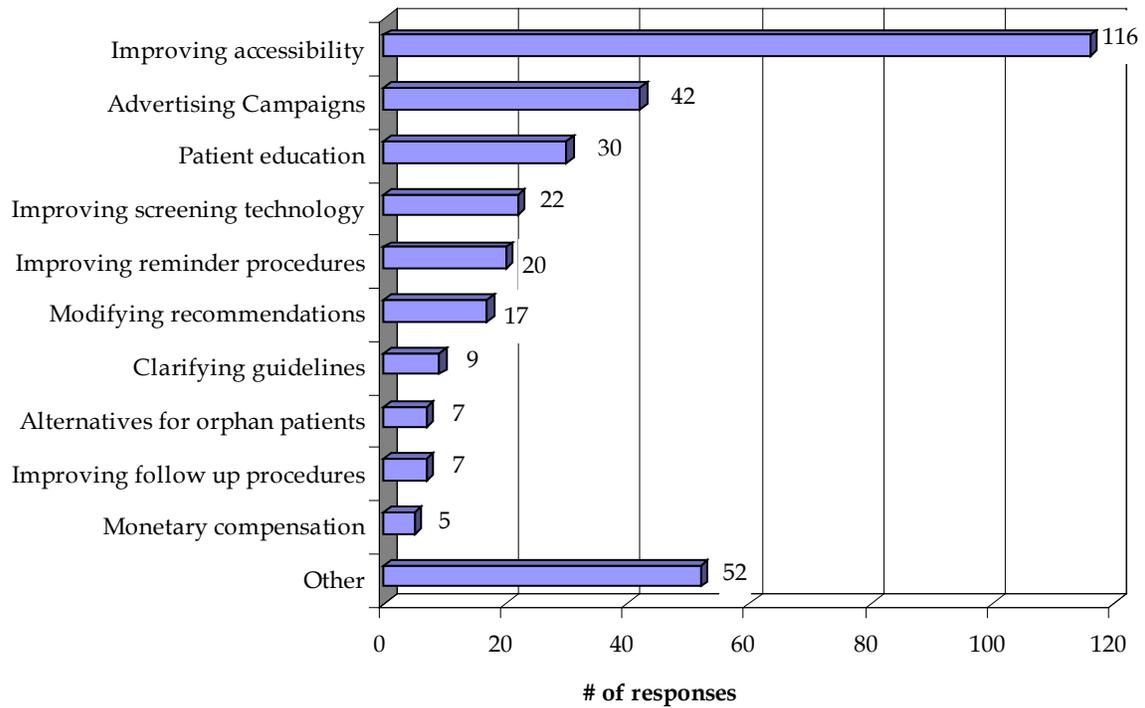
Situations	<i>n</i>	Never	Seldom	Sometimes	Often	Always	Combination of Sometimes, Often, & Always	Weighted Means
a) My patient expresses discomfort with mammogram procedure	859	26%	34%	29%	10%	1%	40%	2.24
b) My patient expresses anxiety about results of screening procedure and/or treatment for breast cancer	861	35%	42%	19%	3%	1%	23%	1.93
c) Mammography is not readily available	819	69%	21%	8%	2%	1%	11%	1.45

Other barriers physician respondent mentioned included: *patients with alternative beliefs* (12 responses), *patient worries about radiation exposure* (7), *limited access to screening* (7), *patient belonging to a particular demographic* (6), *patient refusal* (5), as well as *patient of younger age* (4).

Table 3-10: Perceptions on breast cancer screening related practices

Statements	<i>n</i>	Strongly Disagree 1	2	3	4	Strongly Agree 5	Agreement [4+5]	Weighted Means
a) I am comfortable performing a clinical breast examination	865	1%	1%	4%	27%	68%	95%	4.61
b) Patients should be able to self-refer for breast cancer screening (e.g. as currently available for mammography)	852	3%	3%	10%	21%	63%	84%	4.38
c) I am comfortable explaining the pros/cons of breast cancer screening	863	1%	3%	14%	41%	41%	82%	4.18
d) I am comfortable interpreting the results of a mammogram report	862	2%	5%	15%	49%	31%	79%	4.02
e) I need better educational material about breast cancer screening to give to my patients	863	15%	27%	27%	22%	8%	30%	2.80
f) I need clearer follow-up recommendations for patients with positive screening results	863	29%	33%	15%	14%	9%	23%	2.40
g) I need clearer screening guidelines for breast cancer	863	25%	36%	20%	13%	5%	19%	2.38

Figure 3-19: Suggestions on improving breast cancer screening in BC



SUMMARY OF TABLES AND FIGURES – BREAST CANCER SCREENING

The findings showed the majority (73%) of physician respondents start recommending screening mammography to patients in the 40 – 44 age cohort, consistent with current recommendations¹² but interestingly, at least 62% continue screening beyond age 79 which falls outside of the current guidelines. One key explanation indicated by respondents with regards to continuing to recommend screening mammography may be explained by factors relating to patient life expectancy (figure 3-18). Forty percent of respondents reported at least sometimes having a barrier to encouraging breast cancer screening for well patients when their *patient expressed discomfort with the mammogram procedure*. Interestingly, even though the availability of mammography was reported as a barrier *at least sometimes* by only 11% (see table 3-9 on page 14) of respondents, a large number suggested that accessibility to breast cancer screening in BC (figure 3-19 on page 15) could be improved.

Physician respondents appeared to agree they are comfortable in their *skills* associated with performing breast cancer screening, as well as in *explaining the pros/cons* of breast cancer screening. However, as noted in section 3.5 (see page 33), agreement levels are higher for physicians that have been in practice longer.

¹² BC Cancer Agency (2010). *Screening Mammography Program (SMP) of BC*.
<http://www.bccancer.bc.ca/PPI/Screening/Breast/default.htm>. Accessed on June 3rd, 2010.
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3.4.2 CERVICAL CANCER SCREENING

Table 3-11: Barriers in encouraging cervical cancer screening for well patients

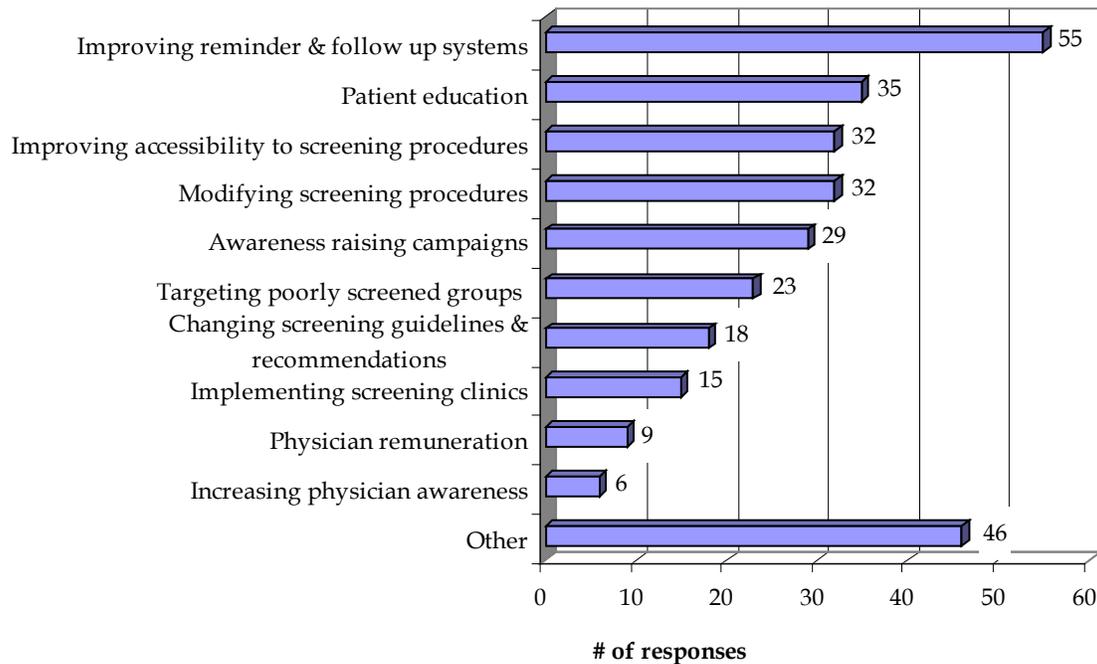
Situations	<i>n</i>	Never	Seldom	Sometimes	Often	Always	Combination of Sometimes, Often, & Always	Weighted Means
a) My patient expresses discomfort with gynaecological procedure	863	19%	41%	33%	7%	1%	40%	2.30
b) My patient expresses cultural sensitivity toward having a gynaecological procedure	863	23%	50%	23%	5%	1%	28%	2.11
c) There may be difficulty in contacting my patient for abnormal pap follow-up	864	27%	47%	22%	4%	0%	26%	2.04
d) There is no female healthcare provider available to conduct a Pap test for my patient	840	57%	25%	12%	6%	1%	19%	1.71
e) My patient expresses anxiety about results of screening procedure and/or treatment for cervical cancer	864	40%	42%	15%	3%	0%	18%	1.81

Other barriers mentioned by physician included: *patients with alternative beliefs, patient disregard or refusal of screening, patient belonging to a particular demographic.*

Table 3-12: Perceptions on cervical cancer screening related practices

Statements	<i>n</i>	Strongly Disagree 1	2	3	4	Strongly Agree 5	Agreement [4+5]	Weighted Means
a) I am comfortable performing a Pap test	872	0%	1%	2%	13%	85%	98%	4.81
b) Women that have received the HPV vaccine still need Pap tests	868	0%	0%	3%	14%	83%	97%	4.79
c) I am comfortable explaining the pro/cons of cervical cancer screening	866	1%	1%	5%	29%	65%	94%	4.57
d) I am comfortable interpreting the reported results of a Pap test	869	1%	1%	7%	35%	56%	91%	4.45
e) I always ask my new female patients about their Pap test history	868	1%	3%	10%	30%	57%	86%	4.38
f) I need access to better reminder systems to notify my patients of recommended cervical cancer screening	868	22%	26%	19%	20%	13%	33%	2.76
g) I need better educational material about cervical cancer screening to give to my patients	869	19%	27%	25%	22%	6%	29%	2.69
h) I need clearer follow-up recommendations for patients with positive screening results	868	38%	34%	15%	10%	4%	14%	2.09
i) I need clearer screening guidelines for cervical cancer	871	35%	35%	17%	10%	4%	13%	2.12

Figure 3-20: Response counts for how cervical cancer screening can be improved in BC



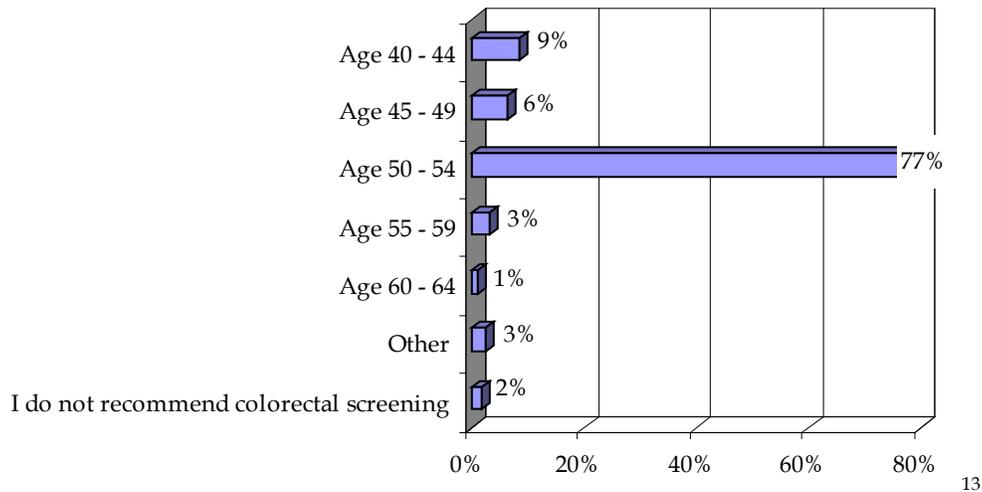
SUMMARY OF TABLES AND FIGURES – CERVICAL CANCER SCREENING

Generally speaking, patient related factors such as *discomfort with gynaecological procedure, cultural sensitivity towards gynaecological procedure, difficulty in contacting for abnormal pap follow-up, as well as anxiety about results of screening procedure and/or treatment for cervical cancer* were less frequently perceived as barriers for physician participants to encourage cervical cancer screening. However, as discussed in section 3.5 (*Associations Between Demographics and Responses – see page 32*), it appears that patient related factors such as *discomfort with gynaecological procedure* may be less of a barrier for female physicians in comparison to male physicians.

In addition, the findings showed that physician participants appeared to be comfortable with their skill in performing cervical screening procedures and knowledge in regards to cervical screening (e.g. interpreting screening results and understanding guidelines and follow up recommendations). It should be noted, as shown in section 3.5 (*see page 32*), female physicians reported they were more comfortable with their skills and knowledge related to cervical screening in comparison to male physicians. Better reminder systems and patient educational materials were commonly suggested in terms of improving cervical cancer screening in BC.

3.4.3 COLORECTAL CANCER SCREENING

Figure 3-21: Well patients' age range at which physicians start recommending colorectal cancer screening (n=859)

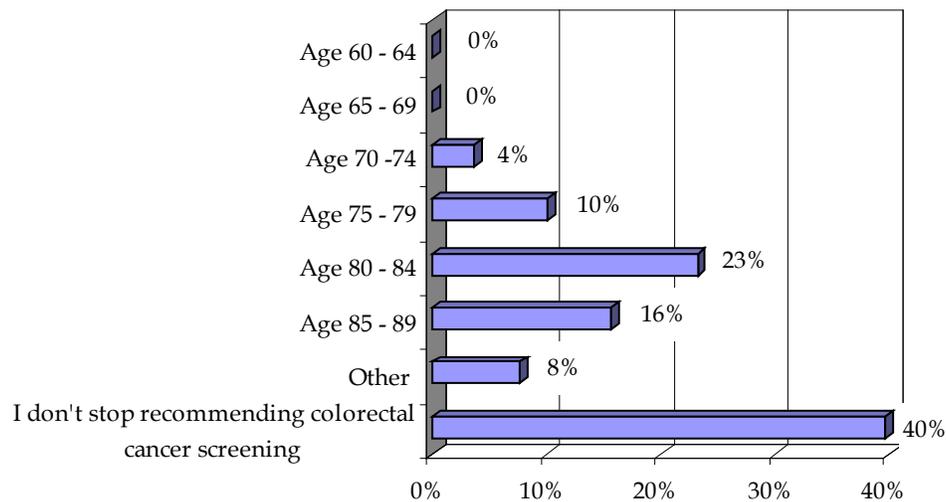


Of the three percent (22 physicians) that indicated there are 'Other' criteria they use to start recommending colorectal cancer, their responses included the following: *dependent on family history, 10 years earlier than age of first degree family member with cancer, at age 50, as well as in the 30 – 39 age range.*

Some of the reasons provided by the two percent (or 14 physicians) that indicated they do not recommend colorectal screening were around: *limited accessibility to screening, poor patient health, uncertainty of the benefits of screening, as well as forgetting to recommend screening.*

¹³ Results shown in Figure 3-22 and Table 3-13 have excluded physicians that indicated they did not recommend colorectal cancer screening in Figure 3-21.

Figure 3-22: Well patients' age range at which the physicians stop recommending colorectal cancer screening (n=853)



Of the eight percent (65 physicians) that indicated there are 'Other' criteria they use to stop recommending colorectal cancer screening, the responses more frequently mentioned were around:

- Dependencies on patient health factors (22 responses);
- Dependencies on patient tolerance to testing and treatment (14);
- Dependencies on patient life expectancy (7);
- Life expectancy of less than 5 years (4); as well as
- Life expectancy of less than 10 years (4).

Table 3-13: Recommended procedures to well patients for colorectal cancer screening

Procedures	n	Never	Seldom	Sometimes	Often	Always	Combination of Sometimes, Often, & Always	Weighted Means
a) Colonoscopy	842	5%	8%	40%	37%	10%	87%	3.39
b) DRE with home FOBT	833	10%	8%	15%	41%	27%	82%	3.66
c) FOBT completed at home	783	11%	7%	19%	36%	28%	82%	3.61
d) Digital rectal exam (DRE) only	807	35%	17%	15%	15%	18%	48%	2.65
e) Flexible sigmoidoscopy	811	26%	31%	30%	12%	2%	43%	2.32
f) DRE with office fecal occult blood test (FOBT)	778	51%	20%	12%	12%	6%	30%	2.03
g) Double-contrast barium enema	810	39%	39%	20%	3%	0%	23%	1.87
h) CT colonography	808	52%	27%	16%	4%	1%	21%	1.75

Physicians provided explanations if they recommended colorectal screening procedures other than those listed in Table 3-13. More of these responses centred on the following areas: *dependent on family history or other indications* (12 responses), *dependent on availability of colonoscopy or CT colonography* (9), *FOBT done in setting other than home or office* (4), and *other individual responses* (10).

Table 3-14: Barriers in encouraging colorectal cancer screening for well patients

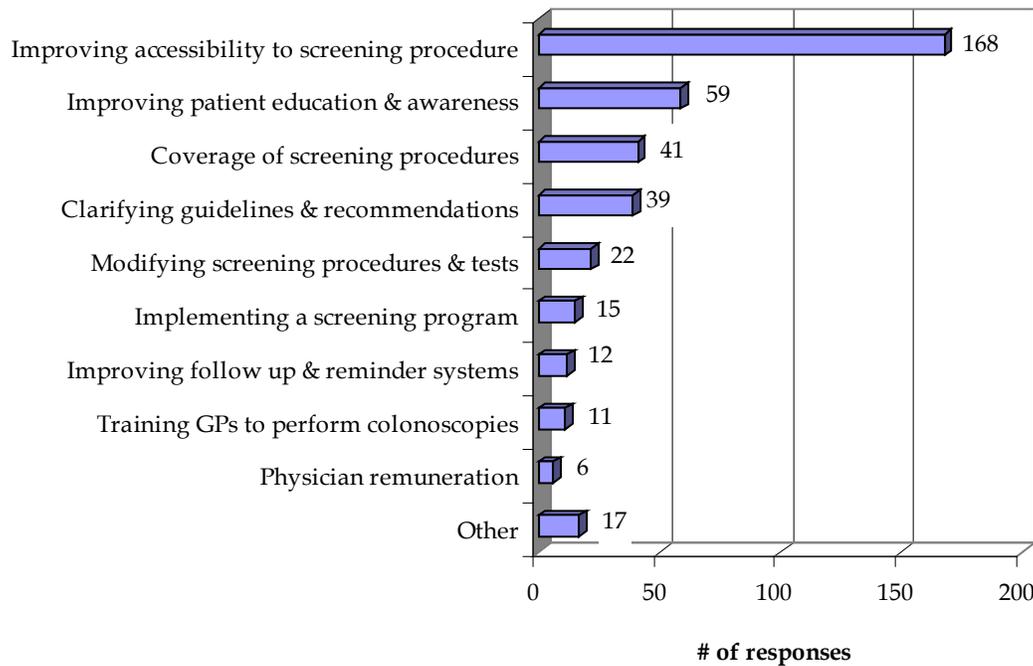
Situations	<i>n</i>	Never	Seldom	Sometimes	Often	Always	Combination of Sometimes, Often & Always	Weighted Means
a) Colonoscopy is not readily available	864	23%	20%	19%	26%	12%	57%	2.85
b) My patient expresses discomfort with colonoscopy	869	17%	34%	37%	10%	2%	49%	2.45
c) My patient is unable to afford cost for colonoscopy screening	849	37%	19%	15%	21%	8%	45%	2.46
d) My patient expresses discomfort with DRE	862	19%	46%	27%	7%	1%	35%	2.25
e) My patient expresses anxiety about results of the screening procedure and/or treatment for colorectal cancer	865	25%	43%	26%	5%	1%	32%	2.14
f) My patient expresses disgust with FOBT at home	861	29%	41%	23%	7%	1%	31%	2.12

Other situations physicians respondents mentioned as barriers in encouraging colorectal cancer screening included: *access to screening is limited by cost and availability of procedure (6 responses), issue with administration of screening procedure (5), FOBT at home not completed (4), patient disregards or refuses screening (4), lack of information for patients (2), as well as, lack of evidence supporting screening procedures (2).*

Table 3-15: Perceptions on colorectal cancer screening related practices

Statements	<i>n</i>	Strongly Disagree 1	2	3	4	Strongly Agree 5	Agreement [4+5]	Weighted Means
a) I am comfortable performing a DRE	873	0%	2%	6%	26%	65%	91%	4.55
b) I am comfortable interpreting the reported results of a colonoscopy procedure	869	1%	3%	12%	43%	41%	84%	4.21
c) I am comfortable explaining the pro/cons of colorectal cancer screening	870	1%	2%	16%	43%	38%	81%	4.14
d) I need better educational material about colorectal cancer screening to give to my patients	872	8%	12%	25%	37%	17%	54%	3.43
e) Patients should be able to self-refer for colorectal cancer screening	869	11%	15%	20%	26%	28%	54%	3.46
f) I need access to better reminder systems to notify my patients of recommended colorectal cancer screening	870	9%	15%	23%	34%	20%	54%	3.41
g) I need clearer screening guidelines for colorectal cancer	871	10%	21%	24%	28%	18%	46%	3.23
h) I need clearer follow-up recommendations for patients with positive screening results	871	23%	29%	20%	19%	9%	28%	2.64

Figure 3-23: Response counts for how colorectal cancer screening can be improved in BC



SUMMARY OF TABLES AND FIGURES – COLORECTAL CANCER SCREENING

Findings showed that the large majority (77%) of physicians start recommending colorectal cancer screening in the 50 – 54 age cohort. Of interest, more (40%) physicians never stop recommending colorectal cancer screening and this suggests that these physicians perceive the potential benefits of screening outweigh the potential harms of not screening in older age groups. Of note, current recommendations suggest screening between ages 50 – 74.¹⁴

It is also interesting to note that even though more physician respondents said that *patient expressing discomfort with colonoscopy (49%), and colonoscopy is not readily available (57%)* is at least sometimes a barrier to encouraging colorectal cancer screening, over three quarters (87%) still more frequently specifically recommend a colonoscopy procedure for well patients. Over 63% often or always recommend DRE with home FOBT, or simply a FOBT completed at home.

Eighty-one percent agreed they were *comfortable explaining the pros/cons of colorectal cancer screening* but 54% indicated that they *needed better educational materials to give to their patients and access to better reminder system to notify their patients about recommended colorectal cancer screening*. Another 46% indicated a *need for clearer screening guidelines* and 54% felt *patients should be able to self-refer for colorectal cancer screening*.

¹⁴ BC Cancer Agency (2009). *Colon Check Resources*. (see ‘colon check brochure’): <http://coloncheck.bccancer.bc.ca/for-health-professionals/order.htm> . Accessed on June 3rd, 2010
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3.4.4 HEREDITARY PREDISPOSITION TO CANCER

Figure 3-24: Referral to the BCCA Hereditary Cancer Program since January 2008 (n=865)

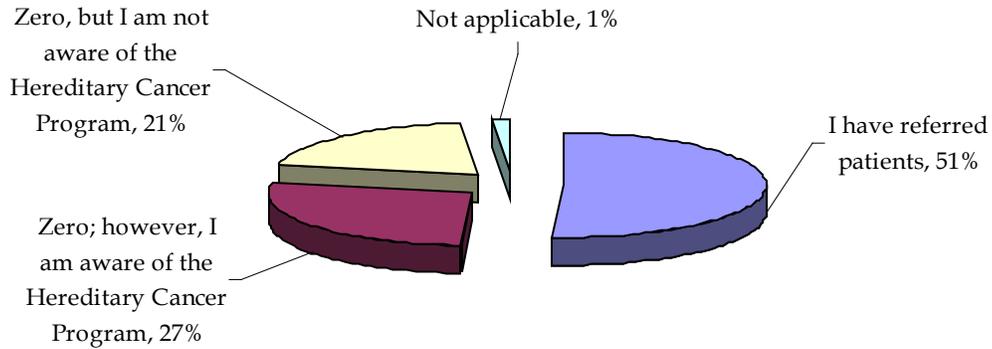


Figure 3-25: Number of Patients Referred to the BCCA Hereditary Cancer Program since January 2008 (n=436) - By Physicians that stated they have referred patients in Figure 3-24

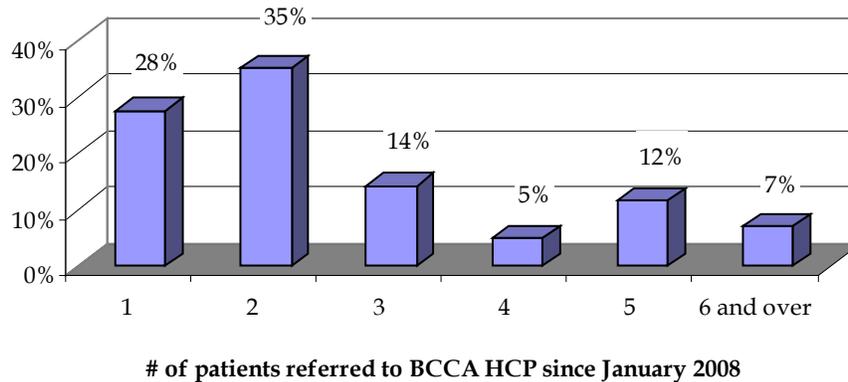


Table 3-16: Barriers in encouraging hereditary cancer risk assessment for well patients

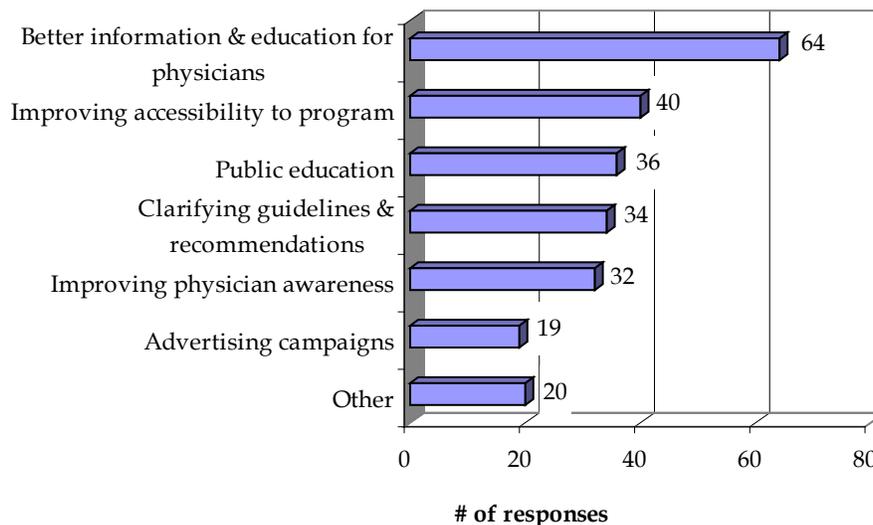
Situations	<i>n</i>	Never	Seldom	Sometimes	Often	Always	Combination of Sometimes, Often, & Always	Weighted Means
a) I anticipate my patient will face difficulty obtaining life/disability insurance due to genetic testing results	744	19%	24%	38%	15%	4%	57%	2.61
b) There is difficulty getting my patient into the Hereditary Cancer Program (i.e. waiting list)	733	19%	24%	30%	19%	8%	57%	2.72
c) Genetic testing is not readily available	742	19%	25%	27%	22%	6%	56%	2.71
d) My patient expresses anxiety about results of genetic tests	750	21%	30%	38%	10%	1%	49%	2.41
e) Geography is a barrier for my patient (e.g. patient unable to travel to cancer centre/other sites to access services)	758	30%	23%	25%	16%	7%	47%	2.46
f) My patient is unwilling to be referred	747	23%	40%	30%	6%	2%	38%	2.24

Other situations physician respondents suggested as barriers included: *physician unaware of the program* (14 responses), *unclear guidelines* (6), *family history of patient is difficult to track down* (6), *patient does not meet criteria of screening program* (4), *as well as paper work is difficult to complete* (2).

Table 3-17: Perceptions on hereditary cancer screening program related practices

Statements	n	Strongly Disagree 1	2	3	4	Strongly Agree 5	Agreement [4+5]	Weighted Means
a) I need better material about hereditary cancer to give to my patients	851	3%	6%	15%	30%	46%	76%	4.11
b) I need clearer follow-up recommendations for patients identified at high risk for hereditary cancer	846	5%	9%	19%	35%	33%	68%	3.83
c) I am familiar with Hereditary Cancer Program referral criteria and process	852	26%	26%	21%	18%	9%	27%	2.59
d) I am comfortable explaining the pros/cons of testing for hereditary predisposition to cancer	853	17%	28%	32%	17%	7%	23%	2.67

Figure 3-26: Response counts of suggestions for improving hereditary cancer risk assessment in BC

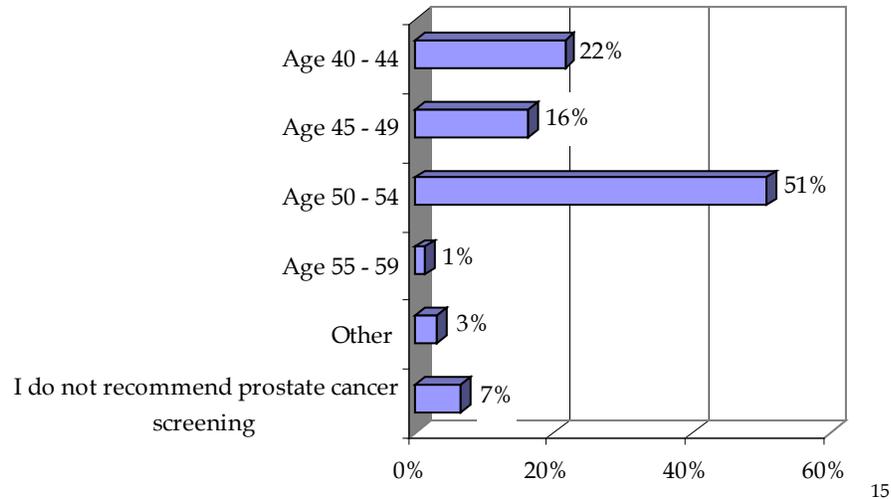


SUMMARY OF TABLES AND FIGURES – HEREDITARY PREDISPOSITION TO CANCER

In addition to findings which showed almost one-quarter (21%) of primary care physicians were not aware of HCP, it was also revealed that educational interventions are needed specifically on *increasing familiarity with referral criteria and processes, clarifying the pros/cons of testing for hereditary predisposition, and clarifying follow-up processes for high risk patients*. Table 3-16 outlines a number of barriers indicated by respondents for encouraging hereditary cancer risk assessment for well patients, which were at least sometimes a problem for the majority of respondents. The need for better public and physician awareness, information, and education on the HCP was apparent along with improved accessibility to this program.

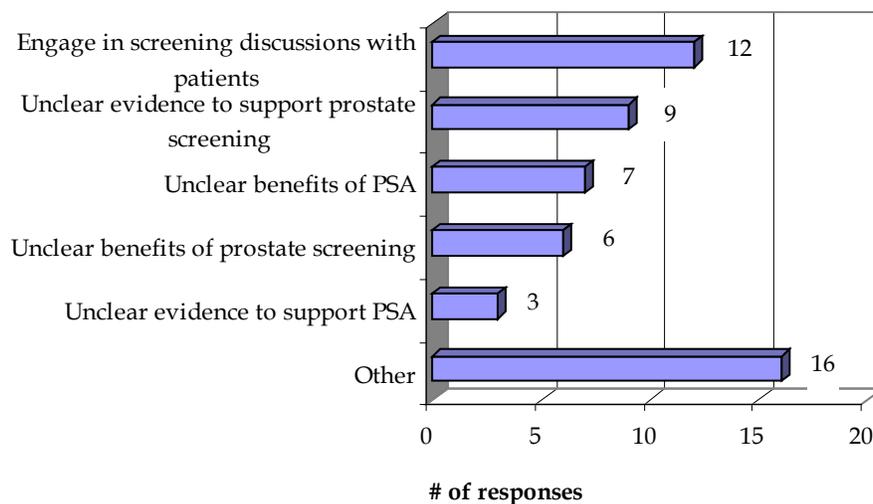
3.4.5 PROSTATE CANCER SCREENING

Figure 3-27: Well patients' age range at which physicians start recommending prostate cancer screening (n=867)



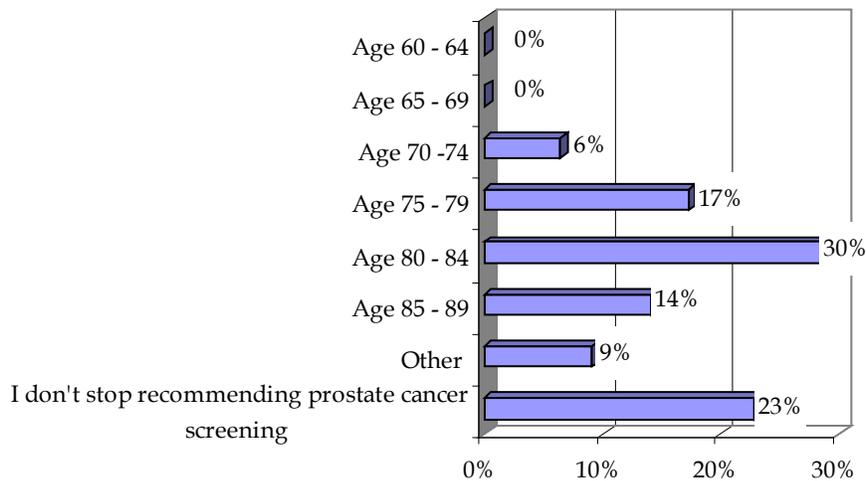
Some of the 'Other' criteria physician respondents use to start recommendation were around: *dependent on family history; physician discusses and offers screening, but does not recommend screening; and physicians that start recommending when patients are 50 years or older.*

Figure 3-28: Response counts for reasons why physicians do not recommend prostate cancer screening



¹⁵ Results shown in Figure 3-29 and Table 3-18 exclude physicians that indicated they do not recommend prostate cancer screening in Figure 3-27.

Figure 3-29: Well patients' age range at which physicians stop recommending prostate cancer screening (n=780)



Of the physicians that provided 'Other' criteria they use to stop recommending prostate cancer screening, the most (27 responses) frequently mentioned suggestion was that it is *dependent on patient health factors*. Other criteria mentioned by the physicians included: *dependent on life expectancy* (9); as well as *life expectancy less than 10 years* (9).

Table 3-18: Recommended procedures to well patients for prostate cancer screening

Procedures	n	Never	Seldom	Sometimes	Often	Always	Combination of Sometimes, Often, & Always	Weighted Means
a) Digital Rectal Exam (DRE)	786	0%	1%	3%	22%	74%	99%	4.69
b) Prostate Specific Antigen (PSA)	817	1%	5%	25%	36%	34%	94%	3.95

Physician respondents were able to describe other prostate screening procedures they use other than DREs and PSA testing. The responses repeatedly mentioned were *Free PSA Rations* (5 responses), and that they *discuss options with patients rather than actively screen* (2 responses).

Other procedures they mentioned included:

- Referral to urologist
- The history of urinary outflow obstruction is also taken into consideration
- Response from O.T.C. B.P.H. medications that reduce urinary symptoms of nocturia, frequency, urgency etc which would indicate no increase in prostate bulk
- PSA q 4yrs now till 75.

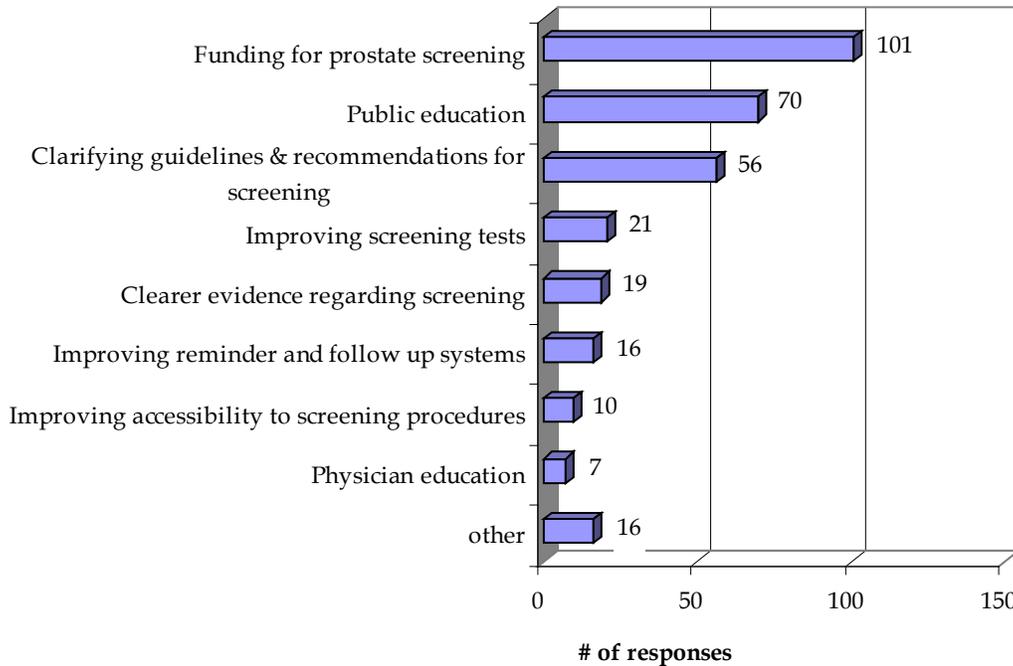
Table 3-19: Barriers in encouraging prostate cancer screening for well patients

Situations	<i>n</i>	Never	Seldom	Sometimes	Often	Always	Combination of Sometimes, Often, & Always	Weighted Means
a) My patient expresses discomfort with a DRE	872	17%	41%	31%	9%	1%	42%	2.37
b) My patient is unable to afford PSA procedure	864	21%	40%	29%	8%	2%	39%	2.31
c) My patient expresses anxiety about results of screening procedures and/or treatment for prostate cancer	868	22%	44%	28%	6%	1%	34%	2.20

Table 3-20: Perceptions on prostate cancer screening related practices

Statements	<i>n</i>	Strongly Disagree 1	2	3	4	Strongly Agree 5	Agreement [4+5]	Weighted Means
a) I am comfortable performing a DRE	875	1%	2%	8%	24%	65%	89%	4.50
b) I am comfortable explaining the pros/cons of prostate cancer screening	876	2%	7%	21%	42%	29%	71%	3.90
c) I am comfortable interpreting the reported results of a PSA procedure	870	2%	8%	27%	38%	26%	64%	3.78
d) I need clearer screening guidelines for prostate cancer	871	12%	17%	20%	31%	20%	51%	3.30
e) I need access to better reminder systems to notify my patients of recommended prostate cancer screening	871	10%	19%	23%	31%	17%	48%	3.25
f) I need better educational materials about prostate cancer screening to give to my patients	874	12%	20%	21%	34%	13%	47%	3.17
g) I need clearer follow-up recommendation for patients with positive prostate screening results	871	16%	21%	19%	29%	15%	44%	3.06

Figure 3-30: Responses for how prostate cancer screening can be improved in BC



SUMMARY OF TABLES AND FIGURES – PROSTATE CANCER SCREENING

There are many controversies surrounding prostate cancer screening and the recommended approaches due to a lack of Canadian data evaluating “whether population based screening for prostate cancer using PSA reduces mortality from the disease, or adversely affects quality of life”.¹⁶ This may explain the fact that only 71% of physicians are *comfortable explaining the pros and cons of prostate cancer screening* and half reported *needing clearer screening guidelines*. This is further evidenced by the significant variability in the age range at which primary care physicians stop recommending prostate cancer screening indicated by 67% of respondents who continue to recommend prostate cancer screening after age 79. Also, 70% of physicians often or always *recommend PSA testing* even though this is not covered by a provincial screening program and 39% agree *patients unable to afford the PSA procedure* is at least sometimes a barrier for them to encourage prostate cancer screening for well patients. Interestingly, only 66% agreed in the *advantages of prostate cancer screening* for well patients (table 3-1) despite the fact that DRE and PSA are at least sometimes recommended by almost all (99% and 94% respectively) of the physicians for well patients. The BCCA statement regarding prostate screening with PSA is that fit men between ages of 50 and 70 should be made aware of the availability of PSA as a detection tool as well as its potential benefits and risks, so patients can make an informed decision whether to have the test performed.¹⁷ Also, a great number of respondents indicated a *need for better educational materials to give to their patients about prostate cancer screening* (47%) and *clearer follow up recommendations for patients with positive prostate screening results* (44%). A large number also suggested a need for funding and public education for prostate cancer screening. The discrepancies in beliefs and practices and other identified needs highlighted in the results show that educational interventions are required to provide primary care physicians with guidance on how they can best address the issue of prostate cancer screening for their patients.

¹⁶ BC Cancer Agency (2006, September). *Recommendations*. <http://www.bccancer.bc.ca/HPI/CancerManagementGuidelines/Genitourinary/Prostate/PSAScreening/Recommendations.htm> . Accessed on June 3rd, 2010.

¹⁷ IBID.

3.5 ASSOCIATIONS BETWEEN DEMOGRAPHICS AND RESPONSES

Rural vs. Urban

Agreement with the advantages of cancer screening for well patients

A significantly higher proportion of physician respondents practicing in urban settings (70%) agreed with the advantages of screening for *prostate cancer* in comparison to those practicing in rural settings (58%).

Barriers in discussing cancer screening with well patients

More physician respondents in urban areas (56%) indicated that *patients with language barriers* is **more frequently** a barrier, in comparison to physician respondents in rural areas (35%).

Barriers in encouraging colorectal cancer screening for well patients

With respect to '*patients unable to afford cost for colonoscopy screening*', just over half (51%) of urban physician respondents said this is **more frequently** a barrier in encouraging colorectal screening, in comparison to under one-third (29%) of rural physicians that said the same.

Perceptions on colorectal cancer screening related practices

There were regional differences in **agreement levels** on the statement '*I need better educational materials about colorectal cancer screening to give to my patients*' (urban 58% vs. rural 47%).

Barriers in encouraging hereditary cancer risk assessment for well patients

There were region differences in identifying '*geography being a barrier for patients*' as **more frequently** being a barrier in encouraging hereditary cancer risk assessment for well patients (rural 76% vs. urban 36%).

Male vs. Female

Communication with patients on cancer screening

Higher proportion of male physicians (64%) said their patients request *PSA tests* **often** in comparison to female physicians (41%). Higher proportion of female physicians (70%) said their patients request *Pap tests* **often** in comparison to male physicians (59%).

Barriers in encouraging cervical cancer screening for well patients

There was gender difference in '*patient expressing discomfort with gynaecological exam*' **more frequently** being a barrier (male 48% vs. female 31%). Further, gender difference also existed in the following situations **more frequently** being a barrier: '*when there is no female healthcare provider available to conduct a Pap test for my patient*' (male 31% vs. female 4%) and '*patients expressing cultural sensitivity toward having a gynaecological exam*' (male 36% vs. female 17%).

Perceptions on cervical cancer screening related practices

With respect to the response scale **strongly agree**, there was gender difference in the following situations:

- 15% more female physicians (93%) strongly agreed they '*are comfortable performing a Pap test*' in comparison to male physicians (78%);
- 31% more female physicians (73%) strongly agreed they '*always ask new female patients about their Pap test history*' in comparison to male physicians (42%);
- 21% more female physicians (76%) strongly agreed '*are comfortable explaining the pros/cons of cervical cancer screening*' in comparison to male physicians (55%);
- 21% more female physicians (68%) strongly agreed they '*are comfortable interpreting the reported results of a Pap test*' in comparison to male physicians (47%);
- 14% more female physicians (90%) strongly agreed '*women that have received the HPV vaccine still need a Pap test*' in comparison to male physicians (77%).

Perceptions on colorectal cancer screening related practices

There were gender differences in **strongly agree** levels on *comfort in performing a DRE* (male 76% vs. female 53%).

Perceptions on prostate cancer screening related practices

There was gender difference in agreement levels of scale **strongly agree** to '*I am comfortable performing a DRE*' (male 79% vs. female 48%). There is also gender difference in overall **agreement levels** to '*I am comfortable in explaining the pros/cons of prostate cancer screening*' (male 80% vs. female 59%).

Graduation Years

(Categories of graduation year from medical school are: 1979 and earlier 1980-1989 1990-1999
2000-2009)

Preferred educational formats for learning about cancer screening

Over half (54%) of physicians graduating within 2000–2009 had a **higher preference** for *online CME/CPD* in comparison to physicians graduating in earlier years (1979 and earlier - 34%, 1980-1989 - 38%, 1990-1999 - 36%).

Preferred sources for accessing cancer screening

Preference levels for accessing cancer screening information through the *BC Cancer Agency Website* was higher for physicians graduating later (1979 and earlier - 40%, 1980-1989 - 51%, 1990-1999 - 57%, 2000–2009 - 65%). This trend is also shown in preference levels for accessing cancer screening information through web-based resources (1979 and earlier - 42%, 1980-1989 - 61%, 1990-1999 - 62%, 2000–2009 - 83%).

Barriers in discussing cancer screening with well patients

More (51%) physicians that graduated within 2000–2009 said their *level of comfort with their knowledge to help patients decide the pros/cons of cancer screening options* were a barrier for them in comparison to physicians graduating in earlier years (1979 and earlier - 24%, 1980-1989 - 34%, 1990-1999 - 39%).

Perceptions on breast cancer screening related practices

The earlier the year of graduation from medical school, the more physicians **strongly agreed** they *are comfortable performing a clinical breast examination* (1979 and earlier - 79%, 1980-1989 - 70%, 1990-1999 - 67%, 2000–2009 - 46%). The results showed similar trends for physicians *comfort in explaining the pros/cons of breast cancer screening* (1979 and earlier - 54%, 1980-1989 - 42%, 1990-1999 - 39%, 2000–2009 - 24%).

Perceptions on prostate cancer screening related practices

The earlier the year of graduation from medical school, the more physicians **strongly agreed** they *are comfortable performing a DRE* (1979 and earlier - 80%, 1980-1989 - 63%, 1990-1999 - 59%, 2000–2009 - 50%).

The later the year of graduation from medical school, the more physicians **agreed** they *need clearer screening guidelines for prostate cancer* (1979 and earlier - 39%, 1980-1989 - 48%, 1990-1999 - 60%, 2000–2009 - 63%).

3.6 SUMMARY OF PERCEPTIONS ON CANCER SCREENING PRACTICE

For each of the five cancer sections (breast, cervical, colorectal, hereditary, and prostate), physicians were asked to indicate their level of agreement/disagreement on a scale of 1 to 5 with a variety of statements regarding their comfort in performing screening procedures, interpreting reported results, need for better educational materials and reminder systems, as well as some questions surrounding attitudes. For comparison purposes, physician responses to each of the five sections are presented below. Aggregates for disagreement (1+2) and agreement (4+5) are below. Data of neutral responses is not reported. The results below point to the need for follow-up recommendations, reminder systems and better patient educational materials for patients.

Table 3-21: Summary of perceptions on cancer screening

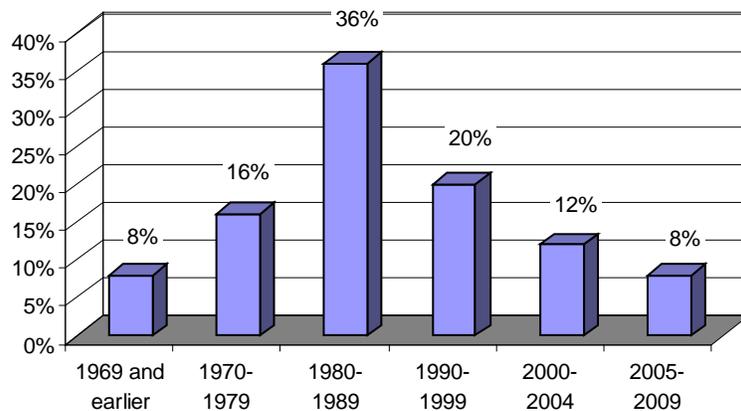
Statements	Breast		Cervical		Colorectal		Hereditary		Prostate	
	Disagree	Agree	Disagree	Agree	Disagree	Agree	Disagree	Agree	Disagree	Agree
I am comfortable performing a clinical breast examination	2%	95%	-	-	-	-	-	-	-	-
I am comfortable performing a Pap test	-	-	1%	98%	-	-	-	-	-	-
I am comfortable performing a DRE	-	-	-	-	2%	92%	-	-	3%	89%
I am comfortable explaining the pros/cons of cancer screening	4%	82%	2%	94%	3%	81%	45%	23%	9%	71%
I am comfortable interpreting the reported results of screening procedure	7%	79%	2%	91%	4%	84%	-	-	10%	64%
I need better educational material about cancer screening to give to my patients	42%	30%	46%	29%	20%	54%	9%	77%	32%	47%
I need clearer cancer screening guidelines	61%	19%	70%	13%	31%	46%	-	-	29%	51%
I need clearer follow-up recommendations for patients with positive screening results	52%	23%	72%	14%	52%	28%	14%	68%	37%	44%
I need access to better reminder systems to notify my patients of recommended cancer screening	-	-	48%	33%	24%	54%	-	-	29%	48%
Patients should be able to self-refer for breast cancer screening (e.g. as currently available for mammography)	6%	84%	-	-	-	-	-	-	-	-
Patients should be able to self-refer for colorectal cancer screening	-	-	-	-	26%	54%	-	-	-	-
Women that have received the HPV vaccine still need Pap tests	-	-	0%	97%	-	-	-	-	-	-
I always ask my new female patients about their Pap test history	-	-	4%	86%	-	-	-	-	-	-
I am familiar with Hereditary cancer Program referral criteria and process	-	-	-	-	-	-	52%	27%	-	-

4 FOCUS GROUP FINDINGS

4.1 PARTICIPANTS DEMOGRAPHICS

The demographics of the focus group and interview participants were similar to the survey participants in gender and years of graduation. Among the 25 focus group and interview participants, there were 13 women and 12 men. The graduation year from medical school ranged from 1957 to 2005 (see figure below).

Figure: The focus group/interview participants' years of graduation from medical schools (n=25)



Primary care physicians practicing in the following communities across BC participated in the focus groups/interviews (Health Authorities in brackets):

- Burnaby (FHA)
- Coquitlam (2) (FHA)
- Dawson Creek (NHA)
- Kamloops (IHA)
- Ladysmith (VIHA)
- North Vancouver (VCHA)
- Port Alice (VIHA)
- Power River (2) (VIHA)
- Queen Charlottes (2) (NHA)
- Sechelt (VCHA)
- Richmond (2) (VCHA)
- Sicamous (IHA)
- Surrey (2) (FHA)
- Vancouver (7) (VCHA)

Similar to survey demographics, there was representation from all health authorities: FHA (5), NHA (3), IHA (2), VIHA (4), and VCHA (11).

4.2 PHYSICIAN ENGAGEMENT

Physician participants were asked about the sources they used for being updated on cancer screening practice, how the BCCA can best inform them about cancer screening guidelines and follow-up recommendations, as well as maintaining ongoing communication between the BCCA and primary care physicians.

4.2.1 SOURCES FOR GENERAL UPDATES ON CANCER SCREENING PRACTICE

The physician participants provided a variety of electronic and paper-based sources they used for keeping themselves up to date on cancer screening practices. In order of frequency they mentioned the following sources:

- Journal and other clinical resources of Canadian Medical Association (CMA);
- Journal and other clinical resources of College of Family Physicians of Canada (CFPC);
- Provincial Guidelines;
- BCCA Website;
- Practice Based Small Group (PBSG) learning program and other Continuing Medical Education (CME) sessions;
- Through discussion and meeting with colleagues and experts (e.g. oncologists); and
- Private Radiology Clinics (e.g. breast MRI information).

They also used American sources such as Up-to-Date and US Prevention Services Task Force (USPSTF) recommendations as reference for cancer screening practices.

4.2.2 BCCA INFORMING PHYSICIANS ABOUT THE CANCER SCREENING PROGRAMS

In terms of informing physicians of screening guidelines for patients at-risk for cancer or follow-up recommendations for patients with positive results, the physicians suggested that the BCCA in coordination with the BC College of Family Physicians and BC Medical Association (BCMA) could effectively reach the whole primary care physician population in BC. The physicians stated that various methods could be used when sending information as they have diverse preferences for receiving information due to age and regional differences. They suggested CME sessions, email, paper mail-outs as well as web-based information should be considered as approaches to convey *cancer screening guidelines* and follow-up information to primary care physicians. This is consistent with survey results pertaining to responsibility for sending screening notifications to patients (*see table 3-5 on page 9*).

The physician participants suggested regular updates of screening programs from the BCCA to BC physicians via emails once or twice per year. They clarified that the content of the emails should be very concise with web links directing the physicians to the new information in the update(s). The physicians indicated that an email could serve as a trigger to raise their awareness to visit the BCCA website for detailed screening program updates.

For *new screening programs*, the physicians suggested they should be informed concurrently through all the following approaches: email, mailed packages to physicians' offices, and workshop sessions to introduce new screening programs for physicians. Some physicians cautioned that promoting new screening programs by contacting the public was not as effective as working through physicians to reach patients.

For major changes in *existing screening programs*, physicians suggested multiple approaches to raise the level of awareness. Adding the latest information into the BCCA feedback report card to physicians was suggested as one such approach. The physicians said major changes to standards of practice should be available on the BCCA website and directly mailed to them as well. Some physicians expressed their need to understand the process of the screening programs. They suggested providing summary of screening process such as flow charts:

“When you’re dealing with a complicated process when there’s a lot of different branches and information, having some kind of a visual tree or flow that’s in front of me showing, my stool fecal occult blood is positive, this is the next thing that will happen, if the next thing is positive it’s [going to] go this way or that way and onwards.” - Physician

In addition, physician participants suggested that providing free cancer related CME opportunities would be an additional motivation for physicians to engage in discussions about screening with their patients. This incentive would increase the number of informed physicians and support improved patient outcomes.

“I think it [cancer related CME] would also motivate people to become educated and if they could go and get CME credits and then use that [new knowledge] to help their patients”. - Physician

4.2.3 ONGOING COMMUNICATION BETWEEN BCCA AND PHYSICIANS

The physicians were asked about what approaches they would suggest for maintaining ongoing communication between them and the BCCA.

The physicians talked about more direct communication between them and the BCCA, such as through a physician hot line. CME events were also mentioned as another platform to establish and maintain the communication. Some physicians commented on their satisfaction with the efficient communication with local BCCA cancer centres such as Fraser Valley Centre. In individual cases, the physicians said it would be “hugely valuable” to have direct and quick opinions from an oncologist or another GP who had more expertise in cancer. However, some physician participants were not aware of the existing BCCA phone lines for GPs contacting the oncologists. For example, a physician participant who used to work in primary care and now works for BCCA said,

“I found when I was in general practice I always found I didn’t know if you could call these people [oncologists], I didn’t know if they were available to or wanted to talk to us even. Now on the other side [working for the BCCA] I find we are quite happy to talk to people [GPs calling in] and actually enjoy it when people call in and talk to us. We are very available but I have the suspicion that the interface isn’t happening.” - Physician

In terms of collecting feedback on the screening programs, participants suggested that the BCCA could approach physicians who had a high number of cancer patients as well as seek additional feedback from cancer patients via face-to-face communication.

Other methods that were suggested for BCCA to get ongoing feedback included: i) email an online questionnaire (*e.g. 10 minutes in length*) to physicians once a year or based upon specific information collection needs; ii) provide some space or a link at the bottom of respective BCCA’s webpage for filling in comments; iii) provide contact information at the bottom of a screening pamphlet or newsletter.

4.2.4 PERCEPTIONS ON HEREDITARY CANCER SCREENING

The results from the survey phase of the cancer screening needs assessment revealed that a high percent of primary care physicians in the province (i) needed better materials about hereditary cancer to give to their patients, (ii) needed clearer follow-up recommendations for patients identified as high risk for hereditary cancer, (iii) were not familiar with the Hereditary Cancer Program referral criteria and process, and (iv) were not comfortable explaining the pros and cons of testing for hereditary predisposition to cancer. With this in mind, physician participants were asked during the focus groups about how to keep them updated (*specifically focusing on hereditary cancer screening*).

The physician participants commented that hereditary cancer screening was a rapidly evolving field and each individual patient's situation was very specific. The physicians noticed that the diagnosed cancer cases associated with apparent hereditary risk reminded their consideration of hereditary screening for well patients, and triggered their awareness of the hereditary cancer screening program.

Physicians who have referred patients to hereditary screening suggested they need feedback about these patients from the Hereditary Cancer Program (HCP). Some commented they have not heard anything back from the HCP after referring patients.

There were physician participants who said that they had received consultation feedback from the HCP after patient referrals; however, they commented the feedback they have received from patients has been that the referral was more confusing than helpful. In short, the referral to the HCP has sometimes not been a good experience for the physicians or their patients.

Some of the physician participants commented they did not think the BCCA promoted hereditary screening very well. Their perception was that hereditary screening was not well established based on available evidence and there was not enough funding to support genetic testing. Further, some physician participants said there was a lack of information about testing making a difference after the screening (i.e., the issue of "so what").

In addition, some of the physician participants stated that the hereditary screening program was not accessible for patients in rural areas due to the length of time to travel to a BCCA centre accepting referrals to the HCP.

"I think if it's not a better outreach program or if there are people not trained regionally, then I don't think it's going to work well with my practice". - Physician

4.3 PHYSICIAN PRACTICE

Physician participants were asked to suggest strategies to address physician challenges to discussing cancer screening with their well patients. The physicians were also asked to comment on patient reminder systems used in practice, on screening feedback report cards sent by the BCCA, and on follow-up systems.

4.3.1 ADDRESSING CHALLENGES

Physician participants were briefed about results from the needs assessment survey regarding areas that were more frequently barriers for physicians in discussing cancer screening with their well patients - 'patients with multiple health issues', 'time to explain the pros/cons of cancer screening', 'patients with language barriers', and 'physician financial compensation'. Physicians were asked to suggest strategies for overcoming these challenges at the practice, patient, and/or health care delivery level.

The feedback received covered the following areas: (i) physician financial compensation; (ii) dedicated time for overall patient health review; (iii) usage of brochures and BCCA website; as well as (iv) other strategies.

Physician financial compensation

Several physicians commented that cancer screening discussions with patients were complicated, time-consuming, and the inadequacies of the financial compensation system brought difficulties for physicians to engage in prevention and screening discussions with their well patients.

"Cancer care is actually terribly funded as a [GP] and I know they're [system] getting there with the other complex care stuff but it is very difficult. You spend a lot of time with your patients with cancer and there is nothing that allows you to bill a code." - Physician

"I think as a GP when I'm seeing people and talking about doing this kind of screening I'm also seeing them about something else. I'm not just seeing them usually about this kind of screening. So in that sense I'm not being compensated directly for it." - Physician

The physicians recommended the establishment of specific cancer related billing codes for compensating physicians engaging in cancer screening activities (e.g. discussing screening options as well as counselling patients after positive screening results) with their patients. They commented that cancer screening activities are a form of chronic disease management, for which physicians should be compensated in accordance with the number of times they engage in cancer screening activities with their patients.

Regarding counselling, the participants commented physicians were currently limited to billing only four encounters per year and the establishment of a new billing code for counselling cancer patients should not include such restrictions.

Physicians also commented that a newly created billing code for cancer related activities should not be set up as a 'complex care billing code', as such a code would require two complex diseases.

In addition, some participants cautioned that physicians' professional income (e.g. fee for service, salary, rostered, or sessional) could impact the extent to which financial compensation was a barrier for them discussing cancer screening with their well patients. For example, physicians paid sessional or those on alternative payment systems may not regard financial compensation as a factor to discussing cancer screening with their well patients.

*"I get paid a little bit different, I don't get paid a fee for service, **I'm paid sessionally**. So for me I can take the time to sit and go through what the person needs to do in terms of cancer screening which is a huge luxury." - Physician*

*"We are on alternative payments so **we're on service contract** which means same amount of money no matter how hard or how little you work. It doesn't occur just to work less, it encourages to work better. We have a half an hour appointments for our non on-call days and we do have the time. Compensation for the fee for service treadmill is a bit moot, though we think we're providing more screening here because we have the luxury of time. So looking at not just a fee code for it but looking at completely new novel ways of funding medical care." - Physician*

Physician participants suggested that the challenges within the physician financial compensation system needed to be addressed at the provincial level. It was suggested the BCMA be engaged to negotiate with the government to champion the creation of funds for physicians towards preventive screening practices. Further, if cancer related billing codes were to account for the cancer risk severity of patients (i.e. varied codes associated with low, medium, or high risk patients) physicians suggested that the BCCA be engaged in determining risk severity.

Dedicated time for overall patient health review

Several participants commented that the challenge in discussing cancer screening with their well patients was a lack of time to integrate this with visits to care for other non cancer related issues. Also commented, was that rural practices can be *"more episodic care for illness rather than wellness"*. In short, participants indicated that cancer screening becomes a secondary issue that might not get discussed during a regular visit with a patient.

They suggested an overall health review of patients (e.g. patients over 50) in a targeted visit to discuss and/or review for cancer screening. Physicians indicated that such dedicated time for cancer screening discussion could be helpful for thoroughly discussing the pros and cons of screening, particularly for patients with multiple health issues, patients with language barriers, and for patients with numerous questions.

"... having a targeted visit about cancer screening. You say to every one of your patients, just come in and you can go through a little check list, have you done this, that and the other because otherwise it's really hard to add in." - Physician

In addition, physicians commented that targeted visits to discuss screening would allow physicians to provide cancer screening in an appropriate contextualized preventative fashion, rather than discussing cancer screening on an ad hoc basis.

Usage of brochures and BCCA website

Some physicians commented that an efficient strategy that would be helpful for physicians to manage their time of discussing cancer screening with their patients, was to provide patients with cancer related brochures as well as the links to the BCCA website.

“The brochure that BCCA put out on PSA screening and prostate cancer I found very useful because I found explaining to them the pros and cons of getting a PSA test was very time consuming and I had to admit I sort of defaulted to say look this is controversial, here’s a brochure, read through this. You want to get the PSA test, here’s the form, go and get it. If you don’t then you can let it pass. And so that was one area where, I mean that information doesn’t have to be given as a brochure, you could give us that as on the web that I could just quickly print out as I need it.” - Physician

Other strategies for increasing uptake of cancer screening

It was indicated that primary care physicians could make better use of the 811 nurse line as a resource for patients, particularly as the line offers health information in other languages. However, the participants cautioned a high percentage of physicians and patients might not be aware of the 811 nurse line, and also, that it can be challenging to speak to someone when a queue is developing on the line.

It was commented that based on the clear information provided in the Colon Check program brochures (*in the sample materials distributed to participants*), physicians might be able to spend less time discussing the screening with their patients.

Compared to urban based practice, language barriers were indicated to be a less common issue for the physicians in rural areas. However, physicians suggested a strategy to address language barriers would be to ask those patients to bring in a family member as an interpreter.

Lastly, some physician participants suggested using group visits as a method of communicating cancer screening to a greater number of patients would be more efficient in comparison to one-on-one patient consultations.

4.3.2 REMINDER SYSTEM

The physicians were asked to comment on what types of systems would be most effective for reminding their patients about cancer screening.

Generally, physician participants were quite satisfied with the reminder system for the mammography program and suggested a similar model (e.g. mailing letters to patients) could be expanded to other screening practices.

The physicians suggested the EMR as a very efficient tool for patient reminder management in the office. It should be noted that 40% of survey respondents used an EMR in their practice. They believed that setting reminders around a patient’s birthday could be a general approach (e.g. in a similar manner to driver’s license renewals). They also suggested reminders be sent out to the public on age-related screening by the BCCA, which could be followed up by appointment pads and email messages from family physicians’ offices.

Some physician participants in rural areas emphasized the importance of public reminders commenting that rural physicians may not see the patients as frequently as urban physicians and further commented this may result in lower rates of patient uptake for cancer screening.

Physicians indicated that paper-based reminders were more effective than phone call reminders to reach the patients and encourage them to book screening appointments. Some physicians also suggested that adding some explanation on the screening procedures in the reminder letter from physicians could increase the uptake of screening by patients:

"...having something in writing about why it's being done has made a difference [in patient uptake]". - Physician

Opinions varied on reminders for screening for multiple cancers at one time to individual patients. Some physicians believed it was easier to remind and subsequently arrange screenings for multiple cancers during a patient's primary visit. Others thought reminding patients about the need for screening for multiple cancers might be too overwhelming.

4.3.3 SCREENING FEEDBACK REPORT CARDS

Physicians were provided with two sample report cards – 2009 Screening Mammography report card and a 2008 Pap Test Sampling Quality Feedback Report. They were asked to comment on their interest in receiving this type of feedback about their practice from BCCA screening programs (e.g. usefulness, improvements to make, etc).

Generally, the physician participants commented that they found both report cards to be useful tools, particularly in reference to the feedback on the quality of the screening that they performed (Pap test) and the summary of the number of patients who got mammograms. One participant described the report cards as the best form of education they had received.

"Well it's useful because then you become proud of the fact that you, you did that, you know [high percentage of satisfactory smears]. I mean you're never happy that you had patients with malignant disease but at least you feel oh, you know, somebody's looking at what I'm doing". - Physician

Not all participants were familiar with the report cards as a few commented they did not recall ever receiving either a Mammogram or Pap Test Sampling Quality report card.

It was commented that the BCCA did not have a direct way of providing feedback to physicians about screening patients for colorectal and prostate cancer, as the screening procedures are currently not provided by a provincial program affiliated with the BCCA. Physicians also elaborated that one possible challenge in creating a report card system for prostate cancer was the reference range of PSA test results might generate different discussions with patients in different age groups.

It was mentioned if a physician supervised medical residents, the summary in a Pap smear report card would actually reflect the performance of the residents but not the performance of the individual physician supervisor. This is noteworthy if the physicians' skills of performing the screening test were evaluated based on information in the report cards.

Suggested improvements

To make the report cards more helpful to physicians, participants suggested that the BCCA incorporate the following enhancements:

- Pap Test Report Card
 - Provide educational resources in areas that physicians need to improve on when a low percentage of satisfactory Pap tests are reported;
 - Include physical 'complimentary technique instruction sheet' or 'educational video or DVD' along with the Pap Report Card;
 - Include a brief summary or guideline on how it applies to a patient in a particular age group in the report;
 - Provide physicians with feedback on the quality of their call-back systems (in connection with receiving a list of overdue patients needing Pap tests or those lost to follow-up).

"I just moved my large practice of 3000 people into this interior health clinic that has a totally different recall system that is much inferior to what I used to use because the list coming back from the BC Cancer Agency now of people that are overdue are significantly longer than what mine used to be so those numbers would be helpful." – Physician

- Mammogram report card
 - Along with including information about the Fast Track, include a hardcopy of the Fast Track application form for physicians to readily use for their patients;
 - Include information on changes to the screening guidelines.

4.3.4 FOLLOW-UP SYSTEM

The physicians thought the brief summary and follow-up recommendation on mammograms and Pap test reports were effective and helpful. They were hesitant to recommend that the BCCA become involved in the already established loops of other processes such as colorectal cancer screening follow-up.

In order to improve the overall efficiency and the time for the follow-up process, the physicians suggested alternative methods to receive the screening results instead of letters:

- Receive results electronically if physicians use EMR;
 - e.g. results could be sent electronically straight into a physician's computer record that is linked to the individual patient;
- Receive results via fax if physicians do not have an EMR system.

Some physicians expressed a need for involvement by the BCCA toward an efficient tracking system for patient follow-up.

"... this is about working on the system to make the system work and not have huge gaps in time and inconsistencies and practice and so on across the province to actually follow-up something when you've got an important flag and I think systematizing this and organizing it, making it consistent and timely and effective is certainly who's [going to] take the lead on that in the province. I certainly think that Cancer Agency should be a part of that, a lead part of that."- Physician

“What really bothers me is that when I send a woman for a pap smear and it’s abnormal, then it takes four months to book a colposcopy and a biopsy. The second thing a mammogram, there is no way that I can get a mammogram quick enough if there is something suspicious”. - Physician

Some physicians commented on the challenge of follow-up with patients using walk-in clinics. They suggested the involvement of the BCCA for following up with patients that access walk-in clinics.

“I work at a walk-in and I do order a lot of screening tests and sometimes it makes for difficulty in tracking things down. I think if the Cancer Agency could consider following up with letters like they do for the abnormal mammograms and like they’re obviously doing with this pilot project for the colon cancer screening with things like PSA and abnormal Paps also which we do in the clinics that sometimes it would just make me feel that the population was being screened and monitored appropriately whereas docs walking in between a practice and a walk-in clinic sometimes find it difficult to track patients down. But if we’ve done the test it would be nice to know the Cancer Agency can actually contact the patient directly.” - Physician

The physicians stated that current follow-up information of different cancer screenings came in various formats (e.g., phone calls, fax, and official report/letter). They suggested these confusing approaches to be standardized; and they preferred that the screening reports went through the physicians first. In that way, the physicians could do the needed follow-up with the patients and the patients would not get unnecessarily upset or confused about the results in the reports as the physician would be involved in the process from the beginning.

4.4 PATIENT EDUCATION

Physician participants commented on several aspects of educating patients on cancer screening.

4.4.1 PUBLIC EDUCATION

The physicians said that patients’ awareness was important and public education could be very supportive to physicians’ practice. Participants commented that physicians were overwhelmed by illness-based visits, and that patients needed to be educated to bring up the cancer screening topic when they communicate with their physician during office visits. Data from the focus groups and survey highlights the need for better patient education to promote patient self-management and for patients to not be over reliant on the busy practitioner to drive cancer screening discussions.

The physicians suggested promoting cancer screening programs to the public because an individual physician was too busy to be relied on as “primary driver” for population based screening. The physicians suggested alternative approaches beyond pamphlets for public education, such as video clips explaining screening tests that could be available on the BCCA website or displayed in a physician’s waiting room. The physicians also suggested that presentation and public forum tool kits be made available for physician use in delivering community education in cancer screening.

4.4.2 PATIENT EDUCATIONAL MATERIALS

It was noted that physician participants gave out breast and cervical cancer materials infrequently, because it was relatively easy to encourage their patients to undergo the screening tests. Nevertheless, they suggested additional Pap test educational materials for young patients with details about what to expect from the test results would be useful.

Some physicians gave out the materials which had information about abnormal screening results since they found these were helpful. Others used prostate screening materials frequently to assist the often lengthy discussion on this option with their patients.

The physicians criticized the readability of some patient educational materials. They suggested the use of lay language (e.g. simple and shorter sentences, more figures, diagrams, and pictures, etc) for the patient educational materials. They commented on the need of educational materials to be available in multiple languages.

The physicians suggested that the posters should be simple and include some “*talking point*” in order to promote a conversation between physicians and patients, while the handout materials should have additional facts.

“I think the key is just a very simple message - screening saves lives and then basically how do you get more information. If that managed to catch your eye and that’s the thing that you are interested in, then where do I go next. And so having the very clear “call this number” and also who you’re calling so the BC Cancer Agency and that’s who’s supporting it, then I think that’s the most important message.” - Physician

The physicians suggested that all the educational materials should be available on the BCCA website so that they could easily print them out in the office or direct the patients to read the materials. The physicians were not interested in receiving or holding a lot of paper materials in their practice. They suggested the BCCA send them the materials upon specific physician request.

4.4.3 SAMPLE MATERIALS FROM BCCA

The physician participants were given the opportunity to comment on the sample BCCA materials circulated prior to the focus groups and interviews (*see appendix 5 on page 95*).

In terms of the latest version of the BCCA materials, the physicians liked the colour branding (e.g. dark purple materials) and logo-on-the-top of the new design. They believed it would be easy for them to pick up the BCCA materials and not get confused with other brochures they received (e.g. brochures from pharmaceutical companies) when giving educational materials to patients.

Some also suggested that besides the highlighted BCCA logo, highlighting the name of the cancer screening at the very top of each brochure is helpful for physicians to quickly identify the materials. They liked that the BCCA website was listed on the front page of the materials. They thought the information in new materials for colon cancer and hereditary cancer was very helpful for them to answer patients’ questions.

The physicians' comments were mixed with regards to the laminated cheat sheets - *on program referrals for hereditary breast & ovarian cancer, and on hereditary colorectal cancer* - as reference tools in their practice. Some physicians liked the laminated reference cards, but others thought they would seldom use them and refer to the BCCA website instead. They especially pointed out that the laminated sheet for hereditary cancer looked too busy and confusing.

In terms of prescription size pads, the physicians often used the mammogram appointment pad and they also had positive comments about using the colon check tear sheets to engage patients in the screening programs (comments specifically made by physician participants in the colon check pilot community of Powell River).

Physicians liked the pink mammogram poster. They said it was great as an educational tool in their offices. They were satisfied with the layout and design of the poster. They did not think there was a need to change the size of the poster or add more information to it. They also suggested the materials have a good black and white logo so that the colors would not get lost when printed out with a laser printer.

The following statements reflect specific comments about the sample materials that were circulated to the participants prior to the focus group:

[Cervical cancer materials]: "I think it's a bit cumbersome to have four separate pamphlets about different aspects of the pap and abnormal cervical smears etc. It would be nice if that was consolidated. And then from a kind of branding marketing perspective it would be nice if there was consistency across the board that this is a BC Cancer Agency, you know, product and you know the cervical cancer ones are all different in terms of appearance." - Physician

[New colon check pamphlet]: "I really like the colon check ones. I think it has a flashy name that would get my attention. Especially the graphic on the front with the two naked people. That's pretty catchy." - Physician

[Mammogram appointment pad]: "It works really well for the Lower Mainland here because it has a number of phone numbers and it suits a wide variety of patients they can access the screening center in their neighbourhood." - Physician

4.5 BCCA WEBSITE

Prior to the focus groups and interviews, physician participants were provided with a link to the BC Cancer Agency's website (www.bccancer.ca) and were asked to review the website to provide feedback on areas such as: information searched, readability, layout, use of graphics, ease of navigation, depth of information, intuitiveness, as well as suggested improvements.

There was an impression from the discussions that the participants practicing in rural areas frequently used the BCCA website and were satisfied with the content, while the website experience and comments from the urban participants were variable. Some physician participants had never used the website before being asked to review the website for the purpose of the focus groups (e.g. one commented they did not find out about the website while they were in training).

Several participants commented on the usefulness of the website, stating that the website had a wealth of information, and also believed the website's structure was clear and easy to navigate. Several physicians also commented they would recommend using the website for their patients with computer access. A couple of physicians commented that they were aware of colleagues in other jurisdictions that were using the BCCA website. For example:

"The BC Cancer Website is renowned many places in Canada, even in North America; I've got oncologist friends in the States that actually refer to the BC cancer website routinely." – Physician

"I have had friends and family from other provinces, I direct them to this website as well and they found it very useful for both other health professionals and for the general public." – Physician

4.5.1 PURPOSE OF BCCA WEBSITE USAGE

The physician participants provided a variety of reasons why they had visited the BCCA website. These included:

- Accessing educational or CME (*continuing medical education*) resources;
- Accessing information related to hereditary cancer screening;
- Inquiring about the impact of family history as a risk factor;
- Inquiring about screening guidelines;
- Inquiring about general information on a specific cancer;
- Inquiring about drug administration or vaccination to patients with cancer (e.g. H1N1 vaccine);
- Inquiring on scenarios;
 - e.g. having a hysterectomy for a cancer or non-cancer related reason, when patient is due for next Pap test;
 - e.g. complicated follow-ups;
- Ordering restricted drugs;
- Searching for a resource [oncologist] to discuss cancer related clinical issues.

4.5.2 CRITIQUES OF BCCA WEBSITE

A few physicians criticized some aspects of the BCCA website. For example, it was commented the website was not visually appealing and the website font was smaller than ideal. It was also commented that the relevance of the pictures on the top right corner of the homepage to the BCCA was not understood.

It was indicated that one reason physicians did not access the website was that they already had other good sources of cancer related materials which they had used for several years. Specifically, one physician mentioned that when they had a specific question related to a patient, they preferred to speak directly to either a surgeon or to another physician that would be performing a procedure. In addition, this physician has used Up-To-Date (a clinical information resource) for over 10 years and commented that all the required answers were found using this resource.

A few physicians commented that they had come across blank or under construction web pages while navigating the website, which created frustration. They suggested such pages be removed.

4.5.3 RECOMMENDED IMPROVEMENTS FOR BCCA WEBSITE

Physician participants provided several suggestions on how they believed the website could be improved for physicians and the general public/patients.

For physicians

- Include a section on the main page highlighting latest updates on cancer (e.g. on clinical trials, landmark studies that may impact clinical guidelines);
 - In relation, for each cancer, provide a brief synopsis on current studies/trials, as well as reference literature published on the cancer;
- Include a section where physicians can download physician specific brochures or newsletters, and where they can also download associated brochures or other educational materials for their patients;
- Stratify the website so there is an entry point for physicians and one for patients/public with appropriate information for the different groups.
 - e.g. similar to sites where a user selects their preferred language
- Reduce the layers to which users have to click through 'branched' information to access desired content.

For public/patients

- Promote the website as a resource for cancer related information and not just for use by public/patients that have had or currently have cancers;
- Better engage the general public/patients using the website as a cancer screening self-education tool: developing an interactive tool that if the users input their demographic information (e.g. age, gender, lifestyle, family history, etc), the generated result will highlight potential cancer risks and will suggest screening procedures/prevention strategies;
- Include a section where patients can print relevant brochures or associated educational materials;
- Ensure content is at a level that can be comprehended by a variety of literacy levels;
 - Ensure content is offered in other languages;
- Incorporate educational videos that explain screening procedures in a more dynamic manner compared to disseminating information through written content.

"...more and more and more patients are checking (the website) before they see us, after they see us, and really do want information and I think that as a tool for me to be able to refer people to a valid reliable up-to-date accessible source on the web, to point patients to that is fundamental and so just endorse that." - Physician

4.6 OTHER IMPORTANT THEMES

The focus group and interview discussions with physician participants yielded additional comments relating to cancer screening practices that were not within the primary scope of the protocol. These additional findings follow:

Learning needs motivated participation in focus group

Some physicians provided their motivations for participating in the focus group phase of the needs assessment study. They were relatively new in their solo practice and expressed the need of being more knowledgeable about the screening guidelines, where to access resources, and the process of screening programs.

Accessibility in rural areas

Several physicians practicing in rural areas commented on accessibility challenges they have had with the mobile van services for the screening mammography program.

"We don't use the mammogram tear off pads either because we just have the visiting [mobile screening van] comes here once a year in September which is a bit of an issue because we get the positive results back just in time for winter storm season and the ferry schedule to get once or two times a week. So it makes a real nightmare for people getting their follow-up...." - Physician

"I mean just accessibility to the mobile screening van has just been added last week and if they didn't get there that day or they had to work that day or their kid was sick that day, then they miss the boat or they must drive a pretty big distance. That's just the way of rural medicine. But certainly accessibility is an issue for something as simple as mammograms." - Physician

"I think in the perfect world either more frequent visits of the van, less centralized screening centers so there was access if they didn't come right to our community, if they missed that day there's somewhere that's within an hour drive instead of a three hour drive. It's just for some of my patients means they're not [going to] get it." - Physician

GP restrictions for ordering screening tests

A few GPs commented on their inability to order some tests that they have heard about, while Specialists do not have the same restrictions.

"A lot of the tests that we hear about we're not allowed to order as GP's. They're sometimes limited to specialists and we do get these high stool DNA, but we're very limited as GP's in what we're allowed to order. I find that quite frustrating. I've had things rejected from labs quite a bit." - Physician

Electronic Medical Records (EMRs)

Some physicians commented on their usage of EMRs to support cancer screening in their clinical practice. A physician mentioned they intend on using their EMR to create a registry of patients that received screening procedures, so they can identify "who's slipping through the crack year after year".

Another physician suggested at the top of a patient's EMR page, there should be a section that lists all the recommended screening procedures based on the patient's profile (e.g. family history, etc.), along with detailed information about when screening procedures were last performed.

Clarity on screening guidelines/programs

Physicians made the following suggestions regarding screening guidelines:

- Create a program for PSA testing or FOBT samples in a similar manner to the screening mammography program in which patients are called back for re-screening;
- Provide (from the BCCA) clarity on the use of PSA testing as physicians are finding it challenging to implement an "unproven program".

"When I'm thinking about prostate cancer, certainly one of the barriers is the urologists say yes for PSAs, the preventative task force says no for PSAs and it seems to even vary from urologist to urologist and you know still when I look on my lab form, ordering a PSA you know, they're supposed to pay if they don't have, meet certain criteria. So I find that still really nebulous and would be really helpful for a very clear statement to come out." - Physician

- Provide clarity on cervical cancer screening;

"... cervical cancer screening, there seemed to be quite a few variations on cervical cancer screening across the country and BC's got one program and other provinces are using different types of pap smears and the States are using different time frames for pap smears and in conjunction with the HPV testing and I guess I'd really love to see the Cancer Control Agency [BCCA]'s statement that's come out HPV testing and intervals and what the future is there." - Physician

- Provide newly licensed physicians with a package of BC screening guidelines to ensure consistency in physician practice;

"... when I moved [to BC] I was recommending the Ontario guidelines to women for about a year and a half before I realized that the BC guidelines were a little different." - Physician

CME opportunities

Several participants commented that there is a lack of regular CME opportunities available for learning about cancer as well as on new screening guidelines. They suggested the inclusion of mobile or travelling CME opportunities to establish communication with primary care physicians on current guidelines. In addition, physician participants suggested including a well respected local specialist (in a dinner) with primary care physicians where they can ask the Specialist clinical questions.

"And it's a bit frustrating as a GP when a patient is diagnosed with let's say prostate cancer and comes in with a zillion questions of different therapies that I cannot answer. That's frustrating for me and for the patient. So it would be nice to get some CME on the stuff regularly so I can say you don't need a radical prostatectomy, you would do just as well with brachytherapy." - Physician

For BCCA

A physician that had participated in an “intake” program for the BCCA (e.g. taking history, and examining patients) commented on learning a lot in this process, particularly in how to look for cancer. They suggest such opportunities to learn be given to other physicians in the community.

Other comments made by the physician participants included:

- The BCCA performing well on biopsies;

“When I think, phone the Cancer Agency directly and say I need a biopsy and it’s done that week or the next week, so that’s, that’s one of the, for me that’s the best thing that the BCCA does is GP referred biopsies and I hope that you can tell them that, that that is a great program they have... for things like even lung cancer etc. If you diagnose on an X-ray, I find if you send it to a respirologist, you could wait weeks before anything is done whereas if you send it down to the Cancer Agency...” - Physician

- The BCCA should promote prevention and the impact of lifestyle attributes on cancer to the public, recognizing the challenge of impacting changes in patients’ lifestyles;
 - Adopt the Ontario model with educational materials directed to public/patients with physicians engaged in supportive roles and not primary drivers of the program.

Physicians’ skill level

Some physician participants commented that their skills in performing screening procedures or knowledge of interpreting reported results or explaining pros or cons of procedures increased primarily due to clinical experience over time rather than from attending specific CME events.

“The longer you’ve been in practice, the more you’ve sort of seen it all and you recognize danger signs amongst your patients. Plus you get to know your patients a lot better.” - Physician

“I would tend to agree, the more you’ve been in practice for all you know, the pitfalls and what is important, what isn’t, and who to screen. And you also know the family histories a bit better with time as well. So we sort of inherently know who the high risk people to deal with are.” - Physician

5 SYNTHESIZED FINDINGS AND RECOMMENDATIONS

The synthesized findings and recommendations are directed towards the BC Cancer Agency (BCCA) and other stakeholder organizations involved in cancer screening in BC. They are grouped into the following eight categories, addressing key findings from the survey and focus groups of the province-wide BC cancer screening needs assessment study:

1. Addressing Practice Based Challenges*
2. Public/Patient Engagement*
3. BCCA Website*
4. Breast Cancer Screening
5. Cervical Cancer Screening
6. Colorectal Cancer Screening
7. Hereditary Predisposition to Cancer
8. Prostate Cancer Screening

* Categories 1 – 3 are general recommendations related to the screening topic areas that were the focus of this needs assessment study.

In interpreting these recommendations, considerations should be made to the associations between demographic variables - geographic region physicians practice in (i.e. urban vs. rural), gender, and years physicians have been in practice - on survey responses that are presented in section 3.5 of the report.

1. ADDRESSING PRACTICE BASED CHALLENGES

- 1.1. British Columbia Medical Association (BCMA) and Society of General Practitioners (SGP) should **advocate** for the creation of specific billing codes to compensate *fee-for-service* primary care physicians for dedicated time to discuss cancer screening with well patients. For example:
 - 1.1.1. A billing code for a cancer screening visit to discuss cancer screening procedures that are appropriate for the patient.
 - 1.1.2. A billing code for a group visit, where physicians educate patients in groups on appropriate cancer screening in a practice support model.
- 1.2. **Need** an expanded reminder and follow up system for all established cancer screening programs, potentially using the model of the Screening Mammography Program of BC.
 - 1.2.1. Prior to implementing changes, ensure physicians are: (i) supportive of expanded reminder or follow up systems; and (ii) kept involved with all aspects of engaging their patients.
- 1.3. **Support** the integration of cancer screening practices into Electronic Medical Record (EMR) systems used by physicians:
 - 1.3.1. Send individualized patient screening results and recommendations directly through electronic methods to physicians' EMR.
 - 1.3.2. Advocate for the Physician Information Technology Office (PITO) to support integration of clinical practice alerts and audits for cancer screening in EMR systems.

- 1.4. BCMA and SGP should **support** the BCCA in the development of a cancer screening system that helps to link all patients to specific primary care physicians or alternate health care providers for screening and follow up.
- 1.5. **Improve** educational materials provided to physicians:
 - 1.5.1. Integrate physician educational materials into the BCCA website and allow physicians to request (via online and paper form) specific brochures for their practice.
 - 1.5.2. Expand the current BCCA branding scheme (e.g. use of purple & white) used on colorectal and hereditary cancer educational materials/brochures to other screening programs. Ensure BCCA logo and type of cancer are prominently displayed (e.g. at the top of the materials) on each piece of educational material/brochure.
 - 1.5.3. Need clear flow charts for each cancer program, similar to the “Participant Flow Chart” used in the pilot Colon Check program, which illustrates the process of screening by outlining the pathways from screening criteria, to appropriate screening procedures, to frequency for repeating screening, to follow-up recommendations for abnormal screening results.
- 1.6. **Coordinate** development of resources and education for primary care physicians on:
 - 1.6.1. How to address situations whereby at-risk patients refuse screening due to cultural sensitivities or a prior traumatic experience (e.g. patient has history of abuse).
 - 1.6.2. Appropriate screening procedures to use for well patients (including accuracy, benefits, and limitations of screening procedures).
 - 1.6.3. Appropriate age groups to begin screening, frequency of screening, and time frame for repeating/stopping screening.
 - 1.6.4. Follow-up procedures for patients with abnormal screening results.
- 1.7. **Disseminate** cancer screening guidelines, follow-up recommendations, changes/updates to existing screening programs, and educate primary care physicians about current recommendations and resources available to assist them in their cancer screening practices through:
 - 1.7.1. Accredited CME/CPD approaches such as: conferences, local small group workshops, hospital rounds, online webinar sessions and/or self-directed learning projects.
 - 1.7.2. Use of multiple mediums such as: the physician section of the BCCA website, BCCA feedback report cards, email, courier services, and postage mail.
 - 1.7.3. Development of a case-based cancer screening related educational road show, which incorporates best practices in cancer screening.
 - 1.7.3.1. Utilize existing professional development networks such as the Family Practice Oncology Network (FPON) and the University of British Columbia’s Division of Continuing Professional Development (UBC CPD) to deliver road shows provincially.
 - 1.7.4. Development of a mechanism to outline BC-based cancer screening guidelines and processes to physicians new to practice or moving to BC from elsewhere.
 - 1.7.5. BCCA partnering with other professional health organizations such as the BCMA, BC College of Family Physicians (BCCFP), UBC CPD, as well as the College of Physicians and Surgeons of BC to address the above areas.

- 1.8. **Encourage** physicians, particularly those in urban areas serving a patient population with diverse languages, to utilize the BCCA website, 811 nurse line, Healthlink BC (www.healthlinkbc.ca), as well as the Public Health Agency of Canada (www.phac-aspc.gc.ca) as resources for multilingual cancer related information.

2. PUBLIC/PATIENT ENGAGEMENT

- 2.1. **Develop** multi-media public education campaigns (*e.g. web-based video clips, TV, radio, brochures within physician offices*) for cancer screening with support from BC Ministry of Health Services, Health Authorities, other professional health organizations, and non governmental organizations, in order to:
 - 2.1.1. Dispel myths and uncertainties about cancer screening (e.g. breast, prostate).
 - 2.1.2. Illustrate benefits and potential harms of screening.
 - 2.1.3. Reduce anxiety and uncertainty about screening procedures.
 - 2.1.4. Encourage appropriate participation in screening procedures.
 - 2.1.5. Engage high-risk groups and those with low screening participation.
 - 2.1.6. Provide clarity on follow up procedures when there is an abnormal screening result.
- 2.2. **Improve** the readability of text in patient brochures by using shorter sentences, additional figures and diagrams, and expand provision of multilingual materials reflective of the diverse BC population.
- 2.3. **Develop** a patient group or public forum educational toolkit on cancer screening that might be delivered by a physician or another trained health care provider.

3. BCCA WEBSITE

- 3.1. **Create** an entry portal for users of the website to select information “For Physicians” or “For Patients”. Subsequent web pages should be tailored accordingly.

For physicians

- 3.2. **Promote** the BCCA website as a resource for primary care physicians to:
 - 3.2.1. Clarify guidelines for cancer screening.
 - 3.2.2. Clarify follow-up recommendations for patients with positive screening results.
 - 3.2.3. Download and/or order relevant educational materials such as brochures or newsletters on cancer screening both for patients and for themselves.
- 3.3. **Enhance** the user interface of the website by reducing the ‘branches’ physicians have to navigate through to obtain desired information.
- 3.4. **Highlight** the latest updates on cancer such as clinical trials, or changes in clinical guidelines on the main entry page.

For public/patients

- 3.5. **Promote** the website as a resource for the public/patients to:
 - 3.5.1. Read and/or download cancer related information and materials such as on prevention strategies and screening procedures.
 - 3.5.2. Be more actively involved in self-education and self management, by developing an interactive tool through which a user can input their demographic information (*e.g. age, gender, lifestyle, family history, etc*), to generate results that highlight potential cancer risks and suggest screening procedures/prevention strategies to discuss with their physician.
- 3.6. **Offer** the public/patient content of the website in languages reflective of the diverse BC population and improve the readability level of text content on the website.
- 3.7. **Imbed** educational videos that explain screening procedures in a more dynamic manner than solely providing information through written content.

4. BREAST CANCER SCREENING

- 4.1. **Develop** educational activities for primary care physicians on enhanced screening practices/recommendations/procedures for high risk patients.
- 4.2. **Improve** accessibility and reduce wait time to the screening mammography program (SMP).
 - 4.2.1. Increase the frequency that the Screening Mammography mobile van visits rural/remote communities.
 - 4.2.2. Expand the number of SMP clinics accepting patients.
- 4.3. **Investigate** the feasibility of alternative evidence-based breast cancer screening procedures that yield less false positives and less discomfort for patients.

5. CERVICAL CANCER SCREENING

- 5.1. **Facilitate** linkages between male primary care physicians and female physicians or allied health care providers, particularly in rural areas, for carrying out a Pap test by a female health care provider when requested by a patient.
- 5.2. **Improve** access to colposcopic examination for follow up of abnormal results.
- 5.3. **Investigate** feasibility and reliability of alternative screening procedures such as:
 - 5.3.1. Procedures that can be performed by patients.
 - 5.3.2. Wider adoption or change over to HPV testing for cervical screening.
 - 5.3.3. Usage of Liquid Based Cytology (LBC).

6. COLORECTAL CANCER SCREENING

- 6.1. **Increase** accessibility and reduce wait time for appropriate colorectal cancer screening (*e.g. colonoscopy*).

7. HEREDITARY PREDISPOSITION TO CANCER

- 7.1. **Support** accredited CME/CPD sessions (*e.g. through regional conferences, local workshops, hospital rounds, webinar sessions, etc*) for primary care physicians that:
 - 7.1.1. Raise physician awareness and familiarity with the Hereditary Cancer Program (HCP), particularly in rural areas (*e.g. criteria for referrals, appointment locations, etc*).
 - 7.1.2. Clarify the genetic counselling and testing process for patients and physicians.
 - 7.1.3. Highlight the evidence and benefits and/or limitations of genetic testing for hereditary predisposition to cancer.
- 7.2. **Provide** primary care physicians with hardcopy samples of patient related educational materials about hereditary predisposition as well as genetic counselling and testing.
- 7.3. **Improve** the communication between the HCP and referring physicians to better clarify the results of genetic testing for both patients and primary care physicians.
 - 7.3.1. Promote physician awareness of the dedicated phone line at the BCCA where primary care physicians can call in to present questions about the referral criteria to HCP or the results of genetic testing.
 - 7.3.2. Identify strategies to more effectively communicate to the primary care physician the implications of genetic testing results for individual patients.
- 7.4. **Solicit** provincial and federal funding to support the expansion of the number of HCP sites.

8. PROSTATE CANCER SCREENING

- 8.1. **Develop** accredited CME/CPD educational programming for primary care physicians to clarify uncertainties surrounding prostate screening.
 - 8.1.1. Provide clear information about the controversies, benefits, and potential harms of prostate cancer screening, in particular on Prostate Specific Antigen (PSA) testing.
 - 8.1.2. Provide primary care physicians with prostate cancer screening guidelines.
 - 8.1.3. Engage the CMPA (Canadian Medical Protective Association) in leading educational programming specifically around any potential medical/legal aspects of not ordering PSA tests.
- 8.2. **Establish** a committee to engage appropriate stakeholders in discussions around Medical Services Plan (MSP) coverage of PSA testing.
- 8.3. **Provide** primary care physicians with decision support aids to give to their patients that:
 - 8.3.1. Create awareness and understanding of prostate cancer.
 - 8.3.2. Educate on available prostate cancer screening procedures such as Digital Rectal Exams and PSA testing, as well as the benefits (*e.g. early detection*) and limitations (*e.g. false positives*) of each.

6 FUTURE DIRECTIONS & NEXT STEPS

There are three main focuses for future directions arising from this needs assessment study:

- i. Organizational Engagement;
- ii. Educational Opportunities; and
- iii. Future Research Opportunities.

ORGANIZATIONAL ENGAGEMENT

It should be noted that throughout the needs assessment study, linkages have emerged between the organizations representing physicians in general practice and those representing interests related to cancer screening. For example, the Advisory Committee for this study included representatives from the following organizations: UBC Division of Continuing Professional Development (UBC CPD), BC Ministry of Healthy Living and Sport, BC Medical Association (BCMA), BC College of Family Physicians (BCCFP), and the BC Cancer Agency's (BCCA) Screening Programs and Family Practice Oncology Network (FPON).

In addition, the presidents of three organizations (BCMA, BCCFP, and SGP) all signed a formal invitation letter supporting the study and encouraged their physician members to participate in the survey phase of the needs assessment study.

In the 'Synthesized Findings and Recommendations' section of this report, there are several organizations suggested to be involved in the implementation of the respective areas. The continued engagement and involvement of these organizations could evolve through actions related to their mandates and ongoing input from the project advisory committee representatives of these organizations (already assisted with development of the survey tool, feedback on the study findings, and interpretation of the data).

EDUCATIONAL OPPORTUNITIES

The study results provided insight into the identified learning needs, educational formats and useful resources to support primary care physicians in BC on a variety of topics pertaining to cancer screening. Opportunities currently exist to begin to address the educational gaps that have been identified in this needs assessment. For example, the FPON delivers online CME through webinars for primary care physicians on "topical, interactive oncology presentations". UBC CPD is currently partnering with the FPON in the delivery of free and accredited CME/CPD webinars to primary care physicians in BC. The first topic was on *current evidence, issues, and recommendations for colorectal and cervical cancer screening*. It is anticipated this webinar will be part of a series which will also include education on breast and prostate cancer screening as well as the hereditary predisposition to cancer. These webinars are being delivered with the same content to all BC physicians but could be tailored according to the specific needs of physician groups based on their geographic location of practice, gender, or years in practice (*as per associations between demographics and responses reported in section 3.5 – see pages 31 - 33*).

The FPON also coordinates CME Road Shows on cancer related topics to communities across BC. These Road Shows are hosted by family physicians and organized through FPON, creating linkages between local health professionals, regional specialists and the BCCA. As described in paragraph 1.7.3 of the *'Synthesized Findings and Recommendations'* – (see page 53), there are partnership possibilities for the FPON, UBC CPD, and the BCCFP, to deliver Road Shows using case-based approaches based on the findings from the needs assessment around the educational needs of primary care physicians. Potential topics would be based on current evidence and recommendations. They may include (*but not be limited to*):

- How to address situations whereby at-risk patients refuse screening due to cultural sensitivities or a prior traumatic experience (e.g. patient has history of abuse).
- Appropriate screening procedures to use for well patients (including accuracy, benefits, and limitations of screening procedures).
- Appropriate age groups to begin screening, frequency of screening, and time frame for repeating/stopping screening.
- Follow-up procedures for patients with abnormal screening results.
- Referral criteria for the BCCA's HCP.

In addition to meeting primary care physicians' educational needs related to cancer screening, organizations, such as those identified in paragraph 2.1 of the *'Synthesized Findings and Recommendations'* (see page 54), might begin discussions on the specific roles they could play in the delivery of public education related to cancer screening.

FUTURE RESEARCH OPPORTUNITIES

Opportunities for future research based on the findings of this report may include the following:

- Further examination of the physicians' cancer screening education needs based on specific demographic groupings such as geographical practice locations (e.g. *urban vs. rural*) or years in practice (e.g. *in practice over 30 years vs. in practice 10 years or less*).
 - Consider assessing the impact and effectiveness of tailored educational interventions to these groups.
- Assessment of effectiveness of educational strategies on screening practice patterns of primary care physicians.
- Investigation of physician practices with significant discrepancies between recommended cancer screening guidelines and their actual practice (e.g. continued cancer screening conducted on patients beyond suggested age limits, high levels of PSA screening for prostate cancer).
 - To find out why this is occurring and to determine potential interventions to respond to this if appropriate.
- Follow-up of patients in a private practice to determine patient outcomes.
 - Understanding patients' experience of cancer screening discussions with physicians (e.g. how often screenings are recommended or repeated measured by patient survey and interviews or by understanding patient decision making (shared decision making) related to the acceptance of recommended cancer screening procedures such as prostate cancer screening).

NEXT STEPS

In order to maximize the potential impact of the findings from this needs assessment study, the next steps include the dissemination of study findings to relevant stakeholders, primarily at organizational or educational program planning levels. The aim will be to inform and provide strategies that begin to implement recommendations arising from this study.

Dissemination of study findings at an organizational level should specifically include (*but not be limited to*) existing programs within the BCCA (*e.g. SMP, CCSP, Colon Check, HCP, and the FPON*), BCMA, BC Ministry of Health Services as well as SGP. Other target audiences for dissemination with an interest related to educational programming might include the Health Authorities, BCCFP and Program Directors/Conference Coordinators within UBC CPD as well as the broader UBC Faculty of Medicine.

Primary care physicians should be alerted of the study findings by making these findings available on specific websites such as those for UBC CPD and BCCA. In addition, opportunities should be explored for publishing the study findings in peer reviewed journals with a national readership.

APPENDIX 1: SAMPLE WEIGHTED MEAN CALCULATION FOR LIKERT SCALES

The survey question is:

“I believe Screening for cervical cancer can be advantageous for well patients”.
Please choose your degree of agreement to this statement.
(Rating scales are 1~5, from **Strongly Disagree** to **Strongly Agree**)

Below are 883 survey participants’ responses shown in Excel spreadsheet:

	A	B
1	16	1
2	1	2
3	5	3
4	37	4
5	824	5
	Response Count	Rating Scale

The calculation of weighted mean is

Total of each (Rating Scale x Response Count) divided by total number of respondents

In this case, the weighted mean of degree of agreement = $(16*1+1*2+5*3+37*4+824*5)/883 = 4.87$

Excel formula is: =SUMPRODUCT(A1:A5, B1:B5)/SUM(A1:A5)

APPENDIX 2: QUOTES FROM OPEN-ENDED RESPONSES

Question 9 – Other barriers to screening discussions

Time constraints

- appropriate appointment, i.e. usually I discuss cancer screening during physicals but not with regular appointment. Government has taught patients to not have physicals so when do I have the chance to talk about screening, lifestyle etc?
- lack of time; patient makes infrequent visits to see me.
- physician workload in practice

Accessibility to screening resources

- availability of resources
- lack of availability of screening test e.g. colonoscopy
- care gap, i.e. colorectal imaging/colonoscopy
- difficulty in accessing screening in a timely manner is sometimes a problem particularly with respect to colorectal cancer screening

Cost

- cost of uninsured screening procedures
- financial issues for pts
- lack of access to MSP covered screening

Unwilling patients

- belief system against allopathic medicine
- poorly informed patients
- some women are against mammograms and cannot be discussed with them.

Conflicting guidelines

- conflicting or unclear or multiple guidelines
- differences in recommendations of different societies, or specialists e.g. American vs Canadian guidelines
- lack of fixed recommendation re: routine colonoscopy >age 50

Other single responses

- how to explain "risks of false positive": what that "means" for a patient
- i am not encouraged to discuss cancer screening with my patients
- needless anxiety
- no handouts with pros and cons for recommended screening procedures
- practical reminder tools
- resources RN or MOA
- systems to help me remember

Question 13: Other reasons why physicians have difficulty encouraging breast cancer screening for their well patients

Patient has alternative beliefs (12 responses)

- they think it unnecessary as asymptomatic, they think it causes breast cancer
- they refuse for philosophical reasons
- belief that being Asian or small breasted mean no/low risk
- some patients are opposed to mammograms as they believe it causes cancer and I am unable to convince them otherwise
- they have anxiety over the harm vs benefit over-diagnosis and overtreatment

Patient worries about radiation exposure (7)

- patients do not want any radiation - most common reason to not have mammogram
- fear that radiation will cause more cancer. I need some stats for this.
- patient is reluctant to go for the fear of radiation exposure

Limited Access to screening (7)

- screening exams - long delays to getting appointments.
- poor rural access
- long wait list for appt
- no mammography in my community - expensive to travel. No visiting mammogram

Patient belongs to a particular demographic (6)

- very small breasts patients
- cultural factors
- breast augmentation

Patient refuses (5)

- patient refuses (usually very adamant refusal)
- patients outright refusal
- Patient opposed to having mammograms.

Patient is of younger age (4)

- well women <40 with no family history
- age 40-49, and high probability of a false positive screen
- patients under 50
- 40-49 yrs - I am not convinced the evidence of benefits outweighs the harms for this age group

Question 15: How can breast cancer screening be improved in BC?

Improved accessibility (116 responses)

- travelling mammography vans/trucks to remote communities
- availability for MSP-funded MRI screening for women with a very strong family history that would be eligible for a genetic screening but choose not to have genetic screening.
- dedicated, full time Breast Cancer screening clinics we can refer to
- include unique high risk groups (e.g. younger transgender women) who are not accepted by the screening programs or MSP ... there is no evidence to draw from regarding Br Ca risk for those on exogenous estrogen under 55.
- more Chinese speaking nurses and technicians in Richmond BC
- shorter wait times! Currently my patients have waited 2-3 months to schedule a screening mammography in Burnaby

Advertising Campaigns (42)

- advertise that mammograms don't spread already existing cancer. 2. Advertise that 5 minutes of squashed breasts leading to early detection may prevent needing chemotherapy leading to baldness
- advertising to dispel myths of "horrific pain" associated with test
- more advertising? clear supportive evidence, clear demonstration of any risk
- target specific groups, plus use the media more - (new) immigrants, ESL patients, "commercials" on TV, radio and newspapers, "advertise" in ethnic newspapers and TV channels, skytrain, buses, bus shelters, etc.
- public health campaign focused on high-risk groups for poor compliance e.g. many Muslim, or Asian women do not accept screening because of 'modesty' issues.

Patient Education (30)

- disclose the limitations and associated morbidity. Need improved distribution of information about weaknesses of breast cancer case finding - see BMJ Feb09
- discourage the hysteria around breast cancer in young women.
- honesty about poor level of evidence 40-50.
- more cultural specific materials translated information into.
- very definitely need much more balanced informed consent educational materials for patients

Improving Screening Technology (22)

- a less uncomfortable imaging modality that could be recommended to small-breasted women
- better technology ==> better quality mammograms/less false alarms
- consider thermography
- CQI for those radiologists who interpret mammograms. Are there required updates for radiographers?
- looking at different imaging techniques e.g. MRI
- ongoing research to provide evidence based guidelines, imaging/technology advances
- utilize current lower radiation device

Improving reminder procedures (20)

- if IR report can state when to screen next - generic recommendations in general and high risk groups etc. - automatic add on to all mammogram.
- registry analogous to Pap smear screening program, administered by Cancer clinic.

- the present breast cancer screening in BC is excellent. Perhaps family physicians can receive notice of patients who are overdue for screening like the Pap Smear program.
- annual print out along with MSP billing to appropriate groups
- reminders and letters sent to women > 40 y.o. (determined by plan care card info)

Modifying Recommendations (17)

- look at the "OBSP" Ontario breast screening program where a nurse does a breast exam on the same visit as the mammogram. This is offered by screening centers and mobile unit for rural areas.
- annual mammograms for women in their 50s!
- stop pushing younger women into this screening.
- tell younger patients (<40 yrs) to get assessed... lots of cancer seen in young patients
- recommendation for patients with 1st degree relative with breast cancer - at age... or ...

Clearer Guidelines (9)

- clearly state Canadian guidelines. Too many women with mammograms based on US guidelines.
- clearer guidelines on what to do with positive or equivocal results
- it would be nice to have clear guidelines for all cancers that we currently screen for --> risk/benefits outlined in something we can give to them - mammos fairly good guidelines
- clarify SMP guidelines for women with fam hx ca br. in 1st deg rel. with br ca < or = 40 yrs

Alternatives for Orphan Patients (7)

- better if able to do screening mammography without a family physicians name.
- doing a pretty good job. One problem is that the patient must have a physician and in some communities, due to physician shortage they may not. This should not be a limiting factor and a system should be created to deal with this.
- some pts have no FP - these women are being told they can't have a mammogram - they should have access.
- patients should be able to self refer and have abnormal results dealt with at a single site (ie rads, sx, oncology referral all at a breast centre) not wander around to an unknown FD after self referring so fd can be responsible for follow up.

Improving follow up procedures (7)

- better follow-up of patients, such as using email. Do not put the onus solely on busy primary care physician offices.
- doctor less patients need a way to have their mammograms reliably and systematically followed up.
- notify family physician if patient does not appear for routine provincial recall
- Patients do get lost to follow up if they move. Not sure what can be done about this. Maybe a question at the time of mammography - "are you going to be moving in the next year?"

Monetary Compensation (5)

- by minimising the gap between mammogram interpretation and further investigation and result counselling. In some countries screening clinics screen then if necessary biopsy and counsel patients on the same visit. Pay patients in some way for attending. Pay doctors for encouraging patients to attend
- encourage breast screening via MSP support

- remuneration for counselling screening
- start with providing a billing code for the cancer screening visit so we can be paid for the job done and pt know the reason for the visit

Question 16: Other reasons why physicians have difficulty encouraging cervical cancer screening for their well patients

Patient with alternative beliefs

- patient does not view cervical cancer screening as part of 'holistic' care and questions the merit of the procedure, and views it as part of 'western medicine' and invasive. I don't believe the College of Naturopathy endorses cervical screening and we have a large population of patients who do not value the merit of western medicine
- patient don't believe in it any more!

Patient disregard or refusal of screening

- patient does not want screening
- patients do not come in when called to come in
- they repeatedly no show for exam
- when they disregard the recall letter

Patient belongs to a particular demographic

- low risk (no history of genital contact)
- older patients with cultural sensitivities to gyne exam
- post-menopausal women, especially hysterectomy
- patients with psychiatric or complex social problems may not come to the doctor.
- they are young and invincible - eg sexually active teenagers, plus age group 17-25 yrs

Other individual situations

- confusing over liquid methods HPV screening, etc
- female patients want to have female doctor to do pap smear
- lack of education

Question 18: How can cervical cancer screening be improved in BC?

Improving reminder and follow-up procedures (55 responses)

- "reminders" mailed/texted to patients
- agency organized recall (like mammography) vs letter to GP the patient recall
- an automatic mailout from CCABC to remind patients of yearly pap tests would be of great benefit, like the mammogram screening program does. Patients like this system for mammograms.
- better reminder systems for patients (given that many patients do not have a family physician, perhaps a centralized reminder system like the Screening Mammography Program would help)
- colposcopy centres need to take responsibility to following up patients that require further treatment.
- patients could be informed by BCCA when due for next pap because when old family physician retires some patients are lost to follow-up
- provincial reminder system like with mammograms, where written and phone reminders are done by screening agency.
- the reports that are sent out need more than a pathological diagnosis. They should include some guidance for follow-up, and standardized interpretations that accompany the report. The report says 'X' and that means '...' and according to the current evidence based screening program '....is recommended'.

Patient education (35)

- as part of a life course and system-level approach to preventive services.
- cervical ca screening materials for late teens and early 20s
- ed. programs in schools/colleges etc.
- patient are coming in requesting HPV testing - further info for Canadian women re HPV (handouts), since we don't do HPV testing

Improving accessibility to screening procedures (32)

- better access to colposcopy for abnormal PAPs
- better access to primary care physicians
- enhance scope of practice so more nursing staff can perform exams - female nurses offer alternative in our setting to male doctor and we have high success with screening PAP's
- increase access for women without family physicians.
- make liquid film test available in rural areas
- pap days on reserves and in low income areas.
- special barriers for abused and addicted women
- specialist screening trained nurse practitioners for rural areas e.g. itinerant clinics

Modifying screening procedures (32)

- better methodology than the Pap (as is used in other countries).
- using methods that can be done by patients themselves, ie not requiring an exam by another person.
- blood test for cervical cancer would be fantastic.
- concerned about the use of slide/smear technique re: lower sensitivity (I thought approx 60%) as opposed to the liquid medium (which I thought was approx 80-85%)
- give us back those little brooms we were testing last year! Provide cyr brushes for free to docs
- pilot project for self-testing swabs

- tampon use to acquire sample - women can send tampon to lab. Lab picks up cells from tampon and analyze.
- stop sidetracking people by recommending hpv vaccine. it is pointless and should be taken off the market until it actually works. it will divert women away from getting pap tests. a costly solution for a nonexistent problem
- wet mount pap

Awareness raising campaigns (29)

- advertising in TV, radio, in school
- media presentation; Min of Health - government mailout
- more PR from the BCCA

Targeting poorly screened groups for screening (23)

- target teenagers in high school (Grades 11 and 12). 3) Target undergraduate women at universities.
- accessing women who aren't seeing docs regularly.
- better outreach to marginalised communities - immigrants - native populations and mental health
- target poorly screened group - ESL, New immigrants, 1st Nations
- the age group 18 - 25 and again the female in her early 40's seem to me to be the problem group re their follow through with regular PAP, resulting in the inability to comfortably /safely extend their follow up term
- the mothers who have completed having children and are not coming for prenatal care seem to disappear from screening for a while-I'd love to see some public education targeted to that age group.

Changing screening guidelines and recommendations (18)

- a comment not related to question...but , need guidelines re pap test in women who have never had intercourse and even digital exam is difficult (not uncommon in 'ethnic' populations (Chinese, Philippine, Japanese)
- better guidelines as seems all over the place and unclear about time intervals.
- i feel the recommendations of CCABC could better reflect research. I have pts with no increased risk who are still asked for q2yr paps even with 15 consecutive normal PAPs!
- the interpretation of abnormal pap is archaic!!! Should be reported as normal, ASCUS, LGSIL, HGSIL, CIS, etc. I can't believe that the reporting system is so behind the recognized international nomenclature and interpretation.
- we should decrease the frequency of Pap screening esp in women with 20+ years of normal screening. Decrease the age recommendations. Be very clear about no required pap smears post hysterectomy.

Implementing screening clinics (15)

- dedicated PAP smear clinics (well women's health)
- many females are reluctant to have their male GP's perform pap tests. There should be some pap clinics available at a hospital out-patient unit, for self referral, just as screening mammograms are available.
- need more walk-in youth/women clinics for patients who do not have a designated family doctor - they are often turned away at walk-in clinics

Physician remuneration (9)

- compensate gp offices for the cost associated with calling in patients for follow up pap tests.
- grants to care providers for pap screens for patients without current GP. I am a female GP at STI clinic. Grant funds refused.
- incentive payment for MD reaching a certain percentage of eligible female population.
- pay family doctors to provide screening to their population, advertise. Provide a capitation system where all patients are registered with a family doctor.
- routine HPV culture covered
- we, family doctors, should get a tray fee when pap is done as part of a complete physical exam as well.

Increasing physician awareness (6)

- increased male MD awareness
- more women are asking about HPV testing specifically. I would appreciate more info on this.

Other (46)

- a C.D. of pictures of cervixes with different problems that we can show our pts on our computers in the exam room. (or a download)
- another good job for all the new NPs being trained - they are well suited for public health positions/prevention
- better access to a patient's screen history, and alerts for when an at risk patient is due for a repeat (hx dysplasia)
- by providing appropriate gyn exam: relaxed, supportive and sensitive examiner; good exam "does not hurt", requires counseling and time; good and various sizes of clean metal speculae; good lighting
- excellent systems except that we do Pap smears more often in low risk patients than the evidence supports.

Question 20 – Why physicians do not recommend colorectal cancer screening, and alternatives used

Limited accessibility to screening

- not a present standard for Canadians without Fm Hx.
- generally, not enough resources (people that can do colonoscopies), so I only recommend it for high risk patients. And, it is not within scope of my practice.

Poor patient health

- I've a low threshold in ordering Ba k enema + - colonoscopy.
- I do not recommend to well patients. I do have very low threshold to motivate testing in low risk population change in bowel habits, blood PR, melena or dark stools, weight loss, anemia (even if mild), family history of any bowel disease, etc.

Unsure of benefits of screening

- uncertainty re risk (false positive) vs. benefit ratio in patient without risk factors
- occult blood is not reliable. Not everyone can have colonoscope.
- low yield in general population. I only screen those with family hx
- There is no effect on all-cause mortality from screening.

Forgetting to recommend screening

- always forget about it during annual phys. exam

Question 23: Other colorectal cancer screening procedures recommended

Dependent on family history or other indications (12 responses)

- as indicated by family history - strongly influence age and workup - may go directly to more invasive.
- history of change of bowel habit
- I only recommend colonoscopy for patients with appropriate indications ie. family history, change in bowel habits, blood in stool either occult or visible.
- sometimes in a very selected patient type, a C.E.A. level

Dependent on availability of colonoscopy or CT colonography (9)

- as if my recommendation matters. It is "the system" that does not provide colonoscopies.
- just cannot get colonoscopy done in Kelowna for screening 2-4 years for pt's with risk factors. My understanding is that I cannot refer for colonoscopy without clinical indication.
- on Vancouver Island you cannot get screening sig/colonoscopy unless symptomatic or high risk. This is deplorable!!
- terrible waits for colonoscopy in Kelowna, unless symptoms or FOB positive. Long wait for flex sig clinic too.

FOBT done in setting other than home or office (4)

- I always do FOBT through community lab.
- stool for OB in lab

Other (10)

- combination of ACBA and Flex Sig, not just one or the other.
- DRE can be difficult if they have hard stool in rectum b/c difficult to tell whether or not there is a polyp.
- inform patients available but not funded by public system unless family history
- need better than FOBT
- referral to GI spec

Question 24: Other reasons why physicians have difficulty encouraging colorectal cancer screening for their well patients

Access to screening is limited by cost and availability of procedure (6)

- cost barrier is huge, wait time long
- note: we do not have colonoscopy screening available , really only patients with symptoms or positive family history can be referred here.
- very long waiting list for procedures

Issue with admin of screening procedures (5)

- FOBT incorrect procedure/ diet
- FOBT is not very sensitive or specific
- meds interfere with FOBT.
- the prep of colonoscopy/CT colon and complaints of patient relating to same

FOBT at home is not completed (4)

- I send out a lot of FOBT to do at home and do not get a lot of returns
- patient agrees to home FOBT but never returns it

Patient disregards or refuses screening (4)

- occasional patient is dismissive of the idea of screening.
- patient had prior "awful" experience

Lack of information for patients (2)

- inadequate pamphlet info
- patients are unaware of need for screening

Lack of evidence supporting screening procedures (2)

- lack of clear evidence
- there is no proven mortality benefit to screening via colonoscopy

Question 26: How can colorectal cancer screening be improved in BC?

Improving accessibility to screening procedures (168 responses)

- delay time for colonoscopy is too long.
- I think colonoscopy or CT colonography should be standard available and FOB to all patients.
- some doctors refer for colonoscopy for well screening + therefore the waitlists are too large for patients with appropriate indications.
- self-referral availability re: colonoscopy for + family history similar to mammography.
- if the system could afford it, colonoscopy clinics for all if they agree at 50 years old, then every 5 years!
pProviding easier access to colonoscopy. At present in the Comox Valley there is a one year + wait list for screening colonoscopy, and a 3-6 month wait for a clinically indicated colonoscopy, and about a 1 month wait for an urgent outpatient colonoscopy. When paid for privately, there is a 1-2 week wait.
- look at Ontario. Have GPs doing colonoscopy in rural areas to make FU of FOB accessible. GP colonoscopy has been proven safe and effective.
- set up "scope clinics" with trained personnel performing same, not essentially an MD.

Improving patient education and awareness (59)

- as part of a programmatic life course approach to organizing preventive care.
- more PR by BCCA
- patient focused Medical Care educational directives in popular media sources - including pro's and con's of recommendations.
- patients get information about colorectal cancer screening from the U.S. media (Oprah, etc.) that advises that everyone have colonoscopy on a regular basis. We do not have the resources to provide this and so, there should be widespread educational info (e.g. full-page newspaper ads, TV spots, etc.) to inform the public what is realistic for this type of screening.
- clearer guidelines by the ministry, or CCABC to the patient.

Coverage of screening procedures (41)

- have the government pay for a colonoscopy from age 50 on every 10 years for everyone (but \$ issues).
- fund more time for gastroenterologists to use the colonoscopy suite.
- this should be a free service like screening and mammography. The cure rate would be 95%!!

Clarifying guidelines and recommendations (39)

- would appreciate a review of pathology of different types of polyps, and relevance for subsequent follow-up.
- have clear guidelines on when and how often and have screening colonoscopies covered with no symptoms.
- I am not sure what the current recommendations other than for DRE or colonoscopy if high risk so I guess better publicity on your recommendations. Can we afford to do colonoscopy on everyone over 50 as they seem to suggest in TV ads coming from the USA?
- the best info I have been able to get is from the NHS UK web site. We need clearer guidelines and also information sheets for who to screen and how, and the risks of colonoscopy and the accuracy of colonoscopy I hope this survey will accomplish this [and also help with the PSA dispute].

- need to know if/how to merge technique. ex. if pt had colonoscopy 2 years ago, do they also do FOBT? Info to docs on guidelines for each type of pathology found - seems to be left to the specialist at this point.
- patients are more familiar with American guidelines because of T.V. Canada does not advocate "screening" colonoscopy as I understand it (unless in risk group).
- I am new to B.C. and am not sure of the availability of CT colonography and colonoscopy and ACBE (in Manitoba all were difficult to arrange).

Modifying screening procedures and tests (22)

- perhaps mailed kits to people at age equal to or over 50
- until endoscopy and or colonography become more feasible (simpler, cheaper, better) the focus should be on patients at increased risk.
- FOBT not requiring dietary changes. Should be given out all over for free to adults.
- smaller caliber colonoscopes

Implementing a screening program (15)

- establish a provincial screening program like the mammogram program.
- formalized self-referred program e.g. sigmoidoscopies
- to start BC wide program as with paps and mammography - patient notification to GP for assessment for FOBT/colonoscopy referral

Improving follow up and reminder systems (12)

- EMR will assist with callbacks for screening.
- better follow-up of patients, such as using email. Do not put the onus solely on busy primary care physician offices. Better communication between referring and consultant MDs on colonoscopy results and follow-up. Perhaps a central bank?

Training GPs to perform colonoscopies (11)

- train GPs in flex sigmoid (q5 yrs) and add FOB (q1 yrly)
- train family docs to do screening colonoscopy
- train more people to do colonoscopies

Physician remuneration (6)

- a special cancer screening billing code specific for cancer screening planned care visits (as is the case for cervical cancer). Recognize this is a special visit, not something to be added onto the routine office visit.
- lack of compensation for routine health checks in BC means no opportunity to have time set aside to discuss these issues.

Other single responses (17)

- if the colonoscopy report explained the pathological significance of the polyp taken (etc.) and what the follow up steps are. I find the quality of the report is surgeon/GI dependant and sometimes I'm not sure about what follow up has been arranged, if any, and what I can tell the patient about their polyp or other findings.
- if the evidence exists to offer average risk people (benefit>risk) colonoscopy then it should be offered when capacity (endoscopists/finances) available.
- it would be beneficial to have an interpretation to the path reports after biopsies are done in a colonoscopy.

- CRC screening is not ready for prime time. there is no proven mortality benefit for colonoscopy, and FOBT requires approx 1300 people to be screened q1-2 yr over 10 yrs to prevent 1 death, which is a pretty minimal return. the stat to focus on is not crc mortality but overall mortality. in an environment of scarcity, we should be focusing our prevention efforts on getting people to lose weight and get exercise.
- by better GP education with frequent refreshment courses

Question 28: Other reasons why physicians have difficulty encouraging hereditary cancer risk assessment for their well patients

Physician is unaware of program (14)

- don't know it's availability, eligibility or purpose
- I am not aware of such programs
- not aware of this assessment

Unclear guidelines (6)

- I do not know the criteria - website too difficult to navigate
- I'm still a little unclear on how the patients are actually serviced in our area - by phone, ? outreach clinic - not sure
- need guidelines who to refer

Family history of patient is difficult to track down (6)

- family member info difficult to track
- I give patient the family history form and they don't complete them.
- indeterminate but suspicious family history
- referral process is very difficult. Family information is difficult to retrieve in the detail requested.

Patient doesn't meet criteria of screening program (4)

- acceptance criteria excludes many patients
- because of the requirements for the number of family members affected in breast/ovarian CA, I have difficulty referring women that I think could be at high risk. Sometimes these women do not have families large enough to fulfill the requirements and I wonder if they had larger families that we would be seeing more prevalence (and then they could qualify for genetic testing).

Paper work is difficult to complete (2)

- big form to complete
- patients find the chart onerous to complete

Question 30: How can hereditary cancer risk assessment be improved in BC?

Better information and education for physicians (64)

- pamphlet of Hereditary predisposition to cancer available to GPs
- more medical education
- let us know what you offer, for whom, and how we best access the service. Educate GPs by giving hospital rounds or more CME's. Send message out via public health.
- a 'primer' on common screening groups (e.g. HNPCC, Tay-Sachs, etc.)
- supply details - on website or handouts --> which in my case preferable

Improving accessibility to program (40)

- paper work is frustrating especially when other members of patients' families have already been seen and I know the program already has their information in way more detail than I am able to retrieve as it is usually second hand.
- access is outrageous - very difficult to contact and refer
- the referral form is difficult. I was very turned off when I couldn't get an appointment for myself despite having breast cancer and being Jewish myself. Some of my patients got faster access but not having breast cancer. One of my patients was seen immediately because a daughter-in-law was pregnant. I have two girls and should have been tested.
- more access and more testing with faster turn-around
- referral process for interior BC needs to be simplified
- locally delivered service in smaller communities
- videoconference to rural areas. We have the equipment.

Public education (36)

- information brochure for waiting room, notice for waiting room re website
- more guidelines and printed material for the patient
- need translated educational material
- public education. Data that covers all ethnic backgrounds.

Clarifying guidelines and recommendations (34)

- need simple info, point form - flow sheet - pages and pages of detail is a block for me
- better and more practical materials and guidelines for family physicians
- need a recommendations card to staple to problem list - as reminder for when to do which procedure
- better access to criteria and the actual cancer texts available

Improving physician awareness (32)

- physician education, at least in my case. I don't have much knowledge of this subject.
- make all physicians in this province aware of what's available especially new and immigrant physicians to BC.

Advertising campaigns (19)

- more PR from BCCA
- publicize what is available and covered.

Other individual responses (20)

- in my community, genetic assessment is done via the hospital locally, with subsequent recommendations given to me and the patient based on those results. There is no referral to a hereditary cancer program that I am aware of.
- it would be nice to have a standardized way of getting recommendations for patients who seem higher risk but don't make the rigorous intake criteria for the program. - example advise for pt with one family member with ovarian ca - ? ca-125 ? ultrasound ? other.
- I see this more as a role of BCCA as pretty much all oncology patients are referred to them, and they seem to have more time available to see patients.
- right now it feels "faceless" and there is no simple appointment method - first the patient has to do a form. By the time another patient comes things change.

Question 32: Reasons why physicians do not recommend prostate cancer screening, and alternatives used

Engage in screening discussions with patients (12):

- I discuss that there is still debate as to the benefits vs. risks of screening and treating asymptomatic men for prostate cancer and let them decide (using the pamphlet from BCCA as their guide for informed decision making).
- I say it is available and explain the pros and cons but I do not specifically recommend it."
- I discuss prostate cancer screening if patient brings it up.

Unclear evidence to support prostate screening (9):

- the evidence is against widespread screening of asymptomatic men. I feel my time can be better directed at other interventions such as help with smoking cessation, increase physical activity and healthy lifestyle choices.
- I tell people the evidence for screening is weak, but we can proceed with testing if the pt wants (+ can pay).

Unclear benefits of PSA testing (7):

- I am still ambivalent about the use of PSA for screening, particularly since I do not have many males in my practice. If they request the test, I will order it, but try to explain the problems with the test, particularly the need for possibly unnecessary further testing.
- I am not convinced that the benefits of PSA testing outweigh the risks. However, I do order it if anyone wants it, I do screen with a prostate exam, and ask about symptoms.
- PSA testing is not a good screening test unless used as a serial test.
- routine PSA screening not recommended as risk/benefit ratio not sufficient to justify routine screening for well patient.
- I think the jury is still out on the risks/benefits of PSA screening. I order it if patients ask, and do digital prostate exams starting at age 50 during routine checks.

Unclear benefits of prostate screening (6):

- there is no proven overall mortality reduction with prostate ca screening, and it only leads to interventions which are very likely to cause complications which diminish quality of life. I discuss the pros and cons of screening and offer it if they wish, but I do not encourage it. I also discuss warning symptoms.
- no evidence of benefit that I am aware of.
- no mortality benefit. Only screen if family history of ca prostate less than 60, or African race.
- I do not think that there is a reliable screening test in which the potential harms outweigh the risks in asymptomatic well patients. However I do offer patients the CCABC brochure about prostate screening.

Unclear evidence to support PSA testing (3):

- my understanding is that PSA is not specific enough to use as a screening tool, and there may be more morbidity due to unnecessary investigations.
- I'm not comfortable with the reliability of the PSA and I am unhappy with the results of radical prostatectomy on my patients but I continue to offer and counsel patients on these issues.
- PSA test has too low a sensitivity and specificity to be useful. There is research evidence that doing PSA tests is not affecting mortality.

Question 36: Other reasons why physicians have difficulty encouraging prostate cancer screening for their well patients

Physician unconvinced or uncertain of benefit of screening (9 responses)

- controversy over PSA
- do not know who to believe regarding screening --> North American or European recommendations
- I'm not entirely clear on what the latest is on the debate.
- uncertain benefit to mortality reduction and risks of procedures(ie: infection with prostate biopsies)

Cost (4)

- my patient does not want to pay when mammograms are covered.
- not covered by MSP

Male patient uncomfortable with female GP (3)

- female physician examining male patients
- male patients uncomfortable with me (as a female)

Other individually mentioned responses (8)

- occasional patient is dismissive of the concept of cancer screening.
- patient has a history of being sexually abused and refuses DRE. I will still recommend a PSA.
- patients may doubt the usefulness of PSA, although I recommend it.
- patient does not understand problems inherent in PSA testing re: does not decrease mortality

Question 38: How can prostate cancer screening be improved in BC?

Funding for screening programs (101)

- get public funding for PSAs. Why do we have it for PAPs and mammography and not PSAs???
- I don't like the fact that people have to pay for PSA testing. It almost encourages the "worried well" who think they are getting something "valuable" because they are paying for it.
- funding for PSA. Compensation to physician to do periodic health check-up and prevention/screening advice.
- PSA should be covered for all male patients above 50 years of age - this is guideline in US, I'm surprised that we have to 'lie' about indication on the lab reqs to get this done without patients paying - so frustrating.
- have MSP coverage for screening PSA as there is for screening mammography, and thus remove an irritating gender bias.
- I am guarded as to whether there are any improvements - I agree PSA should not be free since many of my patients are rich and live in H.K. for most of the year and ask for the PSA because it is free (or free for their friends so it should be free for them).

Public education (70)

- newest PSA brochure from cancer agency is excellent.
- better patient education of the need for prostate cancer screening.
- ongoing clear public information ie TV health promotional advertisements.
- more public education pointing out the limitations of PSA screening, especially the risks of generating false positives resulting in invasive investigations that sometimes carry significant risk.
- maybe an organized respected organization could explain to the public that: as a screening tool PSA will find prostate cancer. The 'saving your life' issue is a different matter, depending on whether you believe the USA or the European study. Patient preference for prostate screening is a personal choice that will take some time to sort out. All this is best addressed in a planned cancer screening visit.
- provide brochures clearly written for patients showing lack of clear data for benefit of PSA testing.

Clarifying guidelines and recommendations for screening (56)

- a clear up to date position statement re: recommended screening for low risk and high risk populations.
- clearer, more well-defined guidelines. There is still a lot of controversy about screening well men. We need to come to a consensus.
- better guidelines in terms of pamphlets about PSA levels and risks and prostate cancer Rx in the elderly and when to just watch etc. who to believe - American Task Force on prev. meds or Canadian urological society?
- by coordinating prostate cancer screening recommendations by BC cancer agency, urologists association, and ministry of health --> Clear guidelines to be sent to all family physicians.

Improving screening tests (21)

- we need a more accurate test and then treatments that are known to work without providing unacceptable side effects.
- non-invasive test for prostate cancer

- screening for a prostate ca has limitations like interpreting PSA level. Patients with prostate ca often die from other causes than prostate cancer.

Clearer evidence regarding screening (19)

- question if prostate CA screening should still be pursued based on lack of evidence.
- literature seems very uncertain about benefit/risk of screening. Is it really helpful?

Improving reminder and follow up systems (16)

- centrally managed by BCCA
- getting men into the doctor's office in the first place. Many do not have a GP, nor do they attend a doctor for anything but an acute illness.
- improved follow up for yearly screening to ensure patients get in on time

Increasing accessibility to screening procedures (10)

- need translated educational materials
- more urologists doing prostate biopsies
- more screening by GP
- self-screening

Physician education (7)

- more teaching to GP's that we are overdiagnosing and overtreating low risk early prostate cancer, and so also more urologists encouraging watchful surveillance and waiting for patients with low risk gleason scores and non palpable prostate cancers.

Other

- it appears the reality is the majority of men get a PSA despite poor recommendations to get one.
- I have recently learned there is a lot more to "just" the PSA value: ie effect of BPH meds, decrease in free PSA, velocity of PSA rise, PSA density etc. 5 α reductase inhibitors (BPH meds).

APPENDIX 3: SURVEY INSTRUMENT

CURRENT PRACTICES

1. I believe screening for each the following cancers **can be advantageous** for well patients.

[PLEASE USE THE SCALE OF 1 TO 5 BELOW WHERE 1 MEANS, 'STRONGLY DISAGREE' AND 5 MEANS, 'STRONGLY AGREE']

	Strongly Disagree 1	2	3	4	Strongly Agree 5
a) Breast	<input type="checkbox"/>				
b) Cervical	<input type="checkbox"/>				
c) Colorectal	<input type="checkbox"/>				
d) Hereditary predisposition to cancer	<input type="checkbox"/>				
e) Prostate	<input type="checkbox"/>				

2. For the following statements on cancer screening, **I believe that:**

	Strongly Disagree 1	2	3	4	Strongly Agree 5
a) I effectively communicate cancer screening strategies to my patients	<input type="checkbox"/>				
b) My patients tend to follow my recommendations for cancer screening	<input type="checkbox"/>				

3. My **patients request** the following screening procedures:

	Never	Seldom	Sometimes	Often	Always
a) Mammograms	<input type="checkbox"/>				
b) Pap tests	<input type="checkbox"/>				
c) Fecal Occult Blood test	<input type="checkbox"/>				
c) Colonoscopy	<input type="checkbox"/>				
d) Hereditary risk assessment	<input type="checkbox"/>				
e) PSA testing	<input type="checkbox"/>				

4. I have cancer screening **educational materials** (e.g. pamphlets) available for my patients?

Cancers	Yes	No
a) Breast	<input type="checkbox"/>	<input type="checkbox"/>
b) Cervical	<input type="checkbox"/>	<input type="checkbox"/>
c) Colorectal	<input type="checkbox"/>	<input type="checkbox"/>
d) Hereditary predisposition to cancer	<input type="checkbox"/>	<input type="checkbox"/>
e) Prostate	<input type="checkbox"/>	<input type="checkbox"/>

5. The following are my **preferred method(s)** for informing my well patients about the need for cancer screening? [**CHECK ALL THAT APPLY**]

Backgrounds	
a) During routine patient visits	<input type="checkbox"/>
b) During scheduled check-ups	<input type="checkbox"/>
c) Phone calls/mail-out from my office	<input type="checkbox"/>
d) Other _____ _____ [PLEASE SPECIFY]	<input type="checkbox"/>

6. I believe each of the following groups have a **responsibility to send cancer screening notifications** to patients:

Groups	Yes	No	Unsure / don't know
a) BC Cancer Agency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Ministry of Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Primary care physicians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Public health agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Regional Health Authorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FACILITATORS FOR CANCER SCREENING

7. I prefer to learn about cancer screening in the following **educational formats**: [**PLEASE ANSWER FOR EACH FORMAT**]

Education Formats	Low Preference 1	2	3	4	High Preference 5
a) Conferences	<input type="checkbox"/>				
b) Hospital rounds	<input type="checkbox"/>				
c) Journal clubs	<input type="checkbox"/>				
d) Online CME/CPD	<input type="checkbox"/>				
e) Peer Network (e.g. Family Practice Oncology Network)	<input type="checkbox"/>				
f) Self-directed study (e.g. personal learning project)	<input type="checkbox"/>				
g) Small group workshops	<input type="checkbox"/>				
h) Videoconferencing	<input type="checkbox"/>				

8. For direct patient care, my preferred **sources for accessing** cancer screening guidelines are: **[PLEASE ANSWER FOR EACH SOURCE]**

Sources	Low Preference 1	2	3	4	High Preference 5
a) BC Cancer Agency Website	<input type="checkbox"/>				
b) EMR decision support tools	<input type="checkbox"/>				
c) Paper-based resources	<input type="checkbox"/>				
d) PDA/Palm hand held devices	<input type="checkbox"/>				
e) Web-based resources (e.g. UpToDate, or MD Consult)	<input type="checkbox"/>				
f) Other [ONLINE]	<input type="checkbox"/>				
g) Other [PAPER-BASED]	<input type="checkbox"/>				

BARRIERS TO SCREENING DISCUSSIONS

9. The following factors are **barriers to discussing cancer screening** with my well patients.

Factors	Never	Seldom	Sometimes	Often	Always
a) Physician financial compensation	<input type="checkbox"/>				
b) Level of comfort with my knowledge to help patients decide pros/cons of cancer screening options	<input type="checkbox"/>				
c) Time it takes to explain the pros/cons of the cancer screening options	<input type="checkbox"/>				
d) Patients with language barriers	<input type="checkbox"/>				
e) Patients with multiple health issues	<input type="checkbox"/>				
f) Patients have cultural sensitivities to cancer screening procedures	<input type="checkbox"/>				
g) Ability to address my patient's fear about the screening procedure (e.g. radiation exposure, pain, embarrassment, etc)	<input type="checkbox"/>				
h) Other _____ [PLEASE SPECIFY]	<input type="checkbox"/>				

SCREENING PROFILE

BREAST CANCER SCREENING

10. I routinely **start** recommending screening mammography to women when they are: [**CHECK ONLY ONE**]

- Age 40 - 44
- Age 45 - 49
- Age 50 - 54
- Other [AGE RANGE] _____
- Only when post-menopausal
- I do not recommend screening mammography

11. If you **do not** recommend screening mammography, please explain.

[IF YOU ANSWERED Q11 AND YOU DO NOT RECOMMEND SCREENING MAMMOGRAPHY, GO TO Q13]

12. I routinely **stop** recommending screening mammography to women when they are: [**CHECK ONLY ONE**]

- Age 65 - 69
- Age 70 - 74
- Age 75 - 79
- Age 80 - 84
- Over age 85
- Other _____ [PLEASE SPECIFY]
- I never stop recommending screening mammography

13. I have **difficulty encouraging** breast cancer screening for my well patients when:

Situations	Never	Seldom	Sometimes	Often	Always
a) My patient expresses anxiety about results of screening procedures and/or treatment for breast cancer	<input type="checkbox"/>				
b) My patient expresses discomfort with mammogram procedure	<input type="checkbox"/>				
c) Mammography is not readily available	<input type="checkbox"/>				
d) Other _____ [PLEASE DESCRIBE]	<input type="checkbox"/>				

14. Please use a scale of 1 to 5 where 1 means 'strongly disagree' and 5 means 'strongly agree' to indicate the extent you agree with each of the following statements:

Statements	Strongly Disagree 1	2	3	4	Strongly Agree 5
a) I am comfortable performing a clinical breast examination	<input type="checkbox"/>				
b) I need better educational materials about breast cancer screening to give to my patients	<input type="checkbox"/>				
c) I need clearer screening guidelines for breast cancer	<input type="checkbox"/>				
d) I need clearer follow-up recommendations for patients with positive screening results	<input type="checkbox"/>				
e) I am comfortable explaining the pros/cons of Breast cancer screening	<input type="checkbox"/>				
f) I am comfortable interpreting the results of a mammogram report	<input type="checkbox"/>				
g) Patients should be able to self-refer for breast cancer screening (e.g. as currently available for mammography)	<input type="checkbox"/>				

15. How can breast cancer screening be improved in BC?

CERVICAL CANCER SCREENING

16. I have **difficulty encouraging** cervical cancer screening for my well patients when:

Situations	Never	Seldom	Sometimes	Often	Always
a) My patient expresses anxiety about results of the screening procedures and/or treatment for cervical cancer	<input type="checkbox"/>				
b) My patient expresses discomfort with gynecological examination	<input type="checkbox"/>				
c) There is no female healthcare provider available to conduct a Pap test for my patient	<input type="checkbox"/>				
d) My patient expresses cultural sensitivity toward having a gynecological examination	<input type="checkbox"/>				
e) There may be difficulty in contacting my patient for abnormal pap follow-up	<input type="checkbox"/>				
f) Other _____ [PLEASE DESCRIBE]	<input type="checkbox"/>				

17. Please use a scale of 1 to 5 where **1** means 'strongly disagree' and **5** means 'strongly agree' to indicate the extent you agree with each of the following statements:

Statements	Strongly Disagree 1	2	3	4	Strongly Agree 5
a) I am comfortable performing a Pap test	<input type="checkbox"/>				
b) I need better educational materials about cervical cancer screening to give to my patients	<input type="checkbox"/>				
c) I need clearer screening guidelines for cervical cancer	<input type="checkbox"/>				
d) I need clearer follow-up recommendations for patients with positive screening results	<input type="checkbox"/>				
e) I need access to better reminder systems to notify my patients of recommended cervical cancer screening	<input type="checkbox"/>				
f) I always ask my new female patients about their Pap test history	<input type="checkbox"/>				
g) I am comfortable explaining the pros/cons of cervical cancer screening	<input type="checkbox"/>				
h) I am comfortable interpreting the reported results of a Pap test	<input type="checkbox"/>				
i) Women that have received the HPV vaccine still need Pap tests	<input type="checkbox"/>				

18. How can cervical cancer screening be improved in BC?

COLORECTAL CANCER (CRC) SCREENING

19. I routinely **start** recommending colorectal cancer screening to my well patients when they are:

- Age 40 - 44
- Age 45 - 49
- Age 50 - 54
- Age 55 - 59
- Age 60 - 64
- Other [AGE RANGE] _____
- I do not recommend colorectal cancer screening

20. If you **do not** recommend colorectal cancer screening, please explain?

[IF YOU ANSWERED Q20 AND YOU DO NOT RECOMMEND COLORECTAL CANCER SCREENING, GO TO Q24]

21. I routinely **stop** recommending colorectal cancer screening to my well patients when they are:

- Age 60 - 64
- Age 65 - 69
- Age 70 - 74
- Age 75 - 79
- Age 80 - 84
- Age 85 - 89
- Other [AGE RANGE] _____ [PLEASE SPECIFY]
- I do not stop recommending colorectal cancer screening

22. I **recommend the following procedures** to my well patients for colorectal cancer screening:

Procedures	Never	Seldom	Sometimes	Often	Always
a) Digital rectal exam (DRE) only	<input type="checkbox"/>				
b) DRE with <u>office</u> fecal occult blood test (FOBT)	<input type="checkbox"/>				
c) DRE with <u>home</u> FOBT	<input type="checkbox"/>				
d) FOBT completed at home	<input type="checkbox"/>				
e) Double-contrast barium enema	<input type="checkbox"/>				
f) Flexible sigmoidoscopy	<input type="checkbox"/>				
g) Colonoscopy	<input type="checkbox"/>				
h) CT colonography	<input type="checkbox"/>				

23. If you recommend colorectal cancer screening procedures other than those listed above, please explain?

24. I have **difficulty encouraging** colorectal cancer screening for my well patients when:

Situations	Never	Seldom	Sometimes	Often	Always
a) Colonoscopy is not readily available	<input type="checkbox"/>				
b) My patient is unable to afford cost for colonoscopy screening	<input type="checkbox"/>				
c) My patient expresses anxiety about results of the screening procedures and/or treatment for colorectal cancer	<input type="checkbox"/>				
d) My patient expresses discomfort with colonoscopy	<input type="checkbox"/>				
e) My patient expresses discomfort with DRE	<input type="checkbox"/>				
f) My patient expresses disgust with FOBT done at home	<input type="checkbox"/>				
g) Other _____ [PLEASE DESCRIBE]	<input type="checkbox"/>				

25. Please use a scale of 1 to 5 where 1 means '**strongly disagree**' and 5 means '**strongly agree**' to indicate the extent you agree with each of the following statements:

Statements	Strongly Disagree 1	2	3	4	Strongly Agree 5
a) I am comfortable with performing a DRE	<input type="checkbox"/>				
b) I need better educational materials about colorectal cancer screening to give to my patients	<input type="checkbox"/>				
c) I need clearer screening guidelines for colorectal cancer	<input type="checkbox"/>				
d) I need clearer follow-up recommendations for patients with positive screening results	<input type="checkbox"/>				
e) I need access to better reminder systems to notify my patients of recommended colorectal cancer screening	<input type="checkbox"/>				
f) Patients should be able to self-refer for colorectal cancer screening	<input type="checkbox"/>				
g) I am comfortable explaining the pros/cons of colorectal cancer screening	<input type="checkbox"/>				
h) I am comfortable interpreting the reported results of a colonoscopy procedure	<input type="checkbox"/>				

26. How can colorectal cancer screening be improved in BC?

HEREDITARY PREDISPOSITION TO CANCER

27. Since January 2008, approximately how many patients have you referred to the BCCA's Hereditary Cancer

Program: [**CHECK ONLY ONE**]

- Approximately: _____ [# PATIENTS]
- Zero; however, I am aware of the Hereditary Cancer Program
- Zero, but I am not aware of the Hereditary Cancer Program
- Not applicable

28. I have **difficulty encouraging** hereditary cancer risk assessment for my well patients when:

Situations	Never	Seldom	Sometimes	Often	Always
a) There is difficulty getting my patient into the Hereditary Cancer Program (i.e. waiting lists)	<input type="checkbox"/>				
b) Geography is a barrier for my patient (e.g. patient unable to travel to cancer centre/other sites to access services)	<input type="checkbox"/>				
c) Genetic testing is not readily available	<input type="checkbox"/>				
d) My patient expresses anxiety about results of genetic tests	<input type="checkbox"/>				
e) My patient is unwilling to be referred	<input type="checkbox"/>				
f) I anticipate my patient will face difficulty obtaining life/disability insurance due to genetic testing results	<input type="checkbox"/>				
g) Other _____ [PLEASE DESCRIBE]	<input type="checkbox"/>				

29. Please use a scale of 1 to 5 where **1** means 'strongly disagree' and **5** means 'strongly agree' to indicate the extent you agree with each of the following statements:

Statements	Strongly Disagree 1	2	3	4	Strongly Agree 5
a) I need better materials about hereditary cancer to give to my patients	<input type="checkbox"/>				
b) I am familiar with Hereditary Cancer Program referral criteria and process	<input type="checkbox"/>				
c) I need clearer follow-up recommendations for patients identified at high risk for hereditary cancer.	<input type="checkbox"/>				
d) I am comfortable explaining the pros/cons of testing for hereditary predisposition to cancer	<input type="checkbox"/>				

30. How can hereditary cancer risk assessment be improved in BC?

PROSTATE CANCER SCREENING

31. I routinely **start** recommending prostate cancer screening to my well patients [*even though PSA testing is not funded by MSP*] when they are:

- Age 40 - 44
- Age 45 - 49
- Age 50 - 54
- Age 55 - 59
- Other _____ [PLEASE SPECIFY]
- I do not recommend prostate cancer screening

32. If you **do not** recommend prostate cancer screening, please explain?

[IF YOU ANSWERED Q32 AND YOU DO NOT RECOMMEND PROSTATE CANCER SCREENING, GO TO Q36]

33. I routinely **stop** recommending prostate cancer screening to my well patients when they are:

- Age 60 - 64
- Age 65 - 69
- Age 70 - 74
- Age 75 - 79
- Age 80 - 84
- Age 85 - 89
- Other _____ [PLEASE SPECIFY]
- I do not stop recommending prostate cancer screening

34. I **recommend the following procedures** to my well patients for prostate cancer screening:

Procedures	Never	Seldom	Sometimes	Often	Always
a) Digital Rectal Exam (DRE)	<input type="checkbox"/>				
b) Prostate Specific Antigen (PSA)	<input type="checkbox"/>				

35. If you recommend prostate cancer screening tests other than those listed above, please explain?

36. I have **difficulty encouraging** prostate cancer screening for my well patients when:

Situations	Never	Seldom	Sometimes	Often	Always
a) My patient expresses discomfort with a DRE	<input type="checkbox"/>				
b) My patient expresses anxiety about results of screening procedures and/or treatment for prostate cancer	<input type="checkbox"/>				
c) My patient is unable to afford PSA procedure	<input type="checkbox"/>				
d) Other _____ [PLEASE DESCRIBE]	<input type="checkbox"/>				

37. Please use a scale of 1 to 5 where **1** means 'strongly disagree' and **5** means 'strongly agree' to indicate the extent you agree with each of the following statements:

Statements	Strongly Disagree 1	2	3	4	Strongly Agree 5
a) I am comfortable performing a DRE	<input type="checkbox"/>				
b) I need better educational materials about prostate cancer screening to give to my patients	<input type="checkbox"/>				
c) I need clearer screening guidelines for prostate cancer	<input type="checkbox"/>				
d) I need clearer follow-up recommendation for patients with positive prostate screening results	<input type="checkbox"/>				
e) I need access to better reminder systems to notify my patients of recommended prostate cancer screening	<input type="checkbox"/>				
f) I am comfortable explaining the pros/cons of prostate cancer screening	<input type="checkbox"/>				
g) I am comfortable interpreting the reported results of a PSA procedure	<input type="checkbox"/>				

38. How can prostate cancer screening be improved in BC?

DEMOGRAPHICS

The following data will help us better understand your context of care and will be used to better support you in your practice. **None of this information is being collected to identify any individual physician.** Your confidentiality will be maintained at all times.

39. I am a:

- GP/FP
 Specialist
 Other _____ [PLEASE SPECIFY]

40. I **graduated** from medical school in _____ [YYYY]

41. I am:

- Female
 Male

42. My age is: _____ [YRS]

43. My **primary practice is located** in or under this following BC health authority? [CHECK ONLY ONE]

- Northern
 Interior
 Fraser
 Vancouver Coastal /Providence HC
 Vancouver Island
 Other _____ [PLEASE DESCRIBE]
 Not applicable

44. My **primary region of practice** is: [SELECT ONLY ONE]

- Rural
 Urban

45. I **currently practice**: [CHECK ONLY ONE]

- Full-time
 Part-time
 A locum
 Retired
 Other _____ [PLEASE SPECIFY]

46. I see the following **number of patients** in a typical, week:

- Approximately _____ [# OF PATIENTS/WEEK]
 Not applicable

47. I primarily work in the following **clinical setting**:

[CHECK ONLY ONE]

- Sessional clinic
 Walk-in clinic
 Family practice in office/clinic
 Long-term care facility
 Not in clinical practice
 Other _____ [PLEASE SPECIFY]

48. The **professional income** from my practice is derived primarily (> 50%) from the following payment method: [CHECK ONLY ONE]

- Fee for service (insured and uninsured)
 Salary
 Rostered (population based blended funding)
 Sessional
 Other _____ [PLEASE SPECIFY]

49. I spend the following number of **hour per week in direct patient care**: _____ [# of HRS/WK]

50. The **number of other physicians** in my practice is?

[CHECK ONLY ONE]

- Solo practice
 _____ [# OF OTHER PHYSICIANS]
 Not applicable

51. I **use an EMR** in my practice?

- Yes
 No

52. I use an **EMR to do clinical practice audits** in cancer screening?

- Yes
 No

YOU'RE DONE!

Thank you for taking the time to complete this important cancer screening needs assessment!

APPENDIX 4: FOCUS GROUP INSTRUMENT

PHYSICIAN ENGAGEMENT

1. What is the best method of keeping you updated on current and new cancer screening programs? *PROMPT:* GPAC guidelines, BCCA website, FPON newsletter, medical literature, mailed information with materials, educational sessions (e.g. rounds, web/video/teleconference, conference)? *PROBE:* What about Hereditary screening guidelines (e.g. consult HCP)?
2. Who would you like to receive the information from? *PROMPT:* Other primary care physicians, a specialist, BCCA staff – medical staff or non-medical but knowledgeable? etc. *PROBE:* Do you see variations in how information should be received for different cancers or programs? *PROBE:* How can the BCCA best inform you of changes to existing screening programs change or when a new program becomes available?
3. How can the BCCA best inform you of screening guidelines for patients **at-risk** for breast, cervical, colorectal, prostate, or hereditary predisposition to cancer (e.g. with hereditary, patient has family history of cancer)?
4. In addition, how should the BCCA inform you of follow-up recommendations for patients with **positive screening results** (e.g. positive for prostate cancer)?

PHYSICIAN PRACTICE

5. Generally, has your skill in performing screening procedures or knowledge of interpreting reported results or explaining pros/cons of procedures increased over time, or have there been specific instances (e.g. CME/CPD events or practice cases) that significantly contributed to your skill and knowledge base?

THE SURVEY RESULTS SHOWED 'PATIENTS WITH MULTIPLE HEALTH ISSUES', 'TIME TO EXPLAIN THE PROS/CONS OF CANCER SCREENING', 'PATIENTS WITH LANGUAGE BARRIERS', AND 'PHYSICIAN FINANCIAL COMPENSATION' WERE MORE FREQUENTLY BARRIERS FOR PHYSICIANS IN DISCUSSING CANCER SCREENING WITH WELL PATIENTS.

6. What strategies would you suggest to overcome these challenges at the practice, patient, and health care delivery levels? *PROMPT:* patient hand outs, screening video or audio available on web/DVD/other suggestion for delivery of material, and remuneration time or multiple billings per visit.

PATIENT FOLLOW-UP & EDUCATIONAL MATERIALS

[SURVEY RESULTS SHOWED OVER HALF OF PHYSICIANS BELIEVED THEY HAVE A RESPONSIBILITY TO SEND CANCER SCREENING NOTIFICATIONS TO PATIENTS].

7. What type of reminder practices would be most effective for reminding your patients of recommended cancer screening? *PROMPT:* invitations/reminders near a patient's birthday, does this really matter? *PROBE:* Should patients in multiple screening programs to receive multiple reminders in a year at different times be a concern?

8. How can current cancer screening guidelines be improved for you (e.g. colorectal, prostate, and hereditary risk assessment)? *PROBE*: Improved readability/clarity of current guidelines, new physician educational materials, clearer follow-up recommendations for patients, etc. SPECIFICS.

SURVEY RESULTS SHOWED THE MAJORITY OF PHYSICIANS DID NOT HAVE EDUCATION MATERIALS AVAILABLE FOR PATIENTS COLORECTAL AND HEREDITARY PREDISPOSITION TO CANCER. FURTHERMORE, A HIGHER PERCENT OF PHYSICIANS SAID THEY NEED BETTER EDUCATIONAL MATERIALS ABOUT COLORECTAL, HEREDITARY, AND PROSTATE CANCERS.

9. What specific cancer screening educational materials (e.g. brochures) do you currently provide to your patients?
10. When providing educational materials (e.g. brochures) to your patients, what information are you trying to provide them with? *PROMPT*: About evidence of screening benefits, clearer general information about cancer, dispelling myths?

[CIRCULATE BCCA MATERIALS TO THE GROUP SPECIFICALLY RELATED TO THE SCREENING PROGRAMS]

11. Have you seen these educational materials from the BCCA before? *PROBE, IF YES*: Do you use these materials, what do you like/dislike about them, what is missing or what could be done to improve them?

NEW CANCER SCREENING PROGRAMS ARE BEING DEVELOPED AND EDUCATIONAL MATERIALS ARE FOLLOWING SPECIFIC DESIGN STANDARDS (SHOW COLON CHECK AND HCP MATERIALS).

12. Would you find it easy to find the brochure or info sheet that you are looking for? What could be done to ensure you can easily and quickly access the information you are looking for for your patient?
13. Would other types of educational materials be useful for you in your practice? *PROMPT*: Health Care Provider fact sheets, a poster on the wall that could be used to explain findings to patients and help to ensure appropriate follow up intervals or posters explaining pathology of different types of polyps and relevance for subsequent follow-up?
14. Would other types of educational materials be useful for you to give to your patients? *PROMPT*: Promotional posters or tear sheets like Colon Check materials.
15. How do you want to provide input into the development of patient education materials and how do you want to provide feedback for suggested changes?

BCCA WEBSITE

16. In a typical visit to the BCCA website, what information would you search, where do you navigate?
17. How would you assess the overall effectiveness of the BCCA website in providing education for patients/public as well as for primary care physicians? *PROMPT*: readability, layout, use of graphics, color, ease of navigation, depth of information, intuitiveness, etc.

18. What improvements, if any, would you make to the BCCA website for physician user and for patients?

CLOSING

SHOW EXAMPLES OF SMPBC AND CCSP "REPORT CARDS".

19. Are you interested in receiving feedback from the BCCA screening programs about your practice?
PROBE: Are these of value to you? What do you find interesting/useful about these types of reports? What else would be helpful to see/know? What do you find irrelevant?
20. Do you have any other comments regarding cancer screening you would like to share that we have not had a chance to discuss? *PROBE: How cancer screening might be improved in BC?*

APPENDIX 5: CONTENT OF THE SAMPLE BCCA MATERIALS

Breast Cancer

- i. "Regular Mammograms Monitor Breast Health"
 - a. Small pink appointment pad
- ii. "Why Regular Mammograms are Important"
 - a. Large pink poster
- iii. "Pass It On" - "Your Breast Health Has Support"
 - a. Pink brochure
- iv. Sample Screening Mammogram Report Card (Rev. January 2009)

Cervical Cancer

- v. "preventing cervical screening"
- vi. "cervical cancer" - "Protect yourself with regular pap tests"
- vii. "abnormal pap smear" - "causes and proper follow-up"
- viii. "hpv & cervical cancer" - "What you should know and do"
- ix. Sample Pap Test Sampling Quality Feedback Report 2008

Colorectal Cancer

- x. "Colon Check" - "What is Colonoscopy"
 - a. 'little girl and 'grandfather'.
- xi. "Colon Check" - "Hind sight is 20/20"
 - a. Naked couple on beach
- xii. "Colon Check" - "Fact Sheet for Health Care Professionals"
 - a. Large hard stock paper
- xiii. "Colon Check" - "Call 1-877-70-colon (26566) to get your free test kit."
 - a. Small tear off pad

Hereditary Cancer Program

- xiv. "Hereditary Cancer Program" - "Newsletter 2009/2010"
- xv. "Hereditary Colorectal Cancer" - "(Lynch Syndrome/HNPCC)
 - a. Small laminate of program referrals
- xvi. "Hereditary Breast and Ovarian Cancer"
 - a. Small laminate of program referrals
- xvii. "Does Cancer Run in My Family" - "Hereditary Cancer: Know More, Worry Less"
 - a. Brochure with sample family tree